

LSST May 2019 Month End Forecast																		
Activity ID	Activity Name	Start	Finish	Physical % Complete	Original Duration	Budgeted Labor Units	Budgeted Labor Cost	Budgeted Material Cost	Budgeted Total Cost no	Total Float	FY2015 2014-10-01	FY2016 2015-10-01	FY2017 2016-10-01	FY2018 2017-10-01	FY2019 2018-10-01	FY2020 2019-10-01	FY2021 2020-10-01	FY2022 2021-10-01
LSST ME 19-05 LSST May 2019 Month End Forecast		01-Aug-14 A	03-Oct-22		2072	1658666.19	\$186,352,605.17	\$262,397,835.93	\$448,750,441.10	257								
LSST-1585	MREFC Program Complete Float	28-Jun-22	30-Sep-22	0%	67	0.00	\$0.00	\$0.00	\$0.00	257								
LSST ME 19-05.00 LSST Program Timeline with Labor		01-Aug-14 A	03-Oct-22		2072	0.00	\$0.00	\$0.00	\$0.00	257								
LSST ME 19-05.00.00 Project Year Boundaries Meetings at		01-Oct-14 A	30-Sep-22		2030	0.00	\$0.00	\$0.00	\$0.00	0								
LSST-0015	Start of FY15	01-Oct-14 A		100%	0	0.00	\$0.00	\$0.00	\$0.00		Start of FY15							
LSST-0016	Start of FY16	01-Oct-15 A		100%	0	0.00	\$0.00	\$0.00	\$0.00			Start of FY16						
LSST-1590	MREFC Late Program Complete		30-Sep-22*	0%	0	0.00	\$0.00	\$0.00	\$0.00	0								
LSST ME 19-05.00.04 Construction Phase		01-Aug-14 A	27-Jun-22		2005	0.00	\$0.00	\$0.00	\$0.00	67								
LSST ME 19-05.00.04.01 Build		01-Aug-14 A	04-Aug-21		1777	0.00	\$0.00	\$0.00	\$0.00	166								
LSST-144	Nominal Start of NSF MREFC Funding	01-Aug-14 A		100%	0	0.00	\$0.00	\$0.00	\$0.00		Nominal Start of NSF MREFC Funding							
LSST-144	Telescope Subsystem Development Activities	01-Aug-14 A	04-Feb-21	62%	1589	0.00	\$0.00	\$0.00	\$0.00	-61								
LSST-144	Telescope Subsystem Development Complete		04-Feb-21	0%	0	0.00	\$0.00	\$0.00	\$0.00	-61								
LSST-147	Camera Ready for I&T at Summit Facility		04-Aug-21	0%	0	0.00	\$0.00	\$0.00	\$0.00	166								
LSST ME 19-05.00.04.02 Commissioning		27-Nov-19	27-Jun-22		655	0.00	\$0.00	\$0.00	\$0.00	67								
LSST-151	Start Early System Integration and Test (ComCam)	05-Feb-21		0%	0	0.00	\$0.00	\$0.00	\$0.00	-61								
LSST-151	Early System Integration and Test (ComCam)	27-Nov-19	04-Aug-21	0%	427	0.00	\$0.00	\$0.00	\$0.00	166								
LSST-151	Engineering First Light w/ComCam		05-Mar-21	0%	0	0.00	\$0.00	\$0.00	\$0.00	-28								
LSST-151	ComCam Commissioning Complete		04-Aug-21	0%	0	0.00	\$0.00	\$0.00	\$0.00	295								
LSST-151	DM and T&S Completion	05-Feb-21	04-Aug-21	0%	128	0.00	\$0.00	\$0.00	\$0.00	166								
LSST-151	Full System Integration and Test	05-Aug-21	05-Oct-21	0%	43	0.00	\$0.00	\$0.00	\$0.00	123								
LSST-151	System Integration Test Complete		06-Oct-21	0%	0	0.00	\$0.00	\$0.00	\$0.00	252								
LSST-152	System First Light		06-Oct-21	0%	0	0.00	\$0.00	\$0.00	\$0.00	123								
LSST-154	Start of Science Verification	06-Oct-21		0%	0	0.00	\$0.00	\$0.00	\$0.00	123								
LSST-155	Science Verification	06-Oct-21	24-Jun-22	0%	184	0.00	\$0.00	\$0.00	\$0.00	-61								
LSST-155	Science Verification Complete		24-Jun-22*	0%	0	0.00	\$0.00	\$0.00	\$0.00	-61								
LSST-155	MREFC Program Complete		27-Jun-22	0%	0	0.00	\$0.00	\$0.00	\$0.00	67								
LSST ME 19-05.00.05 Operations Phase		15-Jan-19 A	03-Oct-22		847	0.00	\$0.00	\$0.00	\$0.00	257								
LSST-1610	Start of Early Operations Funding	15-Jan-19 A		0%	0	0.00	\$0.00	\$0.00	\$0.00									
LSST-1615	Early Operations Phase	15-Jan-19 A	30-Sep-22	0%	847	0.00	\$0.00	\$0.00	\$0.00	0								
LSST-1620	Start of Full Science Operations	03-Oct-22		0%	0	0.00	\$0.00	\$0.00	\$0.00	257								
LSST ME 19-05.01C Project Management Office (C)		01-Aug-14 A	31-Mar-22		1943	220778.51	\$19,540,791.25	\$28,123,866.28	\$47,664,657.53	386								
LSST ME 19-05.01C.01 LSST Project Office		01-Aug-14 A	31-Mar-22		1943	174375.20	\$16,584,091.16	\$10,946,656.55	\$27,530,747.71	386								
LSST ME 19-05.01C.01.01 Project Office and Support		01-Aug-14 A	31-Mar-22		1943	144488.38	\$13,437,329.90	\$5,669,541.10	\$19,106,871.00	129								
A1310	Security work October - December 2018 Labor	01-Oct-18 A	31-Dec-18 A	100%	58	839.12	\$87,813.83	\$0.00	\$87,813.83									
A1840	January - March 2019 Labor	01-Jan-19 A	29-Mar-19 A	100%	61	783.68	\$86,335.25	\$0.00	\$86,335.25									
A4360	Security Operations April - June	01-Apr-19 A	28-Jun-19	67%	64	229.20	\$24,612.09	\$0.00	\$24,612.09	827								
A5020	Data Rights Management April - June	01-Apr-19 A	28-Jun-19	67%	64	153.60	\$18,042.88	\$0.00	\$18,042.88	827								
A5030	Authorization Token Services April - June	01-Apr-19 A	28-Jun-19	67%	64	153.60	\$16,650.24	\$0.00	\$16,650.24	827								
A5110	Information Security Officer	01-Apr-19 A	28-Jun-19	67%	64	51.20	\$6,031.87	\$0.00	\$6,031.87	827								
PMOC-01	Project Office and Support FY 1 - LOE Labor	01-Aug-14 A	30-Sep-14 A	100%	42	835.83	\$69,990.42	\$0.00	\$69,990.42		Project Office and Support FY 1 - LOE Labor							
PMOC-01	Project Office and Support FY 2 - LOE Labor	01-Oct-14 A	30-Sep-15 A	100%	252	15358.97	\$1,088,927.57	\$0.00	\$1,088,927.57			Project Office and Support FY 2 - LOE Labor						
PMOC-01	Project Office and Support FY 3 - LOE Labor	01-Oct-15 A	30-Sep-16 A	100%	254	19383.00	\$1,393,313.61	\$0.00	\$1,393,313.61				Project Office and Support FY 3 - LOE Labor					
PMOC-01	Project Office and Support FY 4 - LOE Labor	01-Oct-16 A	30-Sep-17 A	100%	254	21422.00	\$1,572,442.02	\$0.00	\$1,572,442.02					Project Office and Support FY 4 - LOE Labor				
PMOC-01	Project Office and Support FY 5 - LOE Labor	02-Oct-17 A	29-Dec-17 A	100%	63	4997.67	\$381,024.00	\$0.00	\$381,024.00						Project Office and Support FY 5 - LOE Labor			
PMOC-01	Project Office and Support FY 5 - LOE Labor	01-Jan-18 A	28-Sep-18 A	100%	190	19577.67	\$1,428,325.08	\$0.00	\$1,428,325.08							Project Office and Support FY 5 - LOE Labor		
PMOC-01	Project Office and Support FY 6 - LOE Labor	01-Oct-18 A	30-Sep-19	67%	254	17640.00	\$1,458,716.40	\$0.00	\$1,458,716.40	129								
PMOC-01	Project Office and Support FY 7 - LOE Labor	01-Oct-19	30-Sep-20	0%	254	12240.00	\$1,125,623.70	\$0.00	\$1,125,623.70	129								
PMOC-01	Project Office and Support FY 8 - LOE Labor	01-Oct-20	30-Sep-21	0%	254	9540.00	\$1,011,368.70	\$0.00	\$1,011,368.70	129								
PMOC-01	Project Office and Support FY 9 - LOE Labor	01-Oct-21	31-Mar-22	0%	126	1566.49	\$202,428.20	\$0.00	\$202,428.20	129								
PMOC-01	Project Office and Support FY 1 - LOE TMS	01-Aug-14 A	30-Sep-14 A	100%	42	0.00	\$0.00	\$34,571.04	\$34,571.04		Project Office and Support FY 1 - LOE TMS							
PMOC-01	Project Office and Support FY 2 - LOE TMS	01-Oct-14 A	30-Sep-15 A	100%	252	0.00	\$0.00	\$169,606.75	\$169,606.75			Project Office and Support FY 2 - LOE TMS						
PMOC-01	Project Office and Support FY 3 - LOE TMS	01-Oct-15 A	30-Sep-16 A	100%	254	0.00	\$0.00	\$180,179.04	\$180,179.04				Project Office and Support FY 3 - LOE TMS					
PMOC-01	Project Office and Support FY 4 - LOE TMS	03-Oct-16 A	29-Sep-17 A	100%	254	0.00	\$0.00	\$190,125.89	\$190,125.89					Project Office and Support FY 4 - LOE TMS				
PMOC-01	Project Office and Support FY 5 - LOE TMS	02-Oct-17 A	29-Dec-17 A	100%	63	0.00	\$0.00	\$49,765.00	\$49,765.00						Project Office and Support FY 5 - LOE TMS			
PMOC-01	Project Office and Support FY 5 - LOE TMS	01-Jan-18 A	28-Sep-18 A	100%	190	0.00	\$0.00	\$199,849.90	\$199,849.90							Project Office and Support FY 5 - LOE TMS		
PMOC-01	Project Office and Support FY 6 - LOE TMS	01-Oct-18 A	30-Sep-19	67%	254	0.00	\$0.00	\$210,022.77	\$210,022.77	129								
PMOC-01	Project Office and Support FY 7 - LOE TMS	01-Oct-19	30-Sep-20	0%	254	0.00	\$0.00	\$207,232.81	\$207,232.81	129								
PMOC-01	Project Office and Support FY 8 - LOE TMS	01-Oct-20	30-Sep-21	0%	254	0.00	\$0.00	\$231,972.68	\$231,972.68	129								
PMOC-01	Project Office and Support FY 9 - LOE TMS	01-Oct-21	31-Mar-22	0%	126	0.00	\$0.00	\$120,210.64	\$120,210.64	129								
PMOC-01	Project Office Support FY 1 - LOE PROC	01-Aug-14 A	30-Sep-14 A	100%	42	150.00	\$25,599.00	\$12,818.83	\$38,417.83		Project Office Support FY 1 - LOE PROC							
PMOC-01	Project Office Support FY 2 - LOE PROC	01-Oct-14 A	30-Sep-15 A	100%	252	1800.00	\$324,234.00	\$109,700.60	\$433,934.60			Project Office Support FY 2 - LOE PROC						
PMOC-01	Project Office Support FY 3 - LOE PROC	01-Oct-15 A	30-Sep-16 A	100%	254	1799.95	\$335,563.86	\$425,271.53	\$760,835.39				Project Office Support FY 3 - LOE PROC					
PMOC-01	Project Office Support FY 4 - LOE PROC	03-Oct-16 A	29-Sep-17 A	100%	254	1799.95	\$347,317.50	\$428,088.56	\$775,406.06					Project Office Support FY 4 - LOE PROC				
PMOC-01	Project Office Support FY 5 - LOE PROC	02-Oct-17 A	29-Dec-17 A	100%	63	450.00	\$89,869.50	\$108,116.18	\$197,985.68						Project Office Support FY 5 - LOE PROC			
PMOC-01	Project Office Support FY 5 - LOE PROC	01-Jan-18 A	28-Sep-18 A	100%	189	1350.00	\$269,608.50	\$346,460.64	\$616,069.14							Project Office Support FY 5 - LOE PROC		
PMOC-01	Project Office Support FY 6 - LOE PROC	01-Oct-18 A	30-Sep-19	67%	254	1799.95	\$372,048.76	\$262,213.15	\$634,261.91	129								
PMOC-01	Project Office Support FY 7 - LOE PROC	01-Oct-19	30-Sep-20	0%	254	1799.95	\$385,062.36	\$97,618.88	\$482,681.24	129								
PMOC-01	Project Office Support FY 8 - LOE PROC	01-Oct-20	30-Sep-21	0%	254	1799.95	\$398,543.95	\$92,028.86	\$490,572.82	129								
PMOC-01	Project Office Support FY 9 - LOE PROC	01-Oct-21	31-Mar-22	0%	126	420.00	\$96,251.40	\$0.00	\$96,251.40	129								
PMOC-01	Construction Transition Planning FY 5	02-Jul-18 A	28-Sep-18 A	100%	63	125.00	\$8,985.00	\$0.00	\$8,985.00									
PMOC-01	Construction Transition Planning FY 6	01-Oct-18 A	30-Sep-19	67%	254	75.00	\$5,579.25	\$0.00	\$5,579.25	129								

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<div></div>	PMOC-01 Project Office and Support FY3 - Information Secur	01-Dec-15 A	30-Sep-16 A	100%	213	450.00	\$72,346.50	\$0.00	\$72,346.50					Project Office and Support FY3 - Information Security Officer							
	PMOC-01 Project Office and Support FY4 - Information Secur	03-Oct-16 A	29-Sep-17 A	100%	254	450.00	\$74,880.00	\$0.00	\$74,880.00					Project Office and Support FY4 - Information Security Officer							
	PMOC-01 Security Monitoring Work S17	01-Mar-17 A	31-May-17 A	100%	66	212.00	\$26,852.32	\$0.00	\$26,852.32				Security Monitoring Work S17								
	PMOC-01 Security Monitoring Work F17	01-Jun-17 A	31-Aug-17 A	100%	66	1197.53	\$144,796.08	\$0.00	\$144,796.08				Security Monitoring Work F17								
	PMOC-01 NCSA Data, Compute, and IT Security Services S18	02-Oct-17 A	29-Dec-17 A	100%	41	727.00	\$88,493.22	\$0.00	\$88,493.22				NCSA Data, Compute, and IT Security Services S18A								
	PMOC-01 IDM Security Work Jan 18 - Feb. 15th, 2018	01-Jan-18 A	28-Feb-18 A	100%	31	132.00	\$15,193.86	\$0.00	\$15,193.86				IDM Security Work Jan 18 - Feb. 15th, 2018								
	PMOC-01 Security Work Jan 18 - Mar 18	01-Jan-18 A	30-Mar-18 A	100%	62	733.51	\$89,176.72	\$0.00	\$89,176.72				Security Work Jan 18 - Mar 18								
	PMOC-01 AURA/LSST support of S18ANCSA Data, Compute	01-Jan-18 A	30-Mar-18 A	100%	62	22.50	\$1,084.28	\$0.00	\$1,084.28				AURA/LSST support of S18ANCSA Data, Compute, and IT Security Services								
	PMOC-01 Complete Classification Flow Chart	20-Jan-18 A	30-Jan-18 A	100%	7	0.00	\$0.00	\$3,400.00	\$3,400.00				Complete Classification Flow Chart								
	PMOC-01 Confirm Classification Flow Chart	30-Jan-18 A	30-Jan-18 A	100%	10	0.00	\$0.00	\$1,700.00	\$1,700.00				Confirm Classification Flow Chart								
	PMOC-01 Review Classification Spreadsheet	01-Oct-18 A	01-Nov-18 A	100%	9	0.00	\$0.00	\$3,348.00	\$3,348.00				Review Classification Spreadsheet								
	PMOC-01 Finalize Export Compliance Manual & Procedures	01-Feb-18 A	30-Apr-18 A	100%	20	0.00	\$0.00	\$12,750.00	\$12,750.00				Finalize Export Compliance Manual & Procedures								
	PMOC-01 Training/ Implementation	22-Oct-18 A	26-Oct-18 A	100%	11	0.00	\$0.00	\$3,400.00	\$3,400.00				Training/ Implementation								
	PMOC-01 Project Meetings and Conferences FY 14	01-Aug-14 A	30-Sep-14 A	100%	42	0.00	\$0.00	\$3,172.50	\$3,172.50			Project Meetings and Conferences FY 14									
	PMOC-01 Project Meetings and Conferences FY 15	01-Oct-14 A	30-Sep-15 A	100%	252	0.00	\$0.00	\$197,905.23	\$197,905.23				Project Meetings and Conferences FY 15								
	PMOC-01 Project Meetings and Conferences FY 16	01-Oct-15 A	30-Sep-16 A	100%	254	0.00	\$0.00	\$203,050.08	\$203,050.08					Project Meetings and Conferences FY 16							
	PMOC-01 Project Meetings and Conferences FY 17	03-Oct-16 A	29-Sep-17 A	100%	254	0.00	\$0.00	\$208,330.27	\$208,330.27						Project Meetings and Conferences FY 17						
	PMOC-01 Project Meetings and Conferences FY 18	02-Oct-17 A	29-Dec-17 A	100%	103	0.00	\$0.00	\$617,741.87	\$617,741.87						Project Meetings and Conferences FY 18						
	PMOC-01 Project Meetings and Conferences FY 18	01-Jan-18 A	28-Sep-18 A	100%	190	0.00	\$0.00	\$321,043.91	\$321,043.91							Project Meetings and Conferences FY 18					
	PMOC-01 Project Meetings and Conferences FY 19	01-Oct-18 A	30-Sep-19	67%	254	0.00	\$0.00	\$150,697.64	\$150,697.64	129							Project Meetings and Conferences FY 19				
	PMOC-01 Project Meetings and Conferences FY 20	01-Oct-19	30-Sep-20	0%	254	0.00	\$0.00	\$242,117.19	\$242,117.19	129								Project Meetings and Conferences FY 20			
	PMOC-01 Project Meetings and Conferences FY 21	01-Oct-20	30-Sep-21	0%	254	0.00	\$0.00	\$149,129.74	\$149,129.74	129									Project Meetings and Conferences FY 21		
	PMOC-01 Project Meetings and Conferences FY 22	01-Oct-21	31-Mar-22	0%	126	0.00	\$0.00	\$75,900.89	\$75,900.89	129										Project Meetings and Conferences FY 22	
	PMOC-01 Security Work Apr 18 - Sept 18	02-Apr-18 A	28-Sep-18 A	100%	128	2422.10	\$294,198.00	\$0.00	\$294,198.00						Security Work Apr 18 - Sept 18						
	LSST ME 19-05.01C.01.02 Chief Scientist Support	01-Apr-15 A	31-Mar-22		1943	0.00	\$0.00	\$1,835,346.96	\$1,835,346.96	129											
	PMOC-01 Chief Scientist Support FY 1 - LOE UCD NonLabor	01-Apr-15 A	02-Apr-15 A	100%	42	0.00	\$0.00	\$0.00	\$0.00			Chief Scientist Support FY 1 - LOE UCD NonLabor									
	PMOC-01 Chief Scientist Support FY 2 - LOE UCD NonLabor	02-Apr-15 A	29-Sep-15 A	100%	252	0.00	\$0.00	\$217,920.00	\$217,920.00				Chief Scientist Support FY 2 - LOE UCD NonLabor								
	PMOC-01 Chief Scientist Support FY 3 - LOE UCD NonLabor	01-Oct-15 A	30-Sep-16 A	100%	254	0.00	\$0.00	\$227,317.00	\$227,317.00					Chief Scientist Support FY 3 - LOE UCD NonLabor							
	PMOC-01 Chief Scientist Support FY 4 - LOE UCD NonLabor	03-Oct-16 A	29-Sep-17 A	100%	254	0.00	\$0.00	\$236,370.00	\$236,370.00						Chief Scientist Support FY 4 - LOE UCD NonLabor						
	PMOC-01 Chief Scientist Support FY 5 - LOE UCD NonLabor	02-Oct-17 A	28-Sep-18 A	100%	253	0.00	\$0.00	\$245,784.00	\$245,784.00							Chief Scientist Support FY 5 - LOE UCD NonLabor					
	PMOC-01 Chief Scientist Support FY 6 - LOE UCD NonLabor	01-Oct-18 A	30-Sep-19	67%	254	0.00	\$0.00	\$255,575.05	\$255,575.05	129							Chief Scientist Support FY 6 - LOE UCD NonLabor				
	PMOC-01 Chief Scientist Support FY 7 - LOE UCD NonLabor	01-Oct-19	30-Sep-20	0%	254	0.00	\$0.00	\$265,757.65	\$265,757.65	129								Chief Scientist Support FY 7 - LOE UCD NonLabor			
	PMOC-01 Chief Scientist Support FY 8 - LOE UCD NonLabor	01-Oct-20	30-Sep-21	0%	254	0.00	\$0.00	\$310,460.17	\$310,460.17	129									Chief Scientist Support FY 8 - LOE UCD NonLabor		
	PMOC-01 Chief Scientist Support FY 9 - LOE UCD NonLabor	01-Oct-21	31-Mar-22	0%	126	0.00	\$0.00	\$76,163.10	\$76,163.10	129										Chief Scientist Support FY 9 - LOE UCD NonLabor	
	LSST ME 19-05.01C.01.03 Communications	01-Sep-14 A	31-Mar-22		1943	16629.10	\$1,770,283.13	\$682,937.15	\$2,453,220.28	386											
	PMOC-01 Communications FY 1 - LOE Labor	01-Sep-14 A	30-Sep-14 A	100%	42	215.00	\$21,591.80	\$0.00	\$21,591.80			Communications FY 1 - LOE Labor									
	PMOC-01 Communications FY 2 - LOE Labor	01-Oct-14 A	30-Sep-15 A	100%	252	3330.00	\$295,547.40	\$0.00	\$295,547.40				Communications FY 2 - LOE Labor								
	PMOC-01 Communications FY 3 - LOE Labor	01-Oct-15 A	31-Mar-16 A	100%	125	1786.67	\$160,458.41	\$0.00	\$160,458.41					Communications FY 3 - LOE Labor							
	PMOC-01 Communications FY 4 - LOE Labor	01-Oct-16 A	28-Feb-17 A	100%	103	763.70	\$87,642.52	\$0.00	\$87,642.52						Communications FY 4 - LOE Labor						
	PMOC-01 Communications FY 4 - LOE Labor	01-Mar-17 A	29-Sep-17 A	100%	151	633.74	\$69,297.00	\$0.00	\$69,297.00						Communications FY 4 - LOE Labor						
	PMOC-01 Communications FY 5 - LOE Labor	02-Oct-17 A	28-Sep-18 A	100%	253	1800.00	\$217,701.00	\$0.00	\$217,701.00							Communications FY 5 - LOE Labor					
	PMOC-01 Communications FY 6 - LOE Labor	01-Oct-18 A	30-Sep-19	67%	254	2700.00	\$295,551.00	\$0.00	\$295,551.00	255							Communications FY 6 - LOE Labor				
	PMOC-01 Communications FY 7 - LOE Labor	01-Oct-19	30-Sep-20	0%	254	2700.00	\$305,892.00	\$0.00	\$305,892.00	255								Communications FY 7 - LOE Labor			
	PMOC-01 Communications FY 8 - LOE Labor	01-Oct-20	30-Sep-21	0%	254	2700.00	\$316,602.00	\$0.00	\$316,602.00	255									Communications FY 8 - LOE Labor		
	PMOC-01 Communications FY 1 - LOE NonLabor	01-Oct-14 A	31-Aug-15 A	100%	42	0.00	\$0.00	\$38,238.21	\$38,238.21			Communications FY 1 - LOE NonLabor									



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LSST ME 19-05.01C.01.05 LSST Project Science	PMOC-0%	LSST Project Science FY 1 - LOE UW Labor	01-Dec-14 A	29-May-15 A	100%	42	145.00	\$14,505.30	\$0.00	\$14,505.30									
	PMOC-0%	LSST Project Science FY 2 - LOE UW Labor	29-May-15 A	30-Sep-15 A	100%	252	1740.00	\$180,151.20	\$0.00	\$180,151.20									
	PMOC-0%	LSST Project Science FY 3 - LOE UW Labor	01-Oct-15 A	30-Sep-16 A	100%	254	1740.00	\$186,468.00	\$0.00	\$186,468.00									
	PMOC-0%	LSST Project Science FY 4 - LOE UW Labor	03-Oct-16 A	29-Sep-17 A	100%	254	1740.00	\$192,985.20	\$0.00	\$192,985.20									
	PMOC-0%	LSST Project Science FY 5 - LOE UW Labor	02-Oct-17 A	28-Sep-18 A	100%	253	1740.00	\$199,746.00	\$0.00	\$199,746.00									
	PMOC-0%	Survey Strategy Optimization	02-Oct-17 A	28-Sep-18 A	100%	253	1306.72	\$149,065.59	\$0.00	\$149,065.59									
	PMOC-0%	LSST Project Science FY 6 - LOE UW Labor	01-Oct-18 A	30-Sep-19	67%	254	1740.00	\$206,736.00	\$0.00	\$206,736.00									
	PMOC-0%	LSST Project Science FY 1 - LOE UW NonLabor	01-May-15 A	01-Jul-15 A	100%	42	0.00	\$0.00	\$32,070.90	\$32,070.90									
	PMOC-0%	LSST Project Science FY 2 - LOE UW NonLabor	01-Jul-15 A	30-Sep-15 A	100%	252	0.00	\$0.00	\$133,361.70	\$133,361.70									
	PMOC-0%	LSST Project Science FY 3 - LOE UW NonLabor	01-Oct-15 A	30-Sep-16 A	100%	254	0.00	\$0.00	\$48,284.88	\$48,284.88									
	PMOC-0%	LSST Project Science FY 3 - LOE UW NonLabor	01-Oct-15 A	30-Sep-16 A	100%	254	0.00	\$0.00	\$86,250.00	\$86,250.00									
	PMOC-0%	LSST Project Science FY 4 - LOE UW NonLabor	03-Oct-16 A	29-Sep-17 A	100%	254	0.00	\$0.00	\$44,283.03	\$44,283.03									
	PMOC-0%	LSST Project Science FY 4 - LOE UW NonLabor	03-Oct-16 A	29-Sep-17 A	100%	254	0.00	\$0.00	\$85,030.00	\$85,030.00									
	PMOC-0%	LSST Project Science FY 5 - LOE UW NonLabor	02-Oct-17 A	28-Sep-18 A	100%	253	0.00	\$0.00	\$46,541.48	\$46,541.48									
	PMOC-0%	LSST Project Science FY 5 - LOE UW NonLabor	02-Oct-17 A	28-Sep-18 A	100%	253	0.00	\$0.00	\$83,770.00	\$83,770.00									
	PMOC-0%	LSST Project Science FY 6 - LOE UW NonLabor	01-Oct-18 A	30-Sep-19	67%	254	0.00	\$0.00	\$48,915.03	\$48,915.03									
	PMOC-0%	LSST Project Science FY 6 - LOE UW NonLabor	01-Oct-18 A	30-Sep-19	67%	254	0.00	\$0.00	\$82,470.00	\$82,470.00									
	SIM-2483	Evaluate survey monitoring visualization	09-May-18 A	09-May-18 A	100%	14	74.00	\$8,205.86	\$0.00	\$8,205.86									
	SIM-2488	Evaluate control room visualization proposal	09-May-18 A	09-May-18 A	100%	14	74.00	\$8,205.86	\$0.00	\$8,205.86									
	SIM-2489	Propose required additional visualization requiremen	09-May-18 A	09-May-18 A	100%	7	37.00	\$4,102.93	\$0.00	\$4,102.93									
	SIM-2491	Identify KPMs and metrics for template generation	09-May-18 A	09-May-18 A	100%	12	48.00	\$5,322.72	\$0.00	\$5,322.72									
	SIM-2493	Validate the phosim DCR corrections	09-May-18 A	09-May-18 A	100%	22	96.00	\$10,645.44	\$0.00	\$10,645.44									
	SIM-2494	Develop test procedures for evaluating metrics	09-May-18 A	09-May-18 A	100%	22	96.00	\$10,645.44	\$0.00	\$10,645.44									
	SIM-2495	Implement metrics for evaluating templates	09-May-18 A	09-May-18 A	100%	22	96.00	\$10,645.44	\$0.00	\$10,645.44									
	SIM-2503	Determine scripts and intermediate metrics for astro	09-May-18 A	09-May-18 A	100%	21	111.00	\$12,308.79	\$0.00	\$12,308.79									
	SIM-2505	Evaluate WCS models for the telescope and camera	09-May-18 A	09-May-18 A	100%	14	74.00	\$8,205.86	\$0.00	\$8,205.86									
	LSST ME 19-05.01C.02 Site Office		01-Sep-14 A	31-Mar-22		1880	28200.00	\$1,318,932.00	\$3,157,198.17	\$4,476,130.17	128								
	LSST ME 19-05.01C.02.01 Site Office		01-Sep-14 A	31-Mar-22		1880	28200.00	\$1,318,932.00	\$3,157,198.17	\$4,476,130.17	128								
	PMOC-8%	Site Office FY 1 - LOE Labor	01-Sep-14 A	30-Sep-14 A	100%	40	300.00	\$11,439.00	\$0.00	\$11,439.00									
	PMOC-8%	Site Office FY 2 - LOE Labor	01-Oct-14 A	30-Sep-15 A	100%	244	1800.00	\$72,162.00	\$0.00	\$72,162.00									
	PMOC-8%	Site Office FY 3 - LOE Labor	01-Oct-15 A	30-Sep-16 A	100%	248	1800.00	\$74,682.00	\$0.00	\$74,682.00									
	PMOC-8%	Site Office FY 4 - LOE Labor	03-Oct-16 A	29-Sep-17 A	100%	245	3600.00	\$157,842.00	\$0.00	\$157,842.00									
	PMOC-8%	Site Office FY 5 - LOE Labor	02-Oct-17 A	28-Sep-18 A	100%	244	4500.00	\$203,355.00	\$0.00	\$203,355.00									
	PMOC-8%	Site Office FY 6 - LOE Labor	01-Oct-18 A	30-Sep-19	67%	245	5400.00	\$255,366.00	\$0.00	\$255,366.00	128								
	PMOC-8%	Site Office FY 7 - LOE Labor	01-Oct-19	30-Sep-20	0%	246	5400.00	\$264,312.00	\$0.00	\$264,312.00	128								
	PMOC-8%	Site Office FY 8 - LOE Labor	01-Oct-20	30-Sep-21	0%	248	4050.00	\$207,054.00	\$0.00	\$207,054.00	128								
	PMOC-8%	Site Office FY 8 - LOE Labor	01-Oct-21	31-Mar-22	0%	120	1350.00	\$72,720.00	\$0.00	\$72,720.00	128								
	PMOC-8%	Site Office FY 1 - LOE NonLabor	01-Sep-14 A	13-Mar-15 A	100%	40	0.00	\$0.00	\$247,941.02	\$247,941.02									
	PMOC-8%	Site Office FY 2 - LOE NonLabor	16-Mar-15 A	30-Sep-15 A	100%	244	0.00	\$0.00	\$290,339.67	\$290,339.67									
	PMOC-8%	Site Office FY 3 - LOE NonLabor	01-Oct-15 A	30-Sep-16 A	100%	248	0.00	\$0.00	\$107,625.84	\$107,625.84									
	PMOC-8%	Site Office FY 3 - LOE NonLabor	01-Oct-15 A	30-Sep-16 A	100%	248	0.00	\$0.00	\$807,668.13	\$807,668.13									
	PMOC-8%	Site Office FY 4 - LOE NonLabor	03-Oct-16 A	29-Sep-17 A	100%	245	0.00	\$0.00	\$163,193.13	\$163,193.13									
	PMOC-8%	Site Office FY 4 - LOE NonLabor	03-Oct-16 A	29-Sep-17 A	100%	245	0.00	\$0.00	\$0.00	\$0.00									
	PMOC-8%	Site Office FY 5 - LOE NonLabor	02-Oct-17 A	28-Sep-18 A	100%	244	0.00	\$0.00	\$76,098.73	\$76,098.73									
	PMOC-8%	Site Office FY 5 - LOE NonLabor	02-Oct-17 A	28-Sep-18 A	100%	244	0.00	\$0.00	\$438,855.11	\$438,855.11									
	PMOC-8%	Site Office FY 6 - LOE NonLabor	01-Oct-18 A	30-Sep-19	67%	245	0.00	\$0.00	\$66,937.57	\$66,937.57	277								
	PMOC-8%	Site Office FY 6 - LOE NonLabor	01-Oct-18 A	30-Sep-19	67%	245	0.00	\$0.00	\$241,006.34	\$241,006.34	277								
	PMOC-8%	Site Office FY 7 - LOE NonLabor	01-Oct-19	30-Sep-20	0%	246	0.00	\$0.00	\$81,914.70	\$81,914.70	277								
	PMOC-8%	Site Office FY 7 - LOE NonLabor	01-Oct-19	30-Sep-20	0%	246	0.00	\$0.00	\$249,441.75	\$249,441.75	277								
	PMOC-8%	Site Office FY 8 - LOE NonLabor	01-Oct-20	20-Aug-21	0%	219	0.00	\$0.00	\$128,004.75	\$128,004.75	277								
	PMOC-8%	Site Office FY 8 - LOE NonLabor	01-Oct-20	20-Aug-21	0%	219	0.00	\$0.00	\$258,171.44	\$258,171.44	277								
	LSST ME 19-05.01C.03 Safety and Environmental Assurance		01-Sep-14 A	31-Mar-22		1943	18203.31	\$1,637,768.09	\$780,552.73	\$2,418,320.83	129								
	LSST ME 19-05.01C.03.01 Safety and Environmental Assurance		01-Sep-14 A	31-Mar-22		1943	18203.31	\$1,637,768.09	\$780,552.73	\$2,418,320.83	129								
	PMOC-0%	Safety and Environmental Assurance FY 1 - LOE Labor	01-Sep-14 A	01-Oct-14 A	100%	42	187.33	\$15,886.67	\$0.00	\$15,886.67									
	PMOC-0%	Safety and Environmental Assurance FY 2 - LOE Labor	01-Oct-14 A	30-Sep-15 A	100%	252	2700.00	\$231,615.00	\$0.00	\$231,615.00									
	PMOC-0%	Safety and Environmental Assurance FY 3 - LOE Labor	01-Oct-15 A	30-Sep-16 A	100%	254	2700.00	\$239,715.00	\$0.00	\$239,715.00									
PMOC-0%	Safety and Environmental Assurance FY 4 - LOE Labor	01-Oct-16 A	31-Oct-16 A	100%	21	298.20	\$25,893.00	\$0.00	\$25,893.00										
PMOC-0%	Safety and Environmental Assurance FY 4 - LOE Labor	01-Nov-16 A	28-Feb-17 A	100%	82	1186.13	\$102,992.00	\$0.00	\$102,992.00										
PMOC-0%	Safety and Environmental Assurance FY 5 - LOE Labor	02-Oct-17 A	28-Sep-18 A	100%	253	3088.08	\$270,847.00	\$0.00	\$270,847.00										
PMOC-0%	Safety and Environmental Assurance FY 6 - LOE Labor	01-Oct-18 A	30-Sep-19	67%	254	2775.00	\$245,643.00	\$0.00	\$245,643.00	129									
PMOC-0%	Safety and Environmental Assurance FY 7 - LOE Labor	01-Oct-19	30-Sep-20	0%	254	2700.00	\$245,781.00	\$0.00	\$245,781.00	129									
PMOC-0%	Safety and Environmental Assurance FY 8 - LOE Labor	01-Oct-20	30-Sep-21	0%	254	1716.88	\$171,395.72	\$0.00	\$171,395.72	129									
PMOC-0%	Safety and Environmental Assurance FY 8 - LOE Labor	01-Oct-21	31-Mar-22	0%	126	851.68	\$87,999.69	\$0.00	\$87,999.69	129									
PMOC-0%	Safety and Environmental Assurance FY 1 - LOE NonLabor	01-Sep-14 A	29-Apr-15 A	100%	42	0.00	\$0.00	\$29,244.52	\$29,244.52										
PMOC-0%	Safety and Environmental Assurance FY 2 - LOE NonLabor	30-Apr-15 A	30-Sep-15 A	100%	252	0.00	\$0.00	\$106,593.41	\$106,593.41										
PMOC-0%	Safety and Environmental Assurance FY 3 - LOE NonLabor	01-Oct-15 A	30-Sep-16 A	100%	254	0.00	\$0.00	\$77,940.64	\$77,940.64										
PMOC-0%	Safety and Environmental Assurance FY 3 - LOE NonLabor	01-Oct-15 A	30-Sep-16 A	100%	254	0.00	\$0.00	\$33,435.00	\$33,435.00										
PMOC-0%	Safety and Environmental Assurance FY 4 - LOE NonLabor	01-Oct-16 A	31-Oct-16 A	100%	21	0.00	\$0.00	\$6,760.89	\$6,760.89										
PMOC-0%	Safety and Environmental Assurance FY 4 - LOE NonLabor	03-Oct-16 A	29-Sep-17 A	100%	254	0.00	\$0.00	\$34,605.30	\$34,605.30										
PMOC-0%	Safety and Environmental Assurance FY 5 - LOE NonLabor	02-Oct-17 A	28-Sep-18 A	100%	253	0.00	\$0.00	\$89,624.23	\$89,624.23										
PMOC-0%	Safety and Environmental Assurance FY 5 - LOE NonLabor	02-Oct-17 A	28-Sep-18 A	100%	253	0.00	\$0.00	\$35,816.38	\$35,816.38										

## LSST May 2019 Month End Forecast

Activity ID	Activity Name	Start	Finish	Physical % Complete	Original Duration	Budgeted Labor Units	Budgeted Labor Cost	Budgeted Material Cost	Budgeted Total Cost no	Total Float		FY2015 2014-10-01	FY2016 2015-10-01	FY2017 2016-10-01	FY2018 2017-10-01	FY2019 2018-10-01	FY2020 2019-10-01	FY2021 2020-10-01	FY2022 2021-10-01								
	PMOC-00	Safety and Environmental Assurance FY 6 - LOE No	01-Oct-18 A	29-Mar-19 A	100%	125	0.00	\$0.00	\$45,012.82	\$45,012.82																	
	PMOC-00	Safety and Environmental Assurance FY 6 - LOE No	01-Oct-18 A	30-Sep-19	67%	254	0.00	\$0.00	\$37,070.10	\$37,070.10	255																
	PMOC-00	Safety and Environmental Assurance FY 7 - LOE No	01-Oct-19	30-Sep-20	0%	254	0.00	\$0.00	\$88,838.09	\$88,838.09	255																
	PMOC-00	Safety and Environmental Assurance FY 7 - LOE No	01-Oct-19	30-Sep-20	0%	254	0.00	\$0.00	\$38,367.60	\$38,367.60	255																
	PMOC-00	Safety and Environmental Assurance FY 8 - LOE No	01-Oct-20	30-Sep-21	0%	254	0.00	\$0.00	\$112,613.48	\$112,613.48	255																
	PMOC-00	Safety and Environmental Assurance FY 8 - LOE No	01-Oct-20	30-Sep-21	0%	254	0.00	\$0.00	\$44,630.27	\$44,630.27	255																
	LSST ME 19-05.01C.04 Facility and Staff Administration				01-Aug-14 A	31-Mar-22		1943	0.00	\$0.00	\$4,391,444.15	\$4,391,444.15	129														
	LSST ME 19-05.01C.04.01 Facility				01-Dec-14 A	31-Mar-22		1943	0.00	\$0.00	\$3,752,145.00	\$3,752,145.00	129														
	PMOC-01	Facilities FY 1	01-Dec-14 A	31-Dec-14 A	100%	42	0.00	\$0.00	\$61,800.00	\$61,800.00			Facilities FY 1														
	PMOC-01	Facilities FY 1	01-Dec-14 A	31-Dec-14 A	100%	42	0.00	\$0.00	\$180,967.00	\$180,967.00			Facilities FY 1														
PMOC-01	Facilities FY 2	01-Jan-15 A	30-Sep-15 A	100%	252	0.00	\$0.00	\$377,299.30	\$377,299.30				Facilities FY 2														
PMOC-01	Facilities FY 2	01-Jan-15 A	30-Sep-15 A	100%	252	0.00	\$0.00	\$116,015.85	\$116,015.85				Facilities FY 2														
PMOC-01	Facilities FY 3	01-Oct-15 A	30-Sep-16 A	100%	254	0.00	\$0.00	\$438,888.11	\$438,888.11					Facilities FY 3													
PMOC-01	Facilities FY 3	01-Oct-15 A	30-Sep-16 A	100%	254	0.00	\$0.00	\$1,010.00	\$1,010.00					Facilities FY 3													
PMOC-01	Facilities FY 4	01-Oct-16 A	31-Mar-17 A	100%	126	0.00	\$0.00	\$222,041.28	\$222,041.28						Facilities FY 4												
PMOC-01	Facilities FY 4	03-Apr-17 A	29-Sep-17 A	100%	128	0.00	\$0.00	\$222,041.27	\$222,041.27							Facilities FY 4											
PMOC-01	Facilities FY 4	01-Feb-18 A	28-Feb-18 A	100%	18	0.00	\$0.00	\$482,107.94	\$482,107.94																		
PMOC-01	Facilities FY 5	02-Oct-17 A	28-Sep-18 A	100%	253	0.00	\$0.00	\$423,859.26	\$423,859.26							Facilities FY 5											
PMOC-01	Facilities FY 6	01-Oct-18 A	30-Sep-19	67%	254	0.00	\$0.00	\$375,000.00	\$375,000.00	129							Facilities FY 6										
PMOC-01	Facilities FY 7	01-Oct-19	30-Sep-20	0%	254	0.00	\$0.00	\$299,999.95	\$299,999.95	129								Facilities FY 7									
PMOC-01	Facilities FY 8	01-Oct-20	30-Sep-21	0%	254	0.00	\$0.00	\$275,000.00	\$275,000.00	129									Facilities FY 8								
PMOC-01	Facilities FY 9	01-Oct-21	31-Mar-22	0%	126	0.00	\$0.00	\$225,105.04	\$225,105.04	129									Facilities FY 9								
PMOC-01	Facilities FY 8	01-Oct-20	20-Aug-21	0%	226	0.00	\$0.00	\$51,010.00	\$51,010.00	283									Facilities FY 8								
LSST ME 19-05.01C.04.02 Staff Administration				01-Aug-14 A	30-Sep-16 A		524	0.00	\$0.00	\$639,299.15	\$639,299.15																
PMOC-01	Recruit PMO 2	07-Nov-14 A	28-Nov-14 A	100%	40	0.00	\$0.00	\$22,207.52	\$22,207.52			Recruit PMO 2															
PMOC-01	Relocate PMO 1*	02-Sep-14 A	28-Jul-15 A	100%	20	0.00	\$0.00	\$11,632.51	\$11,632.51				Relocate PMO 1*														
PMOC-01	Recruit PMO 3	02-Sep-14 A	01-Oct-14 A	100%	50	0.00	\$0.00	\$17,027.47	\$17,027.47			Recruit PMO 3															
PMOC-01	Relocate TS 1*	01-Aug-14 A	21-Apr-15 A	100%	20	0.00	\$0.00	\$11,632.51	\$11,632.51				Relocate TS 1*														
PMOC-01	Recruit TS 3	01-Oct-14 A	27-Feb-15 A	100%	40	0.00	\$0.00	\$22,207.52	\$22,207.52				Recruit TS 3														
PMOC-01	Recruit TS 9*	01-Dec-14 A	31-Dec-14 A	100%	10	0.00	\$0.00	\$16,920.02	\$16,920.02				Recruit TS 9*														
PMOC-01	Recruit TS 10	01-Aug-14 A	28-Apr-15 A	100%	40	0.00	\$0.00	\$22,207.52	\$22,207.52				Recruit TS 10														
PMOC-01	Recruit TS 11	01-Sep-14 A	15-May-15 A	100%	28	0.00	\$0.00	\$23,088.94	\$23,088.94				Recruit TS 11														
PMOC-01	Recruit TS 17	01-Oct-14 A	31-Oct-14 A	100%	32	0.00	\$0.00	\$23,088.94	\$23,088.94																		
PMOC-01	Recruit TS 18	02-May-16 A	30-Sep-16 A	100%	34	0.00	\$0.00	\$23,689.18	\$23,689.18																		
PMOC-01	Recruit EPO 1	01-Dec-14 A	31-Mar-16 A	100%	36	0.00	\$0.00	\$23,088.94	\$23,088.94																		
PMOC-01	Recruit LS 4	01-Aug-14 A	29-May-15 A	100%	20	0.00	\$0.00	\$22,207.52	\$22,207.52				Recruit LS 4														
PMOC-01	Recruit TS 12	29-Jul-15 A	10-Aug-15 A	100%	36	0.00	\$0.00	\$23,088.94	\$23,088.94					Recruit TS 12													
PMOC-01	Recruit TS 13	02-Sep-14 A	30-Sep-14 A	100%	36	0.00	\$0.00	\$23,088.94	\$23,088.94					Recruit TS 13													
PMOC-01	Recruit TS 15	02-Feb-15 A	22-May-15 A	100%	35	0.00	\$0.00	\$23,088.94	\$23,088.94					Recruit TS 15													
PMOC-01	Recruit TS 19	01-Sep-15 A	30-Sep-16 A	100%	18	0.00	\$0.00	\$23,088.94	\$23,088.94																		
PMOC-01	Recruit TS 23	01-Mar-16 A	31-Mar-16 A	100%	38	0.00	\$0.00	\$22,346.69	\$22,346.69					Recruit TS 23													
PMOC-01	Recruit EPO 10	01-Sep-16 A	30-Sep-16 A	100%	24	0.00	\$0.00	\$23,689.18	\$23,689.18																		
PMOC-01	Recruit EPO 2	01-Sep-16 A	30-Sep-16 A	100%	32	0.00	\$0.00	\$23,088.94	\$23,088.94																		
PMOC-01	Recruit EPO 3	01-Sep-16 A	30-Sep-16 A	100%	32	0.00	\$0.00	\$23,088.94	\$23,088.94																		
PMOC-01	Recruit LS 1	14-Jul-15 A	31-Aug-15 A	100%	31	0.00	\$0.00	\$23,088.94	\$23,088.94					Recruit LS 1													
PMOC-01	Recruit PR 1*	01-Aug-14 A	01-Dec-14 A	100%	20	0.00	\$0.00	\$16,920.02	\$16,920.02				Recruit PR 1*														
PMOC-01	Recruit PR 2	15-Aug-14 A	01-Dec-14 A	100%	40	0.00	\$0.00	\$22,383.81	\$22,383.81				Recruit PR 2														
PMOC-01	Recruit PR 3	01-Dec-14 A	03-Aug-15 A	100%	40	0.00	\$0.00	\$22,383.81	\$22,383.81					Recruit PR 3													
PMOC-01	Recruit PR 4	03-Aug-15 A	31-Aug-15 A	100%	30	0.00	\$0.00	\$23,088.94	\$23,088.94						Recruit PR 4												
PMOC-01	Recruit PR 5	01-Mar-16 A	31-Mar-16 A	100%	30	0.00	\$0.00	\$23,088.94	\$23,088.94							Recruit PR 5											
PMOC-01	Recruit UW 1*	01-Aug-14 A	01-Aug-15 A	100%	20	0.00	\$0.00	\$16,920.02	\$16,920.02					Recruit UW 1*													
PMOC-01	Recruit UW 2	01-Aug-14 A	29-May-15 A	100%	40	0.00	\$0.00	\$22,383.81	\$22,383.81					Recruit UW 2													
PMOC-01	Recruit UW 3	15-Dec-14 A	31-Aug-15 A	100%	40	0.00	\$0.00	\$22,383.81	\$22,383.81						Recruit UW 3												
PMOC-01	Recruit UW 4	01-May-15 A	29-May-15 A	100%	30	0.00	\$0.00	\$23,088.94	\$23,088.94							Recruit UW 4											
LSST ME 19-05.01C.05 AURA				01-Aug-14 A	31-Mar-22		1943	0.00	\$0.00	\$8,848,014.67	\$8,848,014.67	129															
LSST ME 19-05.01C.05.01 AURA				01-Aug-14 A	31-Mar-22		1943	0.00	\$0.00	\$8,848,014.67	\$8,848,014.67	129															
PMOC-04	Financial and Legal Oversight FY 1 - LOE	01-Dec-14 A	31-Dec-14 A	100%	42	0.00	\$0.00	\$222,851.00	\$222,851.00			Financial and Legal Oversight FY 1 - LOE															
PMOC-04	Financial and Legal Oversight FY 2 - LOE	01-Dec-14 A	30-Sep-15 A	100%	252	0.00	\$0.00	\$1,315,914.80	\$1,315,914.80				Financial and Legal Oversight FY 2 - LOE														
PMOC-04	Financial and Legal Oversight FY 3 - LOE	01-Oct-15 A	29-Apr-16 A	100%	125	0.00	\$0.00	\$930,626.65	\$930,626.65					Financial and Legal Oversight FY 3 - LOE													
PMOC-04	Financial and Legal Oversight FY 4 - LOE	30-Sep-16 A	29-Sep-17 A	100%	254	0.00	\$0.00	\$1,626,877.18	\$1,626,877.18						Financial and Legal Oversight FY 4 - LOE												
PMOC-04	Financial and Legal Oversight FY 5 - LOE	02-Oct-17 A	28-Sep-18 A	100%	253	0.00	\$0.00	\$2,256,164.99	\$2,256,164.99							Financial and Legal Oversight FY 5 - LOE											
PMOC-04	Financial and Legal Oversight FY 6 - LOE	01-Oct-18 A	30-Sep-19	67%	254	0.00	\$0.00	\$900,000.00	\$900,000.00	129							Financial and Legal Oversight FY 6 - LOE										
PMOC-04	Financial and Legal Oversight FY 7 - LOE	01-Oct-19	30-Sep-20	0%	254	0.00	\$0.00	\$700,000.00	\$700,000.00	129								Financial and Legal Oversight FY 7 - LOE									
PMOC-04	Financial and Legal Oversight FY 8 - LOE	01-Oct-20	30-Sep-21	0%	254	0.00	\$0.00	\$559,995.51	\$559,995.51	129									Financial and Legal Oversight FY 8 - LOE								
PMOC-04	CAS Management and IT Fee FY 1 - LOE	01-Aug-14 A	30-Sep-14 A	100%	42	0.00	\$0.00	\$57,791.50	\$57,791.50			CAS Management and IT Fee FY 1 - LOE															
PMOC-04	Financial and Legal Oversight FY 9 - LOE	01-Oct-21	31-Mar-22	0%	126	0.00	\$0.00	\$277,793.05	\$277,793.05	129									Financial and Legal Oversight FY 9 - LOE								
LSST ME 19-05.02C Data Management Construct				01-Aug-14 A	31-Aug-22		2051	713727.63	\$94,895,585.50	\$52,317,904.99	\$147,213,490.49	278															
LSST ME 19-05.02C.00 DM Level 2 Milestones				01-Aug-14 A	31-Aug-22		2051	0.00	\$0.00	\$0.00	\$0.00	21															
DLP-526	Archive Center Integration Complete		28-Oct-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	360																	
DLP-528	Archive Site Ready for Equipment Configuration	01-Oct-15 A		100%	0	0.00	\$0.00	\$0.00	\$0.00																		
DLP-533	Base Center Integration Complete		15-Sep-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	-7																	
DLP-538	LSE-130 Data Items Exchanged between Cam & DM		31-May-17 A	100%	0	0.00	\$0.00	\$0.00	\$0.00																		
												◆ Archive Center Integration Complete															
												◆ Archive Site Ready for Equipment Configuration															
												◆ Base Center Integration Complete															
												◆ LSE-130 Data Items Exchanged between Cam & DM - Phase 3															

## LSST May 2019 Month End Forecast

Activity Name		Start	Finish	Physical % Complete	Original Duration	Budgeted Labor Units	Budgeted Labor Cost	Budgeted Material Cost	Budgeted Total Cost no	Total Float	FY2015 2014-10-01	FY2016 2015-10-01	FY2017 2016-10-01	FY2018 2017-10-01	FY2019 2018-10-01	FY2020 2019-10-01	FY2021 2020-10-01	FY2022 2021-10-01	
LSST DM B	DLP-541	LSE-68 Camera-DM Image data interfaces - Phase		31-Oct-16 A	100%	0	0.00	\$0.00	\$0.00				LSE-68 Camera-DM Image data interfaces - Phase 3						
	DLP-544	LSE-72 OCS-DM master interface - Phase 3		31-Oct-16 A	100%	0	0.00	\$0.00	\$0.00	\$0.00			LSE-72 OCS-DM master interface - Phase 3						
	DLP-551	LSST Software Release 8.1 Complete, Ready for Co		12-Jul-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00									
	DLP-552	LSST Software Release 9.1 Complete, Ready for Fu		27-Nov-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	67								
	DLP-554	LSST Software Release 4.0 Complete		30-Sep-14 A	100%	0	0.00	\$0.00	\$0.00	\$0.00		LSST Software Release 4.0 Complete							
	DLP-555	LSST Software Release 5.0 Complete		06-Mar-15 A	100%	0	0.00	\$0.00	\$0.00	\$0.00		LSST Software Release 5.0 Complete							
	DLP-556	LSST Software Release 5.1 Complete		01-Sep-15 A	100%	0	0.00	\$0.00	\$0.00	\$0.00			LSST Software Release 5.1 Complete						
	DLP-557	LSST Software Release 6.1 Complete		31-Aug-16 A	100%	0	0.00	\$0.00	\$0.00	\$0.00				LSST Software Release 6.1 Complete					
	DLP-558	LSST Software Release 7.1 Complete		31-Aug-17 A	100%	0	0.00	\$0.00	\$0.00	\$0.00					LSST Software Release 7.1 Complete				
	DLP-559	Mountain - Base Network Functional 1 Gbps		01-Jun-15 A	100%	0	0.00	\$0.00	\$0.00	\$0.00		Mountain - Base Network Functional 1 Gbps							
	DLP-566	LSST Software Release 6.0 Complete		12-Jul-16 A	100%	0	0.00	\$0.00	\$0.00	\$0.00				LSST Software Release 6.0 Complete					
	DLP-567	LSST Software Release 7.0 Complete		28-Feb-17 A	100%	0	0.00	\$0.00	\$0.00	\$0.00				LSST Software Release 7.0 Complete					
	DM-STAFF	Staffing Checkpoint		27-Nov-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	375					Staffing Checkpoint			
	DMTC-0000	DM 6.0 Completion Delay	01-Mar-16 A	15-Mar-16 A	100%	11	0.00	\$0.00	\$0.00	\$0.00									
	DMTC-0000	LSST Software Release X16 Complete		12-Jul-16 A	100%	0	0.00	\$0.00	\$0.00	\$0.00			DM 6.0 Completion Delay						
	DMTC-0000	LSST Software Release F16 Complete		30-Nov-16 A	100%	0	0.00	\$0.00	\$0.00	\$0.00				LSST Software Release X16 Complete					
	DMTC-0000	LSST Software Release S17 Complete		31-May-17 A	100%	0	0.00	\$0.00	\$0.00	\$0.00					LSST Software Release F16 Complete				
	DMTC-0100	LSST Software Construction	01-Aug-14 A	27-Jun-22	52%	1944	0.00	\$0.00	\$0.00	\$0.00	67								LSST
	DMTC-0100	DM Base and Archive Center Development	16-Jul-15 A	27-Jun-22	45%	1917	0.00	\$0.00	\$0.00	\$0.00	67								DM B
	DMTC-0100	Long-Haul Networks Development	01-Aug-14 A	27-Nov-19	80%	1351	0.00	\$0.00	\$0.00	\$0.00	195					Long-Haul Networks Development			
	DMTC-0100	Interface Control Document Development	31-Oct-16 A	31-Aug-18 A	100%	827	0.00	\$0.00	\$0.00	\$0.00					Interface Control Document Development				
	F17F	F17 Complete		30-Nov-17 A	100%	0	0.00	\$0.00	\$0.00	\$0.00									
	F17S	F17 Start	01-Jun-17 A		100%	0	0.00	\$0.00	\$0.00	\$0.00				F17 Start					
	F18F	F18 Complete		30-Nov-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00				F17 Complete					
	F18S	F18 Start	01-Jun-18 A		100%	0	0.00	\$0.00	\$0.00	\$0.00					F18 Complete				
	F19F	F19 Complete		27-Nov-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	67								
	F19S	F19 Start	03-Jun-19		0%	0	0.00	\$0.00	\$0.00	\$0.00	193					F19 Start			
	F20F	F20 Complete		30-Nov-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	86								
	F20S	F20 Start	02-Dec-19		0%	0	0.00	\$0.00	\$0.00	\$0.00	271						F20 Start		
	F21F	F21 Complete		30-Nov-21	0%	0	0.00	\$0.00	\$0.00	\$0.00	86								
	F21S	F21 Start	01-Dec-20		0%	0	0.00	\$0.00	\$0.00	\$0.00	340							F21 Start	
	LDM-503-01	Test report: Science Platform with WISE data in PDAC		30-May-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00									
	LDM-503-02	Test report: HSC reprocessing		01-Dec-17 A	100%	0	0.00	\$0.00	\$0.00	\$0.00			Test report: Science Platform with WISE data in PDAC						
	LDM-503-03	Test report: Alert generation validation		01-Dec-17 A	100%	0	0.00	\$0.00	\$0.00	\$0.00			Test report: HSC reprocessing						
	LDM-503-04	Test report: Aux Tel DAQ integration functionality tes		29-Jun-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00			Test report: Alert generation validation						
	LDM-503-04b	Test report: Aux Tel DAQ interface Integration Verific		29-Jun-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00				Test report: Aux Tel DAQ integration functionality test					
	LDM-503-05	Test report: Alert distribution validation		17-Jul-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00				Test report: Aux Tel DAQ interface Integration Verification and Spectrograph Operations Rehearsal					
	LDM-503-06	Test report: DM ComCam interface verification readi		01-Sep-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	1			Test report: Alert distribution validation					
	LDM-503-07	Test report: Camera data processing		17-Jan-19 A	100%	0	0.00	\$0.00	\$0.00	\$0.00						Test report: DM ComCam interface verification readiness			
	LDM-503-08	Test report: Spectrograph data acquisition		03-Mar-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	131					Test report: Camera data processing			
	LDM-503-08b	Test report: Verification Tests for Small Scale CCOB		07-Jun-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	314					Test report: Spectrograph data acquisition			
	LDM-503-09	Test report: Ops rehearsal for commissioning #1		01-Apr-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	110					Test report: Verification Tests for Small Scale CCOB Data Access			
	LDM-503-09a	Test report: Pipelines Release Fall 2018		12-Apr-19 A	100%	0	0.00	\$0.00	\$0.00	\$0.00						Test report: Ops rehearsal for commissioning #1			
	LDM-503-10	Test report: DAQ validation		01-Sep-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	1					Test report: Pipelines Release Fall 2018			
	LDM-503-10a	Test report: LSP		24-Sep-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	239					Test report: DAQ validation			
	LDM-503-10b	Test report: Verification Tests for Large Scale CCOB		06-Dec-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	188					Test report: LSP			
	LDM-503-11	Ops rehearsal for commissioning #2		01-Sep-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	1					Test report: Verification Tests for Large Scale CCOB Data Access			
	LDM-503-11a	ComCam Ops Readiness		12-Mar-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	169					Ops rehearsal for commissioning #2			
	LDM-503-11b	Test report: Pipelines Release Fall 2019		12-Mar-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	125					ComCam Ops Readiness			
	LDM-503-12	Ops rehearsal for commissioning #3		03-Nov-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	1					Test report: Pipelines Release Fall 2019			
LDM-503-12a	LSSTCam Ops Readiness		05-Feb-21	0%	0	0.00	\$0.00	\$0.00	\$0.00	294					Ops rehearsal for commissioning #3				
LDM-503-13	Ops rehearsal for data release processing #1 (Com		05-Feb-21	0%	0	0.00	\$0.00	\$0.00	\$0.00	77					LSSTCam Ops Readiness				
LDM-503-13a	Test report: Pipelines Release Fall 2020		05-Feb-21	0%	0	0.00	\$0.00	\$0.00	\$0.00	77					Ops rehearsal for data release processing #1				
LDM-503-14	Test report: DM Readiness for Science Verification		05-Feb-21	0%	0	0.00	\$0.00	\$0.00	\$0.00	77					Test report: Pipelines Release Fall 2020				
LDM-503-15	Ops rehearsal for data release processing #2		29-Nov-21	0%	0	0.00	\$0.00	\$0.00	\$0.00	215					Ops rehearsal for data release processing #2				
LDM-503-15a	Test report: Pipelines Release Fall 2021		28-Oct-21	0%	0	0.00	\$0.00	\$0.00	\$0.00	21					Test report: DM Readiness for Science Verifi				
LDM-503-16	Ops rehearsal for data release processing #3		29-Nov-21	0%	0	0.00	\$0.00	\$0.00	\$0.00	215					Ops rehearsal for data release processing #3				
LDM-503-17	Final operations rehearsal		31-Aug-22	0%	0	0.00	\$0.00	\$0.00	\$0.00	21					Test report: Pipelines R				
LDM-503-17a	Test report: Final Pipelines Delivery		31-Aug-22	0%	0	0.00	\$0.00	\$0.00	\$0.00	21					Ops rehearsal				
LSST-1160	Header Service Integration		31-Mar-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00										
LSST-1190	Control Interfaces Verification: Single Visit		30-Mar-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00										
LSST-1200	Interface Verification: Single Visit		05-Apr-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00										
LSST-1220	EFD ETL Under DM Control		29-Mar-19 A	100%	0	0.00	\$0.00	\$0.00	\$0.00										
S17F	S17 Complete		31-May-17 A	100%	0	0.00	\$0.00	\$0.00	\$0.00				S17 Complete						
S17S	S17 Start	01-Dec-16 A		100%	0	0.00	\$0.00	\$0.00	\$0.00			S17 Start							
S18F	S18 Complete		31-May-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00										
S18S	S18 Start	01-Dec-17 A		100%	0	0.00	\$0.00	\$0.00	\$0.00				S18 Complete						
S19F	S19 Complete		31-May-19 A	100%	0	0.00	\$0.00	\$0.00	\$0.00				S18 Start						
S19S	S19 Start	01-Dec-18 A		100%	0	0.00	\$0.00	\$0.00	\$0.00						S19 Complete				
S20F	S20 Complete		29-May-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	86					S19 Start				
S20S	S20 Start	03-Jun-19		0%	0	0.00	\$0.00	\$0.00	\$0.00	337						S20 Complete			
S21F	S21 Complete		31-May-21	0%	0	0.00	\$0.00	\$0.00	\$0.00	280							S21 Complete		



LSST May 2019 Month End Forecast												FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022
Activity ID	Activity Name		Start	Finish	Physical % Complete	Original Duration	Budgeted Labor Units	Budgeted Labor Cost	Budgeted Material Cost	Budgeted Total Cost no	Total Float	2014-10-01	2015-10-01	2016-10-01	2017-10-01	2018-10-01	2019-10-01	2020-10-01	2021-10-01
	S21S	S21 Start	01-Jun-20		0%	0	0.00	\$0.00	\$0.00	\$0.00	534								
	S22F	S22 Complete		31-May-22	0%	0	0.00	\$0.00	\$0.00	\$0.00	86								
	S22S	S22 Start	01-Jun-21		0%	0	0.00	\$0.00	\$0.00	\$0.00	280								
	LSST ME 19-05.02C.01 System Management		01-Aug-14 A	31-Mar-22		1943	19866.63	\$2,982,100.17	\$3,955,868.67	\$6,937,968.84	129								
	LSST ME 19-05.02C.01.01 Project Management		01-Sep-14 A	31-Mar-22		1943	11637.12	\$2,148,088.71	\$3,840,658.67	\$5,988,747.38	129								
	DMTC-02	DM System Mgmt Y1 - LOE - FY14 - Labor	01-Sep-14 A	30-Sep-14 A	100%	21	150.00	\$17,599.50	\$0.00	\$17,599.50									
	DMTC-02	DM System Mgmt Y2 - LOE - FY15 - Labor	02-Oct-14 A	27-Feb-15 A	100%	101	746.00	\$92,384.64	\$0.00	\$92,384.64									
	DMTC-02	DM System Mgmt Y2 - LOE - FY15 - Labor	02-Mar-15 A	01-Sep-15 A	100%	130	900.00	\$111,456.00	\$0.00	\$111,456.00									
	DMTC-02	DM System Mgmt Y3 - LOE - FY16 - Labor	01-Sep-15 A	29-Feb-16 A	100%	123	900.00	\$114,687.66	\$0.00	\$114,687.66									
	DMTC-02	DM System Mgmt Y3 - LOE - X16 - Labor	01-Mar-16 A	31-May-16 A	100%	66	450.00	\$83,560.50	\$0.00	\$83,560.50									
	DMTC-02	DM System Mgmt Y3 - LOE - F16 - Labor	01-Jun-16 A	31-Aug-16 A	100%	65	447.06	\$83,014.77	\$0.00	\$83,014.77									
	DMTC-02	DM System Mgmt Y4 - LOE - F16B - Labor	01-Sep-16 A	30-Nov-16 A	100%	62	310.61	\$59,012.64	\$0.00	\$59,012.64									
	DMTC-02	DM System Mgmt Y4 - LOE - S17 - Labor	01-Dec-16 A	01-Feb-17 A	100%	43	600.00	\$125,286.00	\$0.00	\$125,286.00									
	DMTC-02	DM System Mgmt Y5 - LOE - F17 - Labor	03-Apr-17 A	29-Sep-17 A	100%	128	1000.00	\$174,870.00	\$0.00	\$174,870.00									
	DMTC-02	DM System Mgmt Y5 - LOE - S18 - Labor	02-Oct-17 A	31-Mar-18 A	100%	125	900.00	\$179,739.00	\$0.00	\$179,739.00									
	DMTC-02	DM System Mgmt Y6 - LOE - F18 - Labor	02-Apr-18 A	28-Sep-18 A	100%	128	900.00	\$179,739.00	\$0.00	\$179,739.00									
	DMTC-02	DM System Mgmt Y6 - LOE - FY19A - Labor	01-Oct-18 A	29-Mar-19 A	100%	125	1560.80	\$322,617.36	\$0.00	\$322,617.36									
	DMTC-02	DM System Mgmt Y7 - LOE - FY19B - Labor	01-Apr-19 A	30-Sep-19	33%	129	675.00	\$139,522.50	\$0.00	\$139,522.50	129								
	DMTC-02	DM System Mgmt Y7 - LOE - FY20A - Labor	01-Oct-19	31-Mar-20	0%	124	300.00	\$64,179.00	\$0.00	\$64,179.00	129								
	DMTC-02	DM System Mgmt Y8 - LOE - FY20B - Labor	01-Apr-20	30-Sep-20	0%	130	300.00	\$64,179.00	\$0.00	\$64,179.00	129								
	DMTC-02	DM System Mgmt Y8 - LOE - FY21 - Labor	01-Oct-20	30-Sep-21	0%	254	900.00	\$199,278.00	\$0.00	\$199,278.00	129								
	DMTC-02	DM System Mgmt Y8 - LOE - FY22 - Labor	01-Oct-21	31-Mar-22	0%	126	597.65	\$136,963.14	\$0.00	\$136,963.14	129								
	DMTC-02	DM System Mgmt Y1 - LOE - FY14 - NonLabor	01-Sep-14 A	30-Sep-14 A	100%	42	0.00	\$0.00	\$0.00	\$0.00									
	DMTC-02	DM System Mgmt Y2 - LOE - FY15 - NonLabor	01-Oct-14 A	30-Sep-15 A	100%	252	0.00	\$0.00	\$437,355.51	\$437,355.51									
	DMTC-02	DM System Mgmt Y3 - LOE - FY16A - NonLabor	01-Oct-15 A	30-Sep-16 A	100%	254	0.00	\$0.00	\$314,560.79	\$314,560.79									
	DMTC-02	DM System Mgmt Y3 - LOE - FY16B - NonLabor	01-Oct-15 A	30-Sep-16 A	100%	254	0.00	\$0.00	\$110,250.24	\$110,250.24									
	DMTC-02	DM System Mgmt Y4 - LOE - FY17A - NonLabor	03-Oct-16 A	29-Sep-17 A	100%	254	0.00	\$0.00	\$324,353.76	\$324,353.76									
	DMTC-02	DM System Mgmt Y4 - LOE - FY17B - NonLabor	03-Oct-16 A	29-Sep-17 A	100%	254	0.00	\$0.00	\$184,277.30	\$184,277.30									
	DMTC-02	DM System Mgmt Y5 - LOE - FY18A - NonLabor	02-Oct-17 A	28-Sep-18 A	100%	253	0.00	\$0.00	\$234,079.00	\$234,079.00									
	DMTC-02	DM System Mgmt Y5 - LOE - FY18B - NonLabor	02-Oct-17 A	28-Sep-18 A	100%	253	0.00	\$0.00	\$190,514.46	\$190,514.46									
	DMTC-02	DM System Mgmt Y6 - LOE - FY19A - NonLabor	01-Oct-18 A	30-Sep-19	67%	254	0.00	\$0.00	\$788,284.12	\$788,284.12	129								
	DMTC-02	DM System Mgmt Y6 - LOE - FY19B - NonLabor	01-Oct-18 A	30-Sep-19	67%	254	0.00	\$0.00	\$278,788.81	\$278,788.81	255								
	DMTC-02	DM System Mgmt Y7 - LOE - FY20A - NonLabor	01-Oct-19	30-Sep-20	0%	254	0.00	\$0.00	\$446,871.20	\$446,871.20	129								
	DMTC-02	DM System Mgmt Y7 - LOE - FY20B - NonLabor	01-Oct-19	30-Sep-20	0%	254	0.00	\$0.00	\$208,011.23	\$208,011.23	255								
	DMTC-02	DM System Mgmt Y8 - LOE - FY21A - NonLabor	01-Oct-20	30-Sep-21	0%	254	0.00	\$0.00	\$290,158.22	\$290,158.22	129								
	DMTC-02	DM System Mgmt Y8 - LOE - FY21B - NonLabor	01-Oct-20	30-Sep-21	0%	254	0.00	\$0.00	\$26,810.78	\$26,810.78	255								
	DMTC-02	DM System Mgmt - LOE - FY22 - NonLabor	01-Oct-21	31-Mar-22	0%	126	0.00	\$0.00	\$6,343.23	\$6,343.23	129								
	LSST ME 19-05.02C.01.02 [Legacy] Science Data Quality Inte		01-Aug-14 A	01-Jun-16 A		396	8229.50	\$834,011.46	\$115,210.00	\$949,221.46									
	DM-1137	doc-eval-tools	26-Aug-15 A	31-Aug-15 A	100%	7	97.20	\$7,875.73	\$0.00	\$7,875.73									
	DM-1138	doc-demo-tools	08-Oct-14 A	15-Oct-15 A	100%	2	19.45	\$1,508.57	\$0.00	\$1,508.57									
	DM-1139	doc-implement-tools	21-Sep-15 A	15-Mar-16 A	100%	60	252.00	\$18,379.62	\$0.00	\$18,379.62									
	DM-1140	ci-macosx-build-deploy	19-Aug-15 A	19-Aug-15 A	100%	1	2.00	\$189.84	\$0.00	\$189.84									
	DM-1141	ci-eval-ci	31-Mar-15 A	13-Jul-15 A	100%	7	104.55	\$8,575.75	\$0.00	\$8,575.75									
	DM-1142	ci-nightly-weekly	28-Jan-15 A	07-Aug-15 A	100%	2	12.45	\$1,181.75	\$0.00	\$1,181.75									
	DM-1143	ci-test-data	31-Aug-15 A	19-Jan-16 A	100%	4	52.55	\$7,404.46	\$0.00	\$7,404.46									
	DM-2047	SUI Investigate L3 data/tools requirements, evaluate	25-Aug-15 A	26-Aug-15 A	100%	66	120.00	\$22,478.96	\$0.00	\$22,478.96									
	DM-2050	sqre-metrics-infra-capture-one	21-Sep-15 A	01-Jun-16 A	100%	21	400.00	\$28,524.00	\$0.00	\$28,524.00									
	DM-2051	qa-visualise-images	20-Jan-16 A	10-Mar-16 A	100%	64	0.00	\$0.00	\$13,138.00	\$13,138.00									
	DM-2052	stack-green-build	20-Mar-15 A	20-Aug-15 A	100%	64	120.00	\$9,973.80	\$0.00	\$9,973.80									
	DM-205																		

LSST May 2019 Month End Forecast																			
Activity ID	Activity Name	Start	Finish	Physical % Complete	Original Duration	Budgeted Labor Units	Budgeted Labor Cost	Budgeted Material Cost	Budgeted Total Cost no	Total Float		FY2015 2014-10-01	FY2016 2015-10-01	FY2017 2016-10-01	FY2018 2017-10-01	FY2019 2018-10-01	FY2020 2019-10-01	FY2021 2020-10-01	FY2022 2021-10-01
	DMTC SDQA Pipeline R4.0	01-Aug-14 A	02-Sep-14 A	100%	22	0.00	\$0.00	\$0.00	\$0.00		■	SDQA Pipeline R4.0							
	DMTC SDQA Pipeline Scope Planning R5.0	02-Sep-14 A	29-Sep-14 A	100%	20	0.00	\$0.00	\$0.00	\$0.00		■	SDQA Pipeline Scope Planning R5.0							
	DMTC SDQA Pipeline Scope Planning R5.1	27-Feb-15 A	27-Feb-15 A	100%	20	10.00	\$949.20	\$0.00	\$949.20		■	SDQA Pipeline Scope Planning R5.1							
	LSST ME 19-05.02C.01.02.02 Science Data Quality Analyst	01-Aug-14 A	27-Feb-15 A		143	10.00	\$949.20	\$0.00	\$949.20										
	DMTC SDQA Toolkit R4.0	01-Aug-14 A	02-Sep-14 A	100%	22	0.00	\$0.00	\$0.00	\$0.00		■	SDQA Toolkit R4.0							
	DMTC SDQA Toolkit Scope Planning R5.0	02-Sep-14 A	29-Sep-14 A	100%	20	0.00	\$0.00	\$0.00	\$0.00		■	SDQA Toolkit Scope Planning R5.0							
	DMTC SDQA Toolkit Scope Planning R5.1	02-Feb-15 A	27-Feb-15 A	100%	20	10.00	\$949.20	\$0.00	\$949.20		■	SDQA Toolkit Scope Planning R5.1							
	LSST ME 19-05.02C.01.02.03 Science Pipeline Toolkit	01-Aug-14 A	27-Feb-15 A		143	10.00	\$949.20	\$0.00	\$949.20										
	DMTC Science Pipeline Toolkit R4.0	01-Aug-14 A	02-Sep-14 A	100%	22	0.00	\$0.00	\$0.00	\$0.00		■	Science Pipeline Toolkit R4.0							
	DMTC Science Pipeline Toolkit Scope Planning R5.0	02-Sep-14 A	29-Sep-14 A	100%	20	0.00	\$0.00	\$0.00	\$0.00		■	Science Pipeline Toolkit Scope Planning R5.0							
	DMTC Science Pipeline Toolkit Scope Planning R5.1	02-Feb-15 A	27-Feb-15 A	100%	20	10.00	\$949.20	\$0.00	\$949.20		■	Science Pipeline Toolkit Scope Planning R5.1							
	LSST ME 19-05.02C.02 Systems Engineering	01-Aug-14 A	31-Mar-22		1943	64410.61	\$9,500,444.73	\$0.00	\$9,500,444.73	129									
	LSST ME 19-05.02C.02.01 Data Management Science	02-Sep-14 A	30-Sep-21		1796	30792.22	\$3,812,556.09	\$0.00	\$3,812,556.09	255									
	DMTC-0E System Science - LOE - FY14 - Labor	02-Sep-14 A	30-Sep-14 A	100%	21	150.00	\$16,227.00	\$0.00	\$16,227.00		■	System Science - LOE - FY14 - Labor							
	DMTC-0E System Science - LOE - FY15A - Labor	01-Oct-14 A	27-Feb-15 A	100%	101	416.00	\$46,575.36	\$0.00	\$46,575.36		■	System Science - LOE - FY15A - Labor							
	DMTC-0E System Science - LOE - FY15B - Labor	02-Mar-15 A	01-Sep-15 A	100%	130	535.00	\$59,898.60	\$0.00	\$59,898.60		■	System Science - LOE - FY15B - Labor							
	DMTC-0E System Science - LOE - FY16A - Labor	01-Sep-15 A	29-Feb-16 A	100%	123	530.00	\$61,061.69	\$0.00	\$61,061.69		■	System Science - LOE - FY16A - Labor							
	DMTC-0E System Science - LOE - FY16B - Labor	01-Mar-16 A	31-Aug-16 A	100%	131	806.00	\$170,371.78	\$0.00	\$170,371.78		■	System Science - LOE - FY16B - Labor							
	DMTC-0E System Science - LOE - FY17A - Labor	01-Sep-16 A	28-Feb-17 A	100%	124	845.00	\$169,204.88	\$0.00	\$169,204.88		■	System Science - LOE - FY17A - Labor							
	DMTC-0E System Science - LOE - FY17B - Labor	01-Mar-17 A	31-Aug-17 A	100%	131	2650.00	\$302,456.88	\$0.00	\$302,456.88		■	System Science - LOE - FY17B - Labor							
	DMTC-0E System Science - LOE - FY18A - Labor	01-Sep-17 A	28-Feb-18 A	100%	123	3547.50	\$426,795.40	\$0.00	\$426,795.40		■	System Science - LOE - FY18A - Labor							
	DMTC-0E System Science - LOE - FY18B - Labor	01-Mar-18 A	31-Aug-18 A	100%	131	2651.00	\$313,375.56	\$0.00	\$313,375.56		■	System Science - LOE - FY18B - Labor							
	DMTC-0E System Science - LOE - FY19A - Labor	01-Sep-18 A	29-Mar-19 A	100%	144	7147.72	\$646,335.66	\$0.00	\$646,335.66		■	System Science - LOE - FY19A - Labor							
	DMTC-0E System Science - LOE - FY19B - Labor	01-Apr-19 A	30-Sep-19	33%	129	2115.00	\$252,522.90	\$0.00	\$252,522.90	255									
	DMTC-0E System Science - LOE - FY20A - Labor	01-Oct-19	31-Mar-20	0%	124	1224.00	\$192,039.48	\$0.00	\$192,039.48	255									
	DMTC-0E System Science - LOE - FY20B - Labor	01-Apr-20	30-Sep-20	0%	130	1250.00	\$201,621.00	\$0.00	\$201,621.00	255									
	DMTC-0E System Science - LOE - FY21 - Labor	01-Oct-20	30-Sep-21	0%	254	2005.00	\$228,563.10	\$0.00	\$228,563.10	255									
	DMTC-0E System Science - LOE - FY18 - Labor	01-May-18 A	28-Sep-18 A	100%	84	600.00	\$83,238.00	\$0.00	\$83,238.00		■	System Science - LOE - FY18 - Labor							
	DMTC-0E System Science - LOE - FY19A - Labor	01-Oct-18 A	29-Mar-19 A	100%	125	720.00	\$103,384.80	\$0.00	\$103,384.80		■	System Science - LOE - FY19A - Labor							
	DMTC-0E System Science - LOE - FY19B - Labor	01-Apr-19 A	30-Sep-19	33%	129	720.00	\$103,384.80	\$0.00	\$103,384.80	255									
	DMTC-0E System Science - LOE - FY20A - Labor	01-Oct-19	31-Mar-20	0%	124	720.00	\$106,999.20	\$0.00	\$106,999.20	255									
	DMTC-0E System Science - LOE - FY20B - Labor	01-Apr-20	30-Sep-20	0%	130	720.00	\$106,999.20	\$0.00	\$106,999.20	255									
	DMTC-0E System Science - LOE - FY21 - Labor	01-Oct-20	30-Sep-21	0%	254	1440.00	\$221,500.80	\$0.00	\$221,500.80	255									
	LSST ME 19-05.02C.02.02 DM System Architecture	01-Aug-14 A	31-Mar-22		1943	33618.39	\$5,687,888.65	\$0.00	\$5,687,888.65	129									
	DM-1228 SE - LSE-68: Bring pull interface to CCB approval	28-Oct-14 A	27-Aug-15 A	100%	4	14.00	\$2,762.34	\$0.00	\$2,762.34		■	SE - LSE-68: Bring pull interface to CCB approval							
	DM-1229 SE - LSE-68: Major phase-3 details (W15)	27-Aug-15 A	27-Aug-15 A	100%	11	21.00	\$4,143.51	\$0.00	\$4,143.51		■	SE - LSE-68: Major phase-3 details (W15)							
	DM-1230 SE - LSE-69: Bring Summer 2014 work to CCB app	28-Oct-14 A	13-Nov-14 A	100%	4	14.00	\$2,762.34	\$0.00	\$2,762.34		■	SE - LSE-69: Bring Summer 2014 work to CCB approval							
	DM-1231 SE - LSE-69: Phase 3 work (Summer 2015)	24-Aug-15 A	28-Aug-15 A	100%	5	40.00	\$7,892.40	\$0.00	\$7,892.40		■	SE - LSE-69: Phase 3 work (Summer 2015)							
	DM-1232 SE - LSE-72: Bring Summer 2014 work to CCB app	23-Jan-15 A	23-Jan-15 A	100%	2	12.00	\$2,367.72	\$0.00	\$2,367.72		■	SE - LSE-72: Bring Summer 2014 work to CCB approval							
	DM-1234 SE - LSE-72: Remaining Phase 2 details	28-Aug-15 A	28-Aug-15 A	100%	7	37.00	\$7,300.47	\$0.00	\$7,300.47		■	SE - LSE-72: Remaining Phase 2 details							
	DM-1235 SE - LSE-72: Phase 3 details	28-Aug-15 A	28-Aug-15 A	100%	7	37.00	\$7,300.47	\$0.00	\$7,300.47		■	SE - LSE-72: Phase 3 details							
	DM-1236 SE - LSE-75: Bring Summer 2014 work to CCB app	23-Jan-15 A	28-Aug-15 A	100%	4	14.00	\$2,762.34	\$0.00	\$2,762.34		■	SE - LSE-75: Bring Summer 2014 work to CCB approval							
	DM-1237 SE - LSE-75: Refine WCS and PSF requirements	31-Aug-15 A	31-Aug-15 A	100%	6	25.00	\$4,932.75	\$0.00	\$4,932.75		■	SE - LSE-75: Refine WCS and PSF requirements							
	DM-1238 SE - LSE-130: Bring Summer 2014 work to CCB app	28-Jan-15 A	31-Aug-15 A	100%	11	21.00	\$4,143.51	\$0.00	\$4,143.51		■	SE - LSE-130: Bring Summer 2014 work to CCB approval							
	DM-1239 SE - LSE-130: Make requests more quantitative	31-Aug-15 A	31-Aug-15 A	100%	9	48.00	\$9,470.88	\$0.00	\$9,470.88		■	SE - LSE-130: Make requests more quantitative							
	DM-1240 SE - LSE-140: Bring Summer 2014 work to CCB app	06-Oct-14 A	23-Jan-15 A	100%	4	14.00	\$2,762.34	\$0.00	\$2,762.34		■	SE - LSE-140: Bring Summer 2014 work to CCB approval							
	DM-1242 Risk Register refresh 1/2015	27-Aug-15 A	27-Aug-15 A	100%	2	12.00	\$2,367.72	\$0.00	\$2,367.72		■	Risk Register refresh 1/2015							
	DM-1244 TOWG - OpsCon work	24-Aug-15 A	28-Aug-15 A	100%	7	37.00	\$7,300.47	\$0.00	\$7,300.47		■	TOWG - OpsCon work							
	DM-1820 SE - LSE-140: Collect desired changes for future rel	31-Aug-15 A	31-Aug-15 A	100%	5	40.00	\$7,892.40	\$0.00	\$7,892.40		■	SE - LSE-140: Collect desired changes for future release							
	DM-3415 Comprehensive review of ICD status	31-Aug-15 A	31-Oct-18 A	100%	5	40.00	\$7,892.40	\$0.00	\$7,892.40		■	Comprehensive review of ICD status							
	DM-3642 Support OCS revision of LSE-70, LSE-209	18-Mar-16 A	18-Mar-16 A	100%	15	120.00	\$23,898.00	\$0.00	\$23,898.00		■	Support OCS revision of LSE-70, LSE-209							
	DM-3840 LSE-72: Phase 3 in X16	07-Oct-15 A	20-Oct-15 A	100%	10	80.00	\$16,336.80	\$0.00	\$16,336.80		■	LSE-72: Phase 3 in X16							
	DM-3841 LSE-75: Refine WCS and PSF requirements in W16	21-Oct-15 A	28-Oct-15 A	100%	6	48.00	\$9,802.08	\$0.00	\$9,802.08		■	LSE-75: Refine WCS and PSF requirements in W16							
	DM-3842 LSE-68: ICD Details in X16	03-Jun-19	07-Jun-19	0%	5	40.00	\$9,056.40	\$0.00	\$9,056.40	332									
	DM-3843 SE - LSE-74 all Telemetry dictionary - Phase 3	18-Mar-16 A	18-Mar-16 A	100%	5	40.00	\$8,168.40	\$0.00	\$8,168.40		■	SE - LSE-74 all Telemetry dictionary - Phase 3							
	DM-3885 LSE-78: W16 revisions	21-Mar-16 A	21-Mar-16 A	100%	5	40.00	\$8,168.40	\$0.00	\$8,168.40		■	LSE-78: W16 revisions							
	DM-3886 Revise early integration milestones	21-Mar-16 A	21-Mar-16 A	100%	5	40.00	\$8,168.40	\$0.00	\$8,168.40		■	Revise early integration milestones							
	DM-3887 Review ICD flowdown to DMSR and design documents	03-Jun-19	10-Jun-19	0%	6	40.00	\$9,056.40	\$0.00	\$9,056.40	331									
	DM-5441 AstroPY integration with LSST software	28-Mar-16 A	30-May-16 A	100%	44	120.00	\$24,505.20	\$0.00	\$24,505.20		■	AstroPY integration with LSST software							
	DM-5497 DPS-WG X16	01-Jun-17 A	30-Jun-17 A	100%	44	96.00	\$19,604.16	\$0.00	\$19,604.16		■	DPS-WG X16							
	DM-5569 LSE-70, LSE-209 refinements X16	03-Jun-19	04-Jun-19	0%	2	9.15	\$2,072.61	\$0.00	\$2,072.61	335									
	DM-6179 Python3-F16-Arch	06-Jun-16 A	07-Sep-16 A	100%	10	160.00	\$15,718.40	\$0.00	\$15,718.40		■	Python3-F16-Arch							
	DM-6180 F16-Arch-DMSR	29-Nov-16 A	29-Nov-16 A	100%	52	160.00	\$16,152.37	\$0.00	\$16,152.37		■	F16-Arch-DMSR							
	DM-6189 F16 LDM-230/DPS-WG	01-Jun-17 A	14-Jul-17 A	100%	52	40.50	\$7,728.01	\$0.00	\$7,728.01		■	F16 LDM-230/DPS-WG							
	DM-6190 F16 Sizing Model	01-Jun-17 A	30-Jun-17 A	100%	52	40.50	\$7,728.01	\$0.00	\$7,728.01		■	F16 Sizing Model							
	DM-6191 F16 Arch SuperTask	03-Jun-19	14-Aug-19	0%	52	52.50	\$11,886.53	\$0.00	\$11,886.53	285									
	DM-6192 F16 Arch LSE-75	03-Jun-19	14-Aug-19	0%	52	18.00	\$4,075.38	\$0.00	\$4,075.38	285									
	DM-6193 F16 Arch LSE-72	13-Jun-19	26-Aug-19	0%	52	18.00	\$4,075.38	\$0.00	\$4,075.38	277									
	DM-6194 F16 Arch LSE-68	03-Jun-19	14-Aug-19	0%	52	18.00	\$4,075.38	\$0.00	\$4,075.38	285									
	DM-6195 F16 Arch Comm Plan	01-Nov-16 A	23-Nov-16 A	100%	52	18.00	\$3,777.26	\$0.00	\$3,777.26		■	F16 Arch Comm Plan							
	DM-6197 F16 Arch LSE-76	03-Jun-19	14-Aug-19	0%	52	7.50	\$1,698.08	\$0.00	\$1,698.08	285									
	DM-7472 F16-Arch-ADASS	11-Oct-16 A	27-Oct-16 A	100%	52	79.50	\$8,025.71	\$0.00											

## LSST May 2019 Month End Forecast

Activity ID	Activity Name		Start	Finish	Physical % Complete	Original Duration	Budgeted Labor Units	Budgeted Labor Cost	Budgeted Material Cost	Budgeted Total Cost no	Total Float	FY2015 2014-10-01	FY2016 2015-10-01	FY2017 2016-10-01	FY2018 2017-10-01	FY2019 2018-10-01	FY2020 2019-10-01	FY2021 2020-10-01	FY2022 2021-10-01	
DM-8404	DMTC-01	Finalize LSE-68 Camera-DM Image data interfaces	01-Aug-15 A	31-Oct-16 A	100%	90	40.00	\$8,168.40	\$0.00	\$8,168.40										
	DMTC-01	Finalize LSE-69 Camera-DM Master ICD - Phase 3	01-Jul-15 A	30-Jun-17 A	100%	84	120.00	\$23,677.20	\$0.00	\$23,677.20										
	DMTC-01	Finalize LSE-70 all OCS architecture and protocols - Phase 3	01-Jul-15 A	31-Oct-16 A	100%	84	120.00	\$23,677.20	\$0.00	\$23,677.20										
	DMTC-01	Finalize LSE-72 OCS-DM master interface - Phase 3	01-Sep-14 A	31-Oct-16 A	100%	152	40.00	\$8,168.40	\$0.00	\$8,168.40										
	DMTC-01	Finalize LSE-74 all Telemetry dictionary - Phase 3	01-Aug-15 A	30-Jun-17 A	100%	152	37.00	\$7,555.77	\$0.00	\$7,555.77										
	DMTC-01	Finalize LSE-75 TCS-DM telemetry & WFS archive - Phase 3	01-Jul-15 A	31-Oct-16 A	100%	61	140.00	\$27,623.40	\$0.00	\$27,623.40										
	DMTC-01	Finalize LSE-76 DM summit facility interface - Phase 3	01-Jul-15 A	31-Oct-16 A	100%	66	114.72	\$22,636.10	\$0.00	\$22,636.10										
	DMTC-01	Finalize LSE-77 DM base facility interface - Phase 3	01-Nov-16 A	30-Jun-17 A	100%	80	40.00	\$8,168.40	\$0.00	\$8,168.40										
	DMTC-01	Finalize LSE-78 all LSST network design - Phase 3	15-Aug-15 A	30-Jun-17 A	100%	38	44.00	\$8,985.24	\$0.00	\$8,985.24										
	DMTC-01	Finalize LSE-131 EPO-DM interface - Phase 3	01-Oct-14 A	30-Jun-17 A	100%	268	114.93	\$24,290.63	\$0.00	\$24,290.63										
	DMTC-01	Extension to Finalize LSE-131 EPO-DM interface - Phase 3	01-May-17 A	31-Aug-18 A	100%	334	0.00	\$0.00	\$0.00	\$0.00										
	DMTC-01	Finalize LSE-140 Aux Instrum - Phase 3	31-Oct-14 A	30-Jun-17 A	100%	152	30.00	\$6,126.30	\$0.00	\$6,126.30										
	DMTC-01	Finalize LSE-130 Data items Exchanged between Cam & DM - Phase 3	01-Jun-15 A	30-Jun-17 A	100%	87	314.84	\$66,544.00	\$0.00	\$66,544.00										
	DMTC-06	System Architecture - LOE - FY14 - Labor	01-Aug-14 A	01-Oct-14 A	100%	42	0.00	\$0.00	\$0.00	\$0.00										
	DMTC-06	System Architecture - LOE - FY15A - SLAC	01-Oct-14 A	27-Feb-15 A	100%	101	634.00	\$113,745.94	\$0.00	\$113,745.94										
	DMTC-06	System Architecture - LOE - FY15B - SLAC	02-Mar-15 A	01-Sep-15 A	100%	130	926.00	\$166,133.66	\$0.00	\$166,133.66										
	DMTC-06	System Architecture - LOE - FY16A - SLAC	01-Sep-15 A	29-Feb-16 A	100%	123	900.00	\$166,156.02	\$0.00	\$166,156.02										
	DMTC-06	System Architecture - LOE - FY16B - SLAC	01-Mar-16 A	31-Aug-16 A	100%	131	1054.00	\$195,717.26	\$0.00	\$195,717.26										
	DMTC-06	System Architecture - LOE - FY17A - SLAC	01-Sep-16 A	28-Feb-17 A	100%	124	539.12	\$103,613.00	\$0.00	\$103,613.00										
	DMTC-06	System Architecture - LOE - FY17B IPAC	01-Mar-17 A	31-Aug-17 A	100%	131	450.00	\$45,756.00	\$0.00	\$45,756.00										
	DMTC-06	System Architecture - LOE - FY18A - IPAC	01-Sep-17 A	28-Feb-18 A	100%	123	713.82	\$151,235.93	\$0.00	\$151,235.93										
	DMTC-06	System Architecture - LOE - FY18B - IPAC	01-Mar-18 A	31-Aug-18 A	100%	131	222.30	\$47,359.00	\$0.00	\$47,359.00										
	DMTC-06	System Architecture - LOE - FY19A - IPAC	01-Sep-18 A	29-Mar-19 A	100%	144	190.48	\$41,812.76	\$0.00	\$41,812.76										
	DMTC-06	System Architecture - LOE - FY19B - SLAC	01-Apr-19 A	30-Sep-19	33%	129	1800.00	\$342,675.00	\$0.00	\$342,675.00	129									
	DMTC-06	System Architecture - LOE - FY20A - SLAC	01-Oct-19	31-Mar-20	0%	124	1800.00	\$354,672.00	\$0.00	\$354,672.00	129									
	DMTC-06	System Architecture - LOE - FY20B - SLAC	01-Apr-20	30-Sep-20	0%	130	1800.00	\$354,672.00	\$0.00	\$354,672.00	129									
	DMTC-06	System Architecture - LOE - FY21A SLAC	01-Oct-20	30-Sep-21	0%	254	900.00	\$198,486.00	\$0.00	\$198,486.00	129									
	DMTC-06	System Architecture - LOE - FY21B - SLAC	01-Oct-21	31-Mar-22	0%	126	431.30	\$98,449.49	\$0.00	\$98,449.49	129									
	DMTC-06	System Architecture - LOE - FY15 - Labor	02-Mar-15 A	31-Aug-15 A	100%	130	750.00	\$71,190.00	\$0.00	\$71,190.00										
	DMTC-06	System Architecture - LOE - FY16A - Labor	01-Oct-15 A	29-Feb-16 A	100%	123	746.34	\$73,320.59	\$0.00	\$73,320.59										
	DMTC-06	System Architecture - LOE - FY16B - Labor	01-Mar-16 A	31-Aug-16 A	100%	131	1351.00	\$132,722.24	\$0.00	\$132,722.24										
	DMTC-06	System Architecture - LOE - FY17 - Labor	01-Sep-16 A	28-Feb-17 A	100%	124	672.62	\$68,000.00	\$0.00	\$68,000.00										
	DMTC-06	System Architecture - LOE - FY18A - Labor	01-Sep-17 A	28-Feb-18 A	100%	123	900.00	\$94,195.02	\$0.00	\$94,195.02										
	DMTC-06	System Architecture - LOE - FY18B - Labor	01-Mar-18 A	31-Aug-18 A	100%	131	900.00	\$94,716.00	\$0.00	\$94,716.00										
	DMTC-06	System Architecture - LOE - FY18A - Labor	01-Sep-18 A	29-Mar-19 A	100%	144	900.00	\$97,591.00	\$0.00	\$97,591.00										
	DMTC-06	System Architecture - LOE - FY19B - Labor	01-Apr-19 A	30-Sep-19	33%	129	900.00	\$98,028.00	\$0.00	\$98,028.00	129									
	DMTC-06	System Architecture - LOE - FY20A - Labor	01-Oct-19	31-Mar-20	0%	124	900.00	\$101,457.00	\$0.00	\$101,457.00	129									
	DMTC-06	System Architecture - LOE - FY20B - Labor	01-Apr-20	30-Sep-20	0%	130	900.00	\$101,457.00	\$0.00	\$101,457.00	129									
	DMTC-06	System Architecture - LOE - FY19B - IPAC	01-Apr-19 A	30-Sep-19	33%	129	504.00	\$111,126.96	\$0.00	\$111,126.96	129									
	DMTC-06	System Architecture - LOE - FY20A - IPAC	01-Oct-19	31-Mar-20	0%	124	504.00	\$115,017.84	\$0.00	\$115,017.84	129									
	DMTC-06	System Architecture - LOE - FY20B - IPAC	01-Apr-20	30-Sep-20	0%	130	504.00	\$115,017.84	\$0.00	\$115,017.84	129									
	DMTC-06	System Architecture - LOE - FY21A - IPAC	01-Oct-20	30-Sep-21	0%	254	1008.00	\$238,089.60	\$0.00	\$238,089.60	129									
	DMTC-06	System Architecture - LOE - FY21B - IPAC	01-Oct-21	31-Mar-22	0%	126	500.59	\$122,380.36	\$0.00	\$122,380.36	129									
	DMTC-06	System Architecture - LOE - FY17B - Labor	01-Mar-17 A	31-Aug-17 A	100%	131	1032.66	\$105,000.87	\$0.00	\$105,000.87										
	DMTC-06	System Architecture - LOE - FY17B - SLAC	01-Mar-17 A	31-Aug-17 A	100%	131	906.00	\$174,124.14	\$0.00	\$174,124.14										
	DMTC-06	System Architecture - LOE - FY18A - SLAC	01-Sep-17 A	28-Feb-18 A	100%	123	900.00	\$178,035.58	\$0.00	\$178,035.58										
	DMTC-06	System Architecture - LOE - FY18B - SLAC	01-Mar-18 A	31-Aug-18 A	100%	131	1791.00	\$329,301.81	\$0.00	\$329,301.81										
	DMTC-06	System Architecture - LOE - FY19A - SLAC	03-Sep-18 A	29-Mar-19 A	100%	144	1800.00	\$341,146.69	\$0.00	\$341,146.69										
LSST ME 19-05.02C.03 Alert Production		01-Aug-14 A	14-Jan-22		1891	91727.67	\$11,452,634.36	\$41,466.19	\$11,494,100.55	438										
DM-AP-1	SFM1: Basic single frame measurement pipeline for		01-Nov-17 A	100%	0	0.00	\$0.00	\$0.00	\$0.00											
DM-AP-10	SFM2: Advanced single frame measurement pipeline		20-Aug-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	263										
DM-AP-11	DIFF2: Noise decorrelation & DCR correction		21-Oct-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	402										
DM-AP-12	DIFF3: Template PSF agnostic		30-Oct-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	141										
DM-AP-13	DIFFMEAS2: Diffim trailed source measurement		30-Oct-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	141										
DM-AP-14	ALERTDIST2: Alert filtering system		23-Oct-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	146										
DM-AP-15	INTEGRATION1: Alert Distribution System integrate		02-Jun-21	0%	0	0.00	\$0.00	\$0.00	\$0.00	126										
DM-AP-16	INTEGRATION2: Full integration of the Alert Produc		28-Oct-21	0%	0	0.00	\$0.00	\$0.00	\$0.00	21										
DM-AP-17	MOPS algorithmic components available		20-Sep-21	0%	0	0.00	\$0.00	\$0.00	\$0.00	49										
DM-AP-2	DIFF1: Alard & Lupton-style image differencing		01-Nov-17 A	100%	0	0.00	\$0.00	\$0.00	\$0.00											
DM-AP-3	DIFFMEAS1: Point source & dipole measurement on		01-Nov-17 A	100%	0	0.00	\$0.00	\$0.00	\$0.00											
DM-AP-4	DIASource association		01-Nov-17 A	100%	0	0.00	\$0.00	\$0.00	\$0.00											
DM-AP-5	DIAObject generation		01-Nov-17 A	100%	0	0.00	\$0.00	\$0.00	\$0.00											
DM-AP-6	ALERTDIST1: Alert format defined & queue system		31-Jul-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00											
DM-AP-7	ISR1: Basic instrument signature removal		29-Jun-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00											
DM-AP-8	ISR2: Advanced instrument signature removal		17-Jan-19	100%	0	0.00	\$0.00	\$0.00	\$0.00											
DM-AP-9	JOINTCAL1: Jointcal at a functional level		29-Nov-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00											
LSST ME 19-05.02C.03.00 Management, Leadership & Other C		01-Aug-14 A	14-Jan-22		1891	29932.74	\$3,881,337.69	\$41,466.19	\$3,922,803.89	181										
AP-61	Leadership	03-Jun-19	14-Jan-22	0%	666	4878.10	\$687,500.24	\$0.00	\$687,500.24	181										
DM-10296	Address unresolved issues found in building the AP p	25-Apr-17 A	25-Apr-17 A	100%	20	200.00	\$22,178.00	\$0.00	\$22,178.00											
DM-10770	Implement metrics for mvp	28-Jun-17 A	05-Dec-17 A	100%	65	195.00	\$33,196.80	\$0.00	\$33,196.80											
DM-10771	Wrangle datasets for mvp	07-Jul-17 A	05-Sep-17 A	100%	65	105.00	\$17,875.20	\$0.00	\$17,875.20											



## LSST May 2019 Month End Forecast

Activity ID	Activity Name	Start	Finish	Physical % Complete	Original Duration	Budgeted Labor Units	Budgeted Labor Cost	Budgeted Material Cost	Budgeted Total Cost no	Total Float	FY2015 2014-10-01	FY2016 2015-10-01	FY2017 2016-10-01	FY2018 2017-10-01	FY2019 2018-10-01	FY2020 2019-10-01	FY2021 2020-10-01	FY2022 2021-10-01
LSST ME 19-05.02C.03.01	DM-10773	mvp packaging design	26-Jun-17 A	08-Feb-18 A	100%	65	305.00	\$51,923.20	\$0.00	\$51,923.20								
	DM-10775	Lead MVP effort	21-Jun-17 A	31-Jan-18 A	100%	65	105.16	\$17,902.40	\$0.00	\$17,902.40								
	DM-12880	AP group leadership & management during S18	12-Jan-18 A	11-May-18 A	100%	125	432.00	\$47,904.48	\$0.00	\$47,904.48								
	DM-14430	AP group leadership in F18	03-Sep-18 A	30-Nov-18 A	100%	129	432.00	\$48,489.19	\$0.00	\$48,489.19								
	DM-16719	AP group leadership & management in S19A	01-Jan-19 A	30-Apr-19 A	100%	125	3074.00	\$352,802.98	\$0.00	\$352,802.98								
	DM-6186	Update LDM-151	30-May-16 A	15-Jul-16 A	100%	66	150.00	\$15,802.50	\$0.00	\$15,802.50								
	DM-7365	Provide input for the update of LDM-151 in F16B	02-Nov-16 A	28-Nov-16 A	100%	43	120.00	\$12,878.20	\$0.00	\$12,878.20								
	DM-7368	Onboarding KF	01-Sep-16 A	20-Dec-16 A	100%	61	150.00	\$16,173.52	\$0.00	\$16,173.52								
	DM-7369	Onboarding CM	01-Sep-16 A	20-Dec-16 A	100%	61	150.00	\$16,173.52	\$0.00	\$16,173.52								
	DM-7370	Onboarding MR	01-Sep-16 A	20-Dec-16 A	100%	61	150.00	\$16,173.52	\$0.00	\$16,173.52								
	DM-7925	Prototype AP system	10-Jan-17 A	20-Jun-17 A	100%	83	152.00	\$16,437.77	\$0.00	\$16,437.77								
	DM-8470	LDM-151	01-Feb-17 A	01-Mar-17 A	100%	62	60.00	\$6,428.40	\$0.00	\$6,428.40								
	DM-9539	Jointcal validation integration	07-Mar-17 A	20-Nov-17 A	100%	23	30.00	\$3,270.90	\$0.00	\$3,270.90								
	DM-9621	LDM-151	12-Apr-17 A	07-May-17 A	100%	62	195.00	\$20,892.30	\$0.00	\$20,892.30								
	DM-9676	validate_ap	23-Jun-17 A	04-Jan-18 A	100%	43	165.00	\$17,989.95	\$0.00	\$17,989.95								
	DMTC-07	AP Management Engineering and Integration - LOE	01-Aug-14 A	30-Sep-14 A	100%	42	0.00	\$0.00	\$0.00	\$0.00								
	DMTC-07	AP Management Engineering and Integration - LOE	01-Oct-14 A	25-Feb-15 A	100%	101	115.00	\$11,704.70	\$0.00	\$11,704.70								
	DMTC-07	AP Management Engineering and Integration - LOE	02-Mar-15 A	01-Sep-15 A	100%	130	525.00	\$53,434.50	\$0.00	\$53,434.50								
	DMTC-07	AP Management Engineering and Integration - LOE	01-Sep-15 A	29-Feb-16 A	100%	123	450.00	\$47,133.22	\$0.00	\$47,133.22								
	DMTC-07	AP Management Engineering and Integration - LOE	01-Mar-16 A	31-Mar-16 A	100%	23	1773.00	\$209,389.41	\$0.00	\$209,389.41								
	DMTC-07	AP Management Engineering and Integration - LOE	01-Mar-16 A	31-May-16 A	100%	66	381.14	\$45,425.14	\$0.00	\$45,425.14								
	DMTC-07	AP Management Engineering and Integration - LOE	01-Jun-16 A	31-Aug-16 A	100%	65	799.05	\$123,059.41	\$0.00	\$123,059.41								
	DMTC-07	AP Management Engineering and Integration - LOE	01-Sep-16 A	30-Nov-16 A	100%	62	1176.00	\$164,751.54	\$0.00	\$164,751.54								
	DMTC-07	AP Management Engineering and Integration - LOE	01-Dec-16 A	28-Feb-17 A	100%	62	1037.28	\$116,766.42	\$0.00	\$116,766.42								
	DMTC-07	AP Management Engineering and Integration - LOE	01-Feb-17 A	28-Feb-17 A	100%	18	1776.68	\$200,000.00	\$0.00	\$200,000.00								
	DMTC-07	AP Management Engineering and Integration - LOE	01-Mar-17 A	31-May-17 A	100%	66	1893.79	\$215,355.75	\$0.00	\$215,355.75								
	DMTC-07	AP Management Engineering and Integration - LOE	01-Jun-17 A	31-Aug-17 A	100%	65	981.22	\$167,042.81	\$0.00	\$167,042.81								
	DMTC-07	AP Management Engineering and Integration - LOE	01-Sep-17 A	31-May-18 A	100%	189	4712.32	\$523,151.65	\$0.00	\$523,151.65								
	DMTC-07	AP Management Engineering and Integration - LOE	01-Jun-18 A	30-Nov-18 A	100%	129	3264.00	\$582,130.09	\$0.00	\$582,130.09								
	DMTC-07	UW Institution Support Costs - LOE - FY14 - NonLabor	01-Aug-14 A	30-Sep-14 A	100%	42	0.00	\$0.00	\$0.00	\$0.00								
	DMTC-07	UW Institution Support Costs - LOE - FY15 - NonLabor	01-Oct-14 A	30-Sep-15 A	100%	252	0.00	\$0.00	\$5,330.24	\$5,330.24								
	DMTC-07	UW Institution Support Costs - LOE - FY16 - NonLabor	01-Oct-15 A	30-Sep-16 A	100%	254	0.00	\$0.00	\$5,516.78	\$5,516.78								
	DMTC-07	UW Institution Support Costs - LOE - FY17 - NonLabor	03-Oct-16 A	29-Sep-17 A	100%	254	0.00	\$0.00	\$5,709.91	\$5,709.91								
	DMTC-07	UW Institution Support Costs - LOE - FY18 - NonLabor	02-Oct-17 A	28-Sep-18 A	100%	253	0.00	\$0.00	\$5,909.73	\$5,909.73								
	DMTC-07	UW Institution Support Costs - LOE - FY19 - NonLabor	01-Oct-18 A	30-Sep-19	67%	254	0.00	\$0.00	\$6,116.60	\$6,116.60	283							
	DMTC-07	UW Institution Support Costs - LOE - FY20 - NonLabor	01-Oct-19	30-Sep-20	0%	254	0.00	\$0.00	\$6,330.69	\$6,330.69	283							
	DMTC-07	UW Institution Support Costs - LOE - FY21 - NonLabor	01-Oct-20	20-Aug-21	0%	226	0.00	\$0.00	\$6,552.24	\$6,552.24	283							
	LSST ME 19-05.02C.03.01 Single Frame Processing		13-Aug-14 A	30-Nov-21		1858	11247.97	\$1,488,634.57	\$0.00	\$1,488,634.57	214							
	AP-100	CR detection	03-Jun-19	15-Jul-19	0%	30	700.00	\$91,133.00	\$0.00	\$91,133.00	418							
	AP-104	Linear feature detection and removal	03-Jun-19	07-Nov-19	0%	112	1440.00	\$189,115.20	\$0.00	\$189,115.20	214							
	AP-108	Optical ghosts	03-Jun-19	24-Aug-20	0%	312	1492.89	\$199,333.83	\$0.00	\$199,333.83	49							
	AP-115	Improved detection using difference images	25-Aug-20	30-Oct-20	0%	48	514.38	\$62,081.76	\$0.00	\$62,081.76	49							
	AP-221	Improved optical ghost correction	08-Nov-19	30-Nov-21	0%	521	2178.00	\$300,142.74	\$0.00	\$300,142.74	214							
	AP-67	Commissioning support: Single Frame Processing	03-Jul-19	20-Aug-19	0%	34	205.71	\$23,609.83	\$0.00	\$23,609.83	263							
	AP-68	Final integration: Single Frame Processing	02-Nov-20	26-Jul-21	0%	185	1134.00	\$139,413.96	\$0.00	\$139,413.96	88							
	AP-96	ISR ready for FullCam	03-Jul-19	25-Jun-20	0%	248	897.59	\$119,926.62	\$0.00	\$119,926.62	178							
	AP-97	ISR ready for ComCam	03-Jun-19	02-Jul-19	0%	22	109.43	\$14,247.00	\$0.00	\$14,247.00	178							
	AP-98	ISR ready for Aux Telescope	03-Jun-19	01-Jul-19	0%	21	77.67	\$10,112.02	\$0.00	\$10,112.02	179							
	DLP-639	Re-design camera geometry classes		13-Aug-14 A	100%	0	0.00	\$0.00	\$0.00	\$0.00								
	DLP-642	Camera Team using DM code		10-Dec-14 A	100%	0	0.00	\$0.00	\$0.00	\$0.00								
DM-10399	Clean up improved matcher (Continued from F17)	28-Apr-17 A	20-Jun-18 A	100%	40	456.00	\$50,565.84	\$0.00	\$50,565.84									
DM-1113	Fix IsrTask to not take blobs	01-Mar-15 A	01-May-15 A	100%	14	80.00	\$8,142.40	\$0.00	\$8,142.40									
DM-1115	Command-line Tasks - Unit tests for ProcessCod	31-Oct-14 A	20-Nov-14 A	100%	14	114.30	\$21,906.74	\$0.00	\$21,906.74									
DM-12703	Astrometric bootstrapping in S18	14-May-18 A	14-May-18 A	100%	41	160.00	\$17,742.40	\$0.00	\$17,742.40									
DM-1987	Refactor Coord	27-Apr-16 A	21-Feb-17 A	100%	19	90.00	\$9,642.60	\$0.00	\$9,642.60									
DM-3872	Clean Wcs	01-May-16 A	19-May-16 A	100%	19	150.00	\$15,802.50	\$0.00	\$15,802.50									
DM-3873	Requirements for Wcs	19-Jan-16 A	26-May-16 A	100%	19	75.00	\$7,901.25	\$0.00	\$7,901.25									
DM-3874	Design Wcs	24-May-16 A	29-Nov-16 A	100%	131	180.00	\$18,963.00	\$0.00	\$18,963.00									
DM-3875	Implement new Wcs	12-Oct-16 A	05-Jan-18 A	100%	43	157.50	\$16,592.63	\$0.00	\$16,592.63									
DM-3876	Fix-up Wcs classes	01-Apr-16 A	28-Apr-16 A	100%	57	225.00	\$44,633.25	\$0.00	\$44,633.25									
DM-3877	ISR requirements	04-Feb-16 A	04-Feb-16 A	100%	19	37.50	\$3,950.63	\$0.00	\$3,950.63									
DM-3878	ISR improvements	04-Feb-16 A	30-Nov-17 A	100%	170	150.00	\$22,779.00	\$0.00	\$22,779.00									
DM-6164	Implement new XYTransform	13-Mar-17 A	13-Apr-17 A	100%	20	30.00	\$5,466.90	\$0.00	\$5,466.90									
DM-8450	pybind11	30-Nov-16 A	28-Feb-17 A	100%	43	330.00	\$47,746.05	\$0.00	\$47,746.05									
DM-9679	Replace Wcs	22-Mar-17 A	22-Mar-18 A	100%	212	253.00	\$46,665.63	\$0.00	\$46,665.63									
DMTC-0E	Single Frame Processing Scope Planning R5.0	02-Sep-14 A	29-Sep-14 A	100%	20	0.00	\$0.00	\$0.00	\$0.00									
DMTC-0E	Single Frame Processing Scope Planning R5.1	02-Feb-15 A	27-Feb-15 A	100%	20	10.00	\$1,017.80	\$0.00	\$1,017.80									
LSST ME 19-05.02C.03.02 Catalog Association for Alert Produ		01-Aug-14 A	20-Jul-20		1512	2020.13	\$250,776.37	\$0.00	\$250,776.37	560								
AP-129	MultiMatch	21-Aug-19	20-Jul-20	0%	231	1252.00	\$148,115.01	\$0.00	\$148,115.01	560								
DM-10768	Source association II	27-Jun-17 A	14-Nov-17 A	100%	23	300.00	\$51,072.00	\$0.00	\$51,072.00									
DM-16720	AP source association & catalog enhancements in S1	06-Dec-18 A	23-Aug-19	60%	59	188.00	\$21,576.76	\$0.00	\$21,576.76	406								
DM-8471	Source association I	18-Jun-18 A	30-Nov-18 A	100%	83	280.13	\$30,012.59	\$0.00	\$30,012.59									

LSST May 2019 Month End Forecast

Activity ID	Activity Name	Start	Finish	Physical % Complete	Original Duration	Budgeted Labor Units	Budgeted Labor Cost	Budgeted Material Cost	Budgeted Total Cost no	Total Float		FY2015 2014-10-01	FY2016 2015-10-01	FY2017 2016-10-01	FY2018 2017-10-01	FY2019 2018-10-01	FY2020 2019-10-01	FY2021 2020-10-01	FY2022 2021-10-01
DMTC-05	Association Pipeline R4.0	01-Aug-14 A	31-Aug-14 A	100%	22	0.00	\$0.00	\$0.00	\$0.00		Association Pipeline R4.0								
LSST ME 19-05.02C.03.03 Alert Distribution System																			
AP-121	spuriousness	13-Sep-19	07-Sep-21	0%	503	3030.05	\$365,574.44	\$0.00	\$365,574.44	272									spuriousness
DM-217	Alert Distribution Pipeline Integration	03-Jun-19	23-Oct-20	0%	355	601.33	\$70,979.68	\$0.00	\$70,979.68	146									Alert Distribution Pipeline Integration
DM-10023	prototype filter	13-Apr-17 A	03-May-17 A	100%	20	240.00	\$40,857.60	\$0.00	\$40,857.60										
DM-10024	Mini-broker development in F18	12-Jun-18 A	03-Nov-18 A	100%	84	336.00	\$37,259.04	\$0.00	\$37,259.04										
DM-10068	AP Emergent work for -- F17A cycle	05-Apr-17 A	15-Feb-18 A	100%	23	240.00	\$40,857.60	\$0.00	\$40,857.60										
DM-12868	Mini-broker prototype	15-Mar-18 A	26-Jun-18 A	100%	103	328.00	\$36,371.92	\$0.00	\$36,371.92										
DM-7339	Candidate tech for AP	29-Aug-16 A	29-Aug-16 A	100%	22	44.00	\$4,650.12	\$0.00	\$4,650.12										
DM-7352	Prep for alert dist. testing	29-Aug-16 A	29-Sep-16 A	100%	22	75.00	\$7,926.34	\$0.00	\$7,926.34										
DM-7354	Simulate producers and consumers	01-Nov-16 A	07-Feb-17 A	100%	22	112.50	\$12,265.88	\$0.00	\$12,265.88										
DM-7355	Construct test for alert dist.	28-Feb-17 A	28-Aug-17 A	100%	17	75.00	\$8,177.25	\$0.00	\$8,177.25										
DM-7356	Test prototype alert dist.	28-Sep-17 A	20-Oct-17 A	100%	42	172.42	\$18,473.19	\$0.00	\$18,473.19										
DM-9635	Analyze test results	08-Nov-17 A	30-Mar-18 A	100%	190	140.50	\$15,383.17	\$0.00	\$15,383.17										
LSST ME 19-05.02C.03.04 Alert Generation Pipeline																			
AP-119	Trailed point source	10-Oct-19	25-Mar-20	0%	113	337.52	\$40,093.52	\$0.00	\$40,093.52	126									Trailed point source
AP-161	Noise decorrelation in difference images	03-Jun-19	21-Oct-19	0%	99	43.34	\$5,000.00	\$0.00	\$5,000.00	126									Noise decorrelation in difference images
AP-169	Diffim in crowded fields	23-Dec-19	14-Dec-20	0%	248	2764.80	\$330,790.15	\$0.00	\$330,790.15	126									Diffim in crowded fields
AP-71	Commissioning support: Alert Generation Pipeline	03-Jun-19	09-Oct-19	0%	91	43.45	\$5,000.00	\$0.00	\$5,000.00	126									Commissioning support: Alert Generation Pipeline
AP-72	Final integration: Alert Generation Pipeline	15-Dec-20	02-Jun-21	0%	118	622.00	\$76,468.68	\$0.00	\$76,468.68	126									Final integration: Alert Generation Pipeline
DLP-275	Deliver document on effects of DCR		08-Apr-16 A	100%	0	0.00	\$0.00	\$0.00	\$0.00										
DLP-276	Dipole measurement suite		12-Jul-16 A	100%	0	0.00	\$0.00	\$0.00	\$0.00										
DM-12716	Science verification of DCR algorithm	31-May-18 A	28-Nov-18 A	100%	66	508.00	\$56,332.12	\$0.00	\$56,332.12										
DM-14431	AP pipeline infrastructure during F18	07-Jun-18 A	30-Nov-18 A	100%	129	500.00	\$56,121.74	\$0.00	\$56,121.74										
DM-14433	Forced photometry on visits in AP	20-Jun-18 A	18-Sep-18 A	100%	85	172.00	\$19,426.39	\$0.00	\$19,426.39										
DM-14450	Difference imaging in F18	15-Oct-18 A	30-Nov-18 A	100%	44	92.00	\$10,558.84	\$0.00	\$10,558.84										
DM-14464	AP science analysis in F18	26-Jun-18 A	19-Nov-18 A	100%	129	512.00	\$57,468.67	\$0.00	\$57,468.67										
DM-16408	AP science analysis in S19A	05-Dec-18 A	29-Mar-19 A	100%	59	240.00	\$27,544.80	\$0.00	\$27,544.80										
DM-16713	AP pipeline infrastructure during S19A	10-Dec-18 A	31-Mar-19 A	100%	59	180.00	\$20,658.60	\$0.00	\$20,658.60										
DM-16714	Difference imaging in S19A	01-Feb-19 A	23-Aug-19	61.55%	59	180.00	\$20,658.60	\$0.00	\$20,658.60	406									
DM-16723	DCR mitigation in S19A	31-Jan-19 A	29-Mar-19 A	100%	59	184.00	\$21,117.68	\$0.00	\$21,117.68										
DM-17992	AP science analysis in S19B	01-Apr-19 A	04-Sep-19	38.82%	66	348.99	\$40,053.96	\$0.00	\$40,053.96	399									
DM-17994	Difference imaging in S19B	01-Apr-19 A	04-Sep-19	22.22%	66	180.00	\$20,658.60	\$0.00	\$20,658.60	399									
DM-17997	DCR mitigation in S19B	01-Apr-19 A	04-Sep-19	70%	66	240.00	\$27,544.80	\$0.00	\$27,544.80	399									
DM-1988	Update analysis tasks: diffim and snap combination	05-Oct-15 A	01-May-16 A	100%	42	120.00	\$12,427.80	\$0.00	\$12,427.80										
DM-1990	Selection criteria and Strategy for building templates	30-Nov-15 A	04-Feb-16 A	100%	42	150.00	\$15,534.75	\$0.00	\$15,534.75										
DM-246	Investigate compensation for Dcr	01-Oct-14 A	12-Jul-16 A	100%	20	240.00	\$26,613.60	\$0.00	\$26,613.60										
DM-3879	Dipole measurement test	20-Jan-16 A	20-Jan-16 A	100%	18	95.00	\$10,008.25	\$0.00	\$10,008.25										
DM-3880	Refactor dipole measurement	04-Mar-16 A	17-Jun-16 A	100%	38	500.00	\$52,675.00	\$0.00	\$52,675.00										
DM-4898	Implement the simulation and testing framework for analyzing image differencing	15-Mar-16 A	30-Apr-16 A	100%	9	15.00	\$1,580.25	\$0.00	\$1,580.25										
DM-5422	Implement real space extension for ZOGY	20-May-16 A	31-Aug-16 A	100%	52	172.50	\$18,172.88	\$0.00	\$18,172.88										
DM-5455	Experimental DCR	29-Apr-16 A	30-Oct-16 A	100%	77	277.50	\$29,234.63	\$0.00	\$29,234.63										
DM-6241	Implement ZOGY in stack	17-Jun-16 A	09-Sep-16 A	100%	22	120.00	\$12,642.00	\$0.00	\$12,642.00										
DM-6242	Spatially variable ZOGY correction	21-Jul-16 A	07-Mar-17 A	100%	43	150.00	\$15,802.50	\$0.00	\$15,802.50										
DM-6245	Bakeoff DCR correction algorithms	30-Aug-16 A	26-Oct-17 A	100%	43	195.00	\$20,543.25	\$0.00	\$20,543.25										
DM-7359	Decorrelation with preconvolution	13-Sep-16 A	24-Oct-16 A	100%	61	270.00	\$29,109.64	\$0.00	\$29,109.64										
DM-7367	Docs and useability	01-Oct-16 A	06-Oct-16 A	100%	41	150.00	\$16,354.50	\$0.00	\$16,354.50										
DM-7611	Study spatial ZOGY	01-May-17 A	31-May-17 A	100%	22	90.00	\$9,642.60	\$0.00	\$9,642.60										
DM-7746	Implement ZOGY	01-Feb-17 A	28-Feb-17 A	100%	40	150.00	\$16,071.00	\$0.00	\$16,071.00										
DM-9613	Refactor DCR algorithms	13-Apr-17 A	31-Aug-18 A	100%	231	373.00	\$41,055.07	\$0.00	\$41,055.07										
DM-9632	Implement spatial ZOGY	28-Mar-17 A	10-May-17 A	100%	66	150.00	\$16,071.00	\$0.00	\$16,071.00										
DM-9633	Make ZOGY callable from Diffim pipelines	01-May-17 A	31-May-17 A	100%	43	105.00	\$11,249.70	\$0.00	\$11,249.70										
DM-9989	Incorporate ZOGY and A&L decorrelation option into imageDifference.py	09-Jun-17 A	22-Sep-17 A	100%	20	160.00	\$17,742.40	\$0.00	\$17,742.40										
LSST ME 19-05.02C.03.05 Tools for Science Pipelines																			
AP-126	PSF Estimation: Single CCD	03-Jun-19	26-Aug-19	0%	60	127.96	\$14,685.82	\$0.00	\$14,685.82	787									PSF Estimation: Single CCD
AP-186	Coordinate transforms	03-Jun-19	25-Mar-20	0%	204	1792.81	\$210,000.00	\$0.00	\$210,000.00	643									Coordinate transforms
AP-191	Camera Descriptions	03-Jun-19	10-Aug-21	0%	556	1752.78	\$210,000.00	\$0.00	\$210,000.00	291									Camera Descriptions
AP-197	Tools for AP	03-Jun-19	29-Jan-21	0%	420	1955.54	\$232,311.19	\$0.00	\$232,311.19	427									Tools for AP
AP-92	Reference Catalogs for AP	03-Jun-19	28-Oct-21	0%	612	879.79	\$120,000.00	\$0.00	\$120,000.00	235									Reference Catalogs for AP
DLP-638	Refactor AFW R&D Code		13-Aug-14 A	100%	0	0.00	\$0.00	\$0.00	\$0.00		Refactor AFW R&D Code								
DM-10086	Replace existing usage of XYTransform	16-Jun-17 A	02-Sep-17 A	100%	21	100.00	\$11,089.00	\$0.00	\$11,089.00										Replace existing usage of XYTransform
DM-10153	Replace Calib with finished PhotoCalib	01-Apr-19 A	30-Apr-19 A	100%	66	240.00	\$27,544.80	\$0.00	\$27,544.80										Replace Calib with finished PhotoCalib
DM-10769	NDData	03-Oct-17 A	10-Oct-17 A	100%	65	440.00	\$74,905.60	\$0.00	\$74,905.60										
DM-10774	Tech debt	07-Mar-17 A	13-Oct-17 A	100%	65	440.00	\$74,905.60	\$0.00	\$74,905.60										
DM-1112	CameraGeom for Camera Team	24-Oct-14 A	24-Feb-15 A	100%	21	111.50	\$11,348.47	\$0.00	\$11,348.47										
DM-1114	Re-write meas_astrom	26-Feb-15 A	25-Aug-15 A	100%	29	378.60	\$59,080.48	\$0.00	\$59,080.48										
DM-1116	Add numpy typemaps	11-Apr-15 A	11-Apr-15 A	100%	22	68.00	\$13,032.88	\$0.00	\$13,032.88										
DM-1117	Attach background models to Exposures	21-Sep-17 A	26-Sep-17 A	100%	45	186.75	\$22,040.87	\$0.00	\$22,040.87										
DM-11798	AP emergent work for F17B	06-Sep-17 A	12-Jan-18 A	100%	20	160.00	\$17,742.40	\$0.00	\$17,742.40										
DM-12707	Coordinate transform tool for collimated beam projector	20-Apr-18 A	29-Jun-18 A	100%	103	328.00	\$36,371.92	\$0.00	\$36,371.92										
DM-12728	Emergent work for AP in S18	01-Dec-17 A	05-Jun-18 A	100%	125	724.00	\$80,284.36	\$0.00	\$80,284.36										
DM-14447	Emergent work for AP in F18	22-May-18 A	30-Nov-18 A	100%	129	736.00	\$82,611.21	\$0.00	\$82,611.21										

## LSST May 2019 Month End Forecast

Activity ID	Activity Name	Start	Finish	Physical % Complete	Original Duration	Budgeted Labor Units	Budgeted Labor Cost	Budgeted Material Cost	Budgeted Total Cost no	Total Float	FY2015 2014-10-01	FY2016 2015-10-01	FY2017 2016-10-01	FY2018 2017-10-01	FY2019 2018-10-01	FY2020 2019-10-01	FY2021 2020-10-01	FY2022 2021-10-01	
LSST ME 19-05.02C.03.06 Moving Object Processing System	DM-14449 Next generation middleware for AP in F18	12-Dec-18 A	12-Dec-18 A	100%	63	208.00	\$23,359.75	\$0.00	\$23,359.75										
	DM-16722 Emergent work for AP in S19A	30-Apr-19 A	30-Apr-19 A	100%	59	312.00	\$35,808.24	\$0.00	\$35,808.24										
	DM-17887 Emergent work for AP in S19B	01-Apr-19 A	04-Sep-19	76.47%	66	332.00	\$38,103.64	\$0.00	\$38,103.64	1038									
	DM-17980 S19B AP Infrastructure	01-Apr-19 A	04-Sep-19	44.98%	66	241.46	\$27,712.80	\$0.00	\$27,712.80	399									
	DM-17995 Adopt Match Pessimistic B as default	01-Apr-19 A	30-Apr-19 A	100%	66	160.00	\$18,363.20	\$0.00	\$18,363.20										
	DM-1991 Refactor Approximate and Interpolate classes	02-Jun-15 A	04-Feb-16 A	100%	42	150.00	\$15,534.75	\$0.00	\$15,534.75										
	DM-2026 Support Exposure Use Cases	16-Apr-15 A	24-Feb-17 A	100%	21	112.50	\$15,494.85	\$0.00	\$15,494.85										
	DM-3543 Emergent Uncategorized Work	03-Sep-15 A	23-May-16 A	100%	121	150.00	\$19,177.38	\$0.00	\$19,177.38										
	DM-3545 Aperture correction refinement	10-Sep-15 A	11-Feb-16 A	100%	20	52.50	\$10,062.15	\$0.00	\$10,062.15										
	DM-3881 CalibrateTask requirements	17-Dec-15 A	17-Dec-15 A	100%	41	112.50	\$18,828.38	\$0.00	\$18,828.38										
	DM-3882 Implement CalibrateTask	17-Dec-15 A	08-Mar-16 A	100%	20	112.50	\$22,316.63	\$0.00	\$22,316.63										
	DM-5053 Tech debt from W16	10-Mar-16 A	24-May-16 A	100%	22	15.00	\$2,975.55	\$0.00	\$2,975.55										
	DM-5423 Documentation	19-May-16 A	19-May-16 A	100%	55	150.00	\$19,290.75	\$0.00	\$19,290.75										
	DM-5691 AP Emergent work -- F16	05-Apr-16 A	08-Sep-16 A	100%	65	75.00	\$9,296.55	\$0.00	\$9,296.55										
	DM-7362 Emergent work: F16B	18-Aug-16 A	29-Nov-16 A	100%	62	135.00	\$14,550.78	\$0.00	\$14,550.78										
	DM-7364 Remove a.net dependency	09-May-16 A	28-Apr-17 A	100%	22	152.36	\$31,280.54	\$0.00	\$31,280.54										
	DM-7512 Unify obs package testing	10-Oct-16 A	17-Nov-16 A	100%	84	104.00	\$21,171.80	\$0.00	\$21,171.80										
	DM-753 afw::CameraGeom-Cleanup	01-Aug-14 A	31-Oct-14 A	100%	20	56.00	\$6,209.84	\$0.00	\$6,209.84										
	DM-763 Eliminate local pixel indexing; always use parent inste	11-Sep-14 A	12-Sep-14 A	100%	20	212.00	\$23,508.68	\$0.00	\$23,508.68										
	DM-8472 Emergent work: S17A	12-Dec-16 A	27-Feb-17 A	100%	40	90.00	\$10,768.95	\$0.00	\$10,768.95										
	DM-85 Measurement - Aperture Corrections	04-Jun-15 A	14-Aug-15 A	100%	42	265.50	\$41,178.69	\$0.00	\$41,178.69										
	DM-8837 Proper motion corrections for reference catalogs	01-Aug-18 A	31-Aug-18 A	100%	42	160.00	\$17,742.40	\$0.00	\$17,742.40										
	DM-9627 pybind11	09-Mar-17 A	28-Jul-17 A	100%	43	60.00	\$6,428.40	\$0.00	\$6,428.40										
	DM-9678 Emergent work: S17B	04-May-17 A	13-Jun-17 A	100%	66	150.00	\$17,197.35	\$0.00	\$17,197.35										
	DM-9680 Assess PSF estimation framework	10-Mar-17 A	28-Feb-18 A	100%	43	120.00	\$12,856.80	\$0.00	\$12,856.80										
	DM-9832 Clean-up and unify star selector call signatures	06-Jun-17 A	18-Jan-19 A	100%	21	160.00	\$17,742.40	\$0.00	\$17,742.40										
	DMTC-12 Application Framework - Exposures R4.0	01-Aug-14 A	02-Sep-14 A	100%	22	0.00	\$0.00	\$0.00	\$0.00										
	DMTC-12 Application Framework - Exposures Scope Planning	02-Sep-14 A	29-Sep-14 A	100%	20	0.00	\$0.00	\$0.00	\$0.00										
	DMTC-12 Application Framework - Exposures Scope Planning	02-Feb-15 A	27-Feb-15 A	100%	20	10.00	\$1,017.80	\$0.00	\$1,017.80										
	LSST ME 19-05.02C.03.06 Moving Object Processing System					01-May-18 A	12-Aug-21	937	6961.00	\$853,471.37	\$0.00	\$853,471.37	546						
	AP-178	MOPS Implementation	03-Jun-19	12-Aug-21	0%	558	4328.74	\$518,674.15	\$0.00	\$518,674.15	75								
	AP-222	MOPS senior expert consultant	03-Jun-19	12-Aug-21	0%	558	1300.00	\$183,080.37	\$0.00	\$183,080.37	75								
	DM-12704	MOPS development in S18	01-May-18 A	31-May-18 A	100%	125	256.00	\$28,387.84	\$0.00	\$28,387.84									
	DM-14432	Work on MOPS in F18	01-Nov-18 A	28-Feb-19 A	100%	64	168.00	\$19,087.85	\$0.00	\$19,087.85									
	DM-16741	MOPS development in S19A	01-Feb-19 A	23-Aug-19	84%	59	416.00	\$47,744.32	\$0.00	\$47,744.32	406								
	DM-17993	MOPS development in S19B	01-Apr-19 A	04-Sep-19	32.3%	66	492.26	\$56,496.84	\$0.00	\$56,496.84	1038								
	LSST ME 19-05.02C.03.07 Transform Fitting on Stacks of Ima					10-Nov-16 A	20-May-20	1116	6312.00	\$737,700.22	\$0.00	\$737,700.22	603						
	AP-134	Astrometric Fitting: Single CCD	10-Oct-19	03-Jan-20	0%	57	360.00	\$42,764.40	\$0.00	\$42,764.40	699								
	AP-148	Photometric Fitting: Single Visit	10-Oct-19	03-Jan-20	0%	57	3276.00	\$389,156.04	\$0.00	\$389,156.04	699								
	AP-219	Jointcal maintenance	03-Jun-19	20-May-20	0%	244	1550.00	\$181,979.40	\$0.00	\$181,979.40	603								
	DM-11783	Replace meas_mosaic with Jointcal	05-Oct-17 A	21-Nov-18 A	100%	59	208.00	\$23,065.12	\$0.00	\$23,065.12									
	DM-12196	Implement improved composed model design in Join	01-Aug-18 A	29-Nov-18 A	100%	20	208.00	\$23,065.12	\$0.00	\$23,065.12									
	DM-16742	Jointcal development in S19A	11-Dec-18 A	23-Aug-19	81.25%	59	160.00	\$18,363.20	\$0.00	\$18,363.20	406								
	DM-3871	SimPhotom	02-Jan-17 A	09-Jan-17 A	100%	40	225.00	\$23,703.75	\$0.00	\$23,703.75									
	DM-7210	Jointcal photometry	20-Dec-16 A	10-Jul-17 A	100%	22	105.00	\$11,430.59	\$0.00	\$11,430.59									
	DM-8231	support separate photometric and astrometric catalo	10-Nov-16 A	03-Jan-17 A	100%	20	100.00	\$11,089.00	\$0.00	\$11,089.00									
	DM-9184	Improved Jointcal Photometry	07-Feb-17 A	10-Oct-17 A	100%	43	120.00	\$13,083.60	\$0.00	\$13,083.60									
	LSST ME 19-05.02C.03.08 Integration					24-Feb-15 A	28-Oct-21	1696	4947.88	\$577,976.33	\$0.00	\$577,976.33	21						
	AP-85	Precovery and Forced Photometry	03-Jun-19	28-Oct-21	0%	612	1400.88	\$168,438.29	\$0.00	\$168,438.29	21								
	AP-88	MOPS integration	02-Nov-20	20-Sep-21	0%	224	1350.00	\$165,969.00	\$0.00	\$165,969.00	49								
DLP-644	Generalized Single Frame Astrometry Pipeline		24-Feb-15 A	100%	0	0.00	\$0.00	\$0.00	\$0.00										
DM-12711	AP Pipeline development in S18	01-Dec-17 A	11-Jun-18 A	100%	125	872.00	\$96,696.08	\$0.00	\$96,696.08										
DM-1989	Define API for Astrometric Self Calibration	04-Feb-16 A	04-Feb-16 A	100%	19	37.50	\$3,950.63	\$0.00	\$3,950.63										
DM-3544	Astrometry Fix-ups	04-Sep-15 A	31-May-16 A	100%	42	150.00	\$22,393.50	\$0.00	\$22,393.50										
DM-3869	Determine requirements for improvements to simulta	08-Mar-16 A	21-Jun-16 A	100%	19	37.50	\$3,950.63	\$0.00	\$3,950.63										
DM-3870	Refactor Joitntcal	09-Aug-16 A	09-May-17 A	100%	14	75.00	\$7,901.25	\$0.00	\$7,901.25										
DM-5501	Metadata	07-Jul-16 A	18-Nov-16 A	100%	43	400.00	\$42,140.00	\$0.00	\$42,140.00										
DM-6185	Get jointcal running	08-Jul-16 A	01-Dec-16 A	100%	64	400.00	\$42,140.00	\$0.00	\$42,140.00										
DM-7058	Jointcal summary plots	20-Dec-16 A	20-Dec-16 A	100%	43	75.00	\$8,042.46	\$0.00	\$8,042.46										
DM-7366	Improve matcher	01-Dec-16 A	28-Mar-17 A	100%	22	150.00	\$16,354.50	\$0.00	\$16,354.50										
LSST ME 19-05.02C.04 Data Release Production					01-Aug-14 A	31-Aug-22	2051	14573.77	\$17,460,780.81	\$41,466.19	\$17,502,247.00	278							
DM-DRP-1	DRP-MS-INT-1: HSC merger compelte		01-Nov-17 A	100%	0	0.00	\$0.00	\$0.00	\$0.00										
DM-DRP-10	DRP-MS-CPP-8: Calibration products include an opt		05-Feb-21	0%	0	0.00	\$0.00	\$0.00	\$0.00	77									
DM-DRP-11	DRP-MS-OBJCHAR-8: Support for database ingest		02-Aug-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	421									
DM-DRP-12	DRP-MS-IMCHAR-6: Background estimation over th		30-Sep-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	235									
DM-DRP-13	DRP-MS-IMCHAR-2: PSF estimation over the full vi		30-Sep-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	235									
DM-DRP-14	DRP-MS-OBJCHAR-9: Simulated source injection		01-Dec-17 A	100%	0	0.00	\$0.00	\$0.00	\$0.00										
DM-DRP-15	DRP-MS-COADD-3: Coadds for detection & charac		30-Nov-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00										
DM-DRP-16	DRP-MS-IMCHAR-1: Global Photometric Fitting		31-May-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00										
DM-DRP-17	DRP-MS-IMCHAR-4: Simultaneous photometry & a		29-Nov-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00										
DM-DRP-18	DRP-MS-DET-1: Initial multi-band deblender		01-Dec-17 A	100%	0	0.00	\$0.00	\$0.00	\$0.00										
DM-DRP-19	DRP-MS-QA-2: QA metrics generated during pipelin		13-Dec-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00										



LSST May 2019 Month End Forecast																		
Activity ID	Activity Name	Start	Finish	Physical % Complete	Original Duration	Budgeted Labor Units	Budgeted Labor Cost	Budgeted Material Cost	Budgeted Total Cost no	Total Float	FY2015 2014-10-01	FY2016 2015-10-01	FY2017 2016-10-01	FY2018 2017-10-01	FY2019 2018-10-01	FY2020 2019-10-01	FY2021 2020-10-01	FY2022 2021-10-01
DM-DRP-2	DRP-MS-QA-1: Basic visualization & QA tooling		01-Nov-17 A	100%	0	0.00	\$0.00	\$0.00	\$0.00					◆				
	DM-DRP-20	DRP-MS-CPP-7: Refined set of LSST calibration products	06-Mar-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	128								
	DM-DRP-21	DRP-MS-IMCHAR-5: Integrated image characterization pipeline	26-Nov-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	194					◆			
	DM-DRP-22	DRP-MS-COADD-4: Template generation integrated	21-Oct-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	402						◆		
	DM-DRP-23	DRP-MS-CPP-10: Atmospheric characterization based on data from the LSST	12-Mar-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	125							◆	
	DM-DRP-24	DRP-MS-IMCHAR-3: Physically motivated PSF model	27-Nov-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	375							◆	
	DM-DRP-25	DRP-MS-OBJCHAR-1: Prototype multi-epoch fitting system	06-Feb-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	330							◆	
	DM-DRP-26	DRP-MS-DET-3: Overlap resolution at tract & patch boundaries	31-Oct-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	394							◆	
	DM-DRP-27	DRP-MS-DET-2: Object generation	27-Nov-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	375							◆	
	DM-DRP-28	DRP-MS-COADD-5: Difference image production during data releases	03-Feb-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	333							◆	
	DM-DRP-29	DRP-MS-OBJCHAR-3: Moving point source model fitting	30-Sep-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	235							◆	
	DM-DRP-3	DRP-MS-COADD-1: PSF-homogenized coadd construction	01-Nov-17 A	100%	0	0.00	\$0.00	\$0.00	\$0.00				◆	◆				
	DM-DRP-30	DRP-MS-OBJCHAR-2: Forced photometry on PVLs during data releases	31-Jan-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	334							◆	
	DM-DRP-31	DRP-MS-OBJCHAR-7: Photometric redshifts	31-May-21	0%	0	0.00	\$0.00	\$0.00	\$0.00	342								◆
	DM-DRP-32	DRP-MS-OBJCHAR-6: Object classification system	31-Oct-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00				◆	◆				
	DM-DRP-34	DRP-MS-OBJCHAR-5: Selection maps are generated during data releases	20-Feb-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	320							◆	
	DM-DRP-35	DRP-MS-DET-4: Multi-coadd measurement	13-Aug-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	542							◆	
	DM-DRP-36	DRP-MS-OBJCHAR-4: MOPS during data release	20-Sep-21	0%	0	0.00	\$0.00	\$0.00	\$0.00	263								◆
	DM-DRP-37	DRP-MS-COADD-2: Artifact rejection and background matching	30-Sep-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	235							◆	
	DM-DRP-38	DRP-MS-CPP-2: Camera package supporting the Commissioning Camera	29-Jun-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00					◆				
	DM-DRP-4	DRP-MS-CPP-6: Calibration product generation in support of basic ISR	01-Dec-17 A	100%	0	0.00	\$0.00	\$0.00	\$0.00				◆					
	DM-DRP-5	DRP-MS-CPP-3: Camera package supporting the LSST Camera	29-Jun-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00				◆					
	DM-DRP-6	DRP-MS-CPP-1: Camera package supporting the Auxiliary Telescope.	31-Jan-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00				◆					
	DM-DRP-7	DRP-MS-CPP-4: Collimated beam projector coordinate transform tool	05-Jul-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00					◆				
	DM-DRP-8	DRP-MS-CPP-5: Calibration product generation for the Auxiliary Telescope	03-Jun-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	319					◆			
	DM-DRP-9	DRP-MS-CPP-9: Data reduction pipeline for the Auxiliary Telescope	25-Mar-19 A	100%	0	0.00	\$0.00	\$0.00	\$0.00					◆	◆			
	LSST ME 19-05.02C.04.00 Management, Leadership & Other																	
	DM-10382	DRP pipelines maintenance in F17	02-Jun-17 A	20-Nov-17 A	100%	129	556.00	\$70,605.67	\$0.00	\$70,605.67								
	DM-10584	Forward Global Calibration Method	31-Jul-17 A	04-Jun-18 A	100%	169	180.00	\$23,356.80	\$0.00	\$23,356.80								
	DM-10585	RedMaPPer QA system	01-Nov-18 A	30-Nov-18 A	100%	64	128.00	\$16,838.88	\$0.00	\$16,838.88								
	DM-12908	DRP group leadership & management in S18	01-Dec-17 A	04-Apr-18 A	100%	125	264.00	\$35,101.44	\$0.00	\$35,101.44								
	DM-14444	DRP group leadership and management during F18	01-Nov-18 A	31-Dec-18 A	100%	129	3057.00	\$411,417.46	\$0.00	\$411,417.46								
	DM-16679	DRP group leadership & management in S19	03-Dec-18 A	31-Jul-19	0%	125	2400.00	\$327,141.22	\$0.00	\$327,141.22								
	DM-2025	Infrastructure for measurement of FY15 Key Performance Metrics	26-Aug-15 A	26-Aug-15 A	100%	13	78.29	\$23,078.70	\$0.00	\$23,078.70								
	DM-5398	Support for DM replanning process	01-May-16 A	31-May-16 A	100%	55	180.00	\$23,790.60	\$0.00	\$23,790.60								
	DM-5426	Participate in X16 DMLT Working Groups	12-Apr-16 A	03-Jun-16 A	100%	55	180.00	\$23,790.60	\$0.00	\$23,790.60								
	DM-6169	Work on replanning process & prep for review	27-May-16 A	03-Oct-16 A	100%	86	532.00	\$72,483.56	\$0.00	\$72,483.56								
	DM-6171	Service technical debt	03-Jun-16 A	17-Nov-16 A	100%	127	392.00	\$46,068.73	\$0.00	\$46,068.73								
	DM-6172	Emergent issues	13-Jun-16 A	30-Nov-16 A	100%	85	216.00	\$26,949.99	\$0.00	\$26,949.99								
	DM-6173	Serve a chair of the IVOA Time Domain Interest Group	02-Nov-16 A	02-Nov-16 A	100%	61	80.00	\$10,822.56	\$0.00	\$10,822.56								
	DM-6174	Prepare for and participate in meeting of SBAC	26-May-16 A	01-Jul-16 A	100%	22	80.00	\$10,573.60	\$0.00	\$10,573.60								
	DM-7331	Finish DM replanning	10-Oct-16 A	28-Nov-16 A	100%	61	120.00	\$16,233.84	\$0.00	\$16,233.84								
	DM-7613	Task Documentation	21-Oct-16 A	29-Nov-16 A	100%	41	168.06	\$32,299.00	\$0.00	\$32,299.00								
	DM-8494	DRP replan work in S17	27-Dec-16 A	11-Sep-17 A	100%	128	260.00	\$33,399.60	\$0.00	\$33,399.60								
	DM-8559	Task documentation system	05-Dec-16 A	07-Jun-17 A	100%	22	72.00	\$9,249.12	\$0.00	\$9,249.12								
	DMTC-16	DRP Management Engineering and Integration - LOE - FY14 - Labor	01-Aug-14 A	30-Sep-14 A	100%	42	0.00	\$0.00	\$0.00	\$0.00								
	DMTC-16	DRP Management Engineering and Integration - LOE - FY15 - Labor	01-Oct-14 A	27-Feb-15 A	100%	101	576.00	\$170,599.68	\$0.00	\$170,599.68								
	DMTC-16	DRP Management Engineering and Integration - LOE - FY15 - Labor	02-Mar-15 A	01-Sep-15 A	100%	130	432.00	\$121,858.56	\$0.00	\$121,858.56								
	DMTC-16	DRP Management Engineering and Integration - LOE - FY16 - Labor	01-Sep-15 A	29-Feb-16 A	100%	123	450.00	\$59,476.50	\$0.00	\$59,476.50								
	DMTC-16	DRP Management Engineering and Integration - LOE - X16 - Labor	01-Mar-16 A	31-May-16 A	100%	66	1112.00	\$156,921.40	\$0.00	\$156,921.40								
	DMTC-16	DRP Management Engineering and Integration - LOE - F16 - Labor	01-Jun-16 A	30-Nov-16 A	100%	127	2066.00	\$331,384.81	\$0.00	\$331,384.81								
	DMTC-16	DRP Management Engineering and Integration - S17 - Labor	01-Dec-16 A	31-May-17 A	100%	128	3495.00	\$439,401.72	\$0.00	\$439,401.72								
	DMTC-16	DRP Management Engineering and Integration - F17 - Labor	01-Jun-17 A	04-Dec-17 A	100%	131	3638.00	\$463,680.66	\$0.00	\$463,680.66								
	DMTC-16	DRP Management Engineering and Integration - S18 - Labor	05-Dec-17 A	31-May-18 A	100%	123	3026.27	\$402,373.28	\$0.00	\$402,373.28								
	DMTC-16	DRP Management Engineering and Integration UCD FY16A	01-Sep-15 A	29-Feb-16 A	100%	123	349.02	\$38,500.00	\$0.00	\$38,500.00								
	DMTC-16	DRP Management Engineering and Integration UCD FY16B	01-Mar-16 A	31-Aug-16 A	100%	131	347.00	\$38,500.00	\$0.00	\$38,500.00								
	DMTC-16	Princeton Institution Support Costs - LOE - FY14 - NonLabor	01-Aug-14 A	30-Sep-14 A	100%	42	0.00	\$0.00	\$0.00	\$0.00								
	DMTC-16	Princeton Institution Support Costs - LOE - FY15 - NonLabor	01-Oct-14 A	30-Sep-15 A	100%	252	0.00	\$5,330.24	\$5,330.24									
	DMTC-16	Princeton Institution Support Costs - LOE - FY16 - NonLabor	01-Oct-15 A	30-Sep-16 A	100%	254	0.00	\$5,516.78	\$5,516.78									
	DMTC-16	Princeton Institution Support Costs - LOE - FY17 - NonLabor	03-Oct-16 A	29-Sep-17 A	100%	254	0.00	\$5,709.91	\$5,709.91									
	DMTC-16	Princeton Institution Support Costs - LOE - FY18 - NonLabor	02-Oct-17 A	28-Sep-18 A	100%	253	0.00	\$5,909.73	\$5,909.73									
	DMTC-16	Princeton Institution Support Costs - LOE - FY19 - NonLabor	01-Oct-18 A	30-Sep-19	67%	254	0.00	\$6,116.60	\$6,116.60	283								
	DMTC-16	Princeton Institution Support Costs - LOE - FY20 - NonLabor	01-Oct-19	30-Sep-20	0%	254	0.00	\$6,330.69	\$6,330.69	283								
	DMTC-16	Princeton Institution Support Costs - LOE - FY21 - NonLabor	01-Oct-20	20-Aug-21	0%	226	0.00	\$6,552.24	\$6,552.24	283								
	DRP-PP-1	T/CAM management	03-Jun-19	31-May-22	0%	761	2400.00	\$349,948.79	\$0.00	\$349,948.79								
	DRP-PP-1	Science leadership	03-Jun-19	31-May-22	0%	761	900.00	\$131,230.80	\$0.00	\$131,230.80								
	LSST ME 19-05.02C.04.01 Software Primitives																	
	DLP-288	HSC merger complete		07-Dec-16 A	100%	0	0.00	\$0.00	\$0.00	\$0.00								
	DLP-588	AFW R&D code refactored		01-Aug-14 A	100%	0	0.00	\$0.00	\$0.00	\$0.00								
	DLP-73	Footprints redesigned and refactored		09-May-17 A	100%	0	0.00	\$0.00	\$0.00	\$0.00								
	DLP-736	Performance and capability enhancements in support of catalog use cases		19-Dec-16 A	100%	0	0.00	\$0.00	\$0.00	\$0.00								
	DM-10383	DRP software primitives maintenance in F17	06-Mar-17 A	11-Dec-17 A	100%	129	572.00	\$71,153.38	\$0.00	\$71,153.38								

## LSST May 2019 Month End Forecast

Activity ID	Activity Name	Start	Finish	Physical % Complete	Original Duration	Budgeted Labor Units	Budgeted Labor Cost	Budgeted Material Cost	Budgeted Total Cost no	Total Float	FY2015 2014-10-01	FY2016 2015-10-01	FY2017 2016-10-01	FY2018 2017-10-01	FY2019 2018-10-01	FY2020 2019-10-01	FY2021 2020-10-01	FY2022 2021-10-01
DM-10586	Middleware, framework and parallelization developm	03-Jul-17 A	18-Dec-17 A	100%	129	604.00	\$61,384.13	\$0.00	\$61,384.13									
	DM-1074 Measurement - Calibration and Ingest	22-Dec-14 A	27-Feb-15 A	100%	7	51.25	\$10,704.73	\$0.00	\$10,704.73									
	DM-1099 afw::table - finish interface transition	01-Oct-14 A	17-Feb-15 A	100%	13	115.56	\$19,102.54	\$0.00	\$19,102.54									
	DM-1100 Measurement - Convert Old Algorithms	10-Oct-14 A	01-Mar-15 A	100%	11	161.84	\$34,031.72	\$0.00	\$34,031.72									
	DM-1101 Measurement - Finish Framework Overhaul	31-Oct-14 A	08-Feb-15 A	100%	18	164.45	\$27,281.56	\$0.00	\$27,281.56									
	DM-1107 afw - Footprint Improvements	21-Nov-14 A	26-Jan-15 A	100%	11	166.00	\$46,825.28	\$0.00	\$46,825.28									
	DM-1109 DRP Middleware Evolution in S17	24-Feb-17 A	30-May-17 A	100%	128	448.00	\$44,611.92	\$0.00	\$44,611.92									
	DM-12738 Butler development during S18	14-Dec-17 A	15-Jun-18 A	100%	125	560.00	\$74,457.60	\$0.00	\$74,457.60									
	DM-14448 Butler and SuperTask Conversion during F18	18-Jun-18 A	31-Dec-18 A	100%	107	800.00	\$107,167.63	\$0.00	\$107,167.63									
	DM-16675 DRP efforts toward Gen 3 Mddware: PipelineTask	13-Dec-18 A	28-Feb-19 A	100%	40	400.00	\$55,044.00	\$0.00	\$55,044.00									
	DM-16678 Emergent work for DRP in S19	10-Dec-18 A	26-Nov-19	38.45%	125	572.00	\$78,712.92	\$0.00	\$78,712.92	68								
	DM-16771 DRP efforts toward Gen 3 Mddware during secon	01-Apr-19 A	04-Sep-19	62.7%	66	631.99	\$86,968.56	\$0.00	\$86,968.56	128								
	DM-1739 Science Pipelines DM-W15-4 Bugs & Papercuts	06-Jan-15 A	22-Jan-15 A	100%	7	0.00	\$0.00	\$0.00	\$0.00									
	DM-1904 Continued footprint improvements	26-Mar-15 A	26-Aug-15 A	100%	64	40.83	\$11,518.28	\$0.00	\$11,518.28									
	DM-1910 DRP DM-S15-1,2,3 Bugs and Papercuts	02-Mar-15 A	27-May-15 A	100%	64	103.96	\$25,744.61	\$0.00	\$25,744.61									
	DM-2044 Science Pipelines DM-W15-5 Bugs & Papercuts	20-Feb-15 A	01-Apr-15 A	100%	7	0.00	\$0.00	\$0.00	\$0.00									
	DM-3559 Implement improved Footprints	09-Aug-16 A	27-Apr-17 A	100%	60	210.00	\$27,755.70	\$0.00	\$27,755.70									
	DM-3568 HSC port: framework	11-Sep-15 A	15-Mar-16 A	100%	60	183.75	\$24,286.24	\$0.00	\$24,286.24									
	DM-3578 Initial utility class for chromaticity	01-May-17 A	31-May-17 A	100%	55	115.50	\$9,044.81	\$0.00	\$9,044.81									
	DM-3579 CalibrateTask redesign	21-Dec-15 A	21-Dec-15 A	100%	38	42.00	\$5,551.14	\$0.00	\$5,551.14									
	DM-3581 Top-level tasks update	29-Jun-16 A	29-Jun-16 A	100%	55	126.00	\$16,653.42	\$0.00	\$16,653.42									
	DM-3586 Framework bucket	01-Sep-15 A	15-Mar-16 A	100%	121	63.00	\$8,326.71	\$0.00	\$8,326.71									
	DM-5346 Recover from accumulated technical debt	17-Mar-16 A	05-Jul-16 A	100%	55	200.00	\$24,064.16	\$0.00	\$24,064.16									
	DM-5395 Prototype afw/AstroPy integration	22-Mar-16 A	17-May-16 A	100%	55	100.00	\$13,217.00	\$0.00	\$13,217.00									
	DM-5396 Transfer relevant HSC documentation to LSST	19-Nov-17 A	30-Apr-18 A	100%	67	152.00	\$17,935.44	\$0.00	\$17,935.44									
	DM-5397 X16 Framework bucket	16-Mar-16 A	12-Jun-16 A	100%	45	83.05	\$10,566.31	\$0.00	\$10,566.31									
	DM-5399 HSC port: data release verification	16-Mar-16 A	05-Dec-16 A	100%	97	356.00	\$47,052.52	\$0.00	\$47,052.52									
	DM-6168 Port afw to pybind11	21-Jun-16 A	24-Oct-16 A	100%	66	304.00	\$40,179.68	\$0.00	\$40,179.68									
	DM-6175 Work with SUIT group on afwDisplay/Firefly	28-Jul-16 A	01-Nov-16 A	100%	85	80.00	\$10,665.11	\$0.00	\$10,665.11									
	DM-7318 Science Pipelines Modernization	22-Aug-16 A	07-Nov-16 A	100%	61	108.00	\$14,610.45	\$0.00	\$14,610.45									
	DM-7330 Develop infrastructure for pybind11 conversion	02-Oct-16 A	09-Mar-17 A	100%	195	514.32	\$68,335.38	\$0.00	\$68,335.38									
	DM-7717 Full-stack port to pybind11	16-Nov-16 A	07-Mar-17 A	100%	43	192.00	\$19,709.28	\$0.00	\$19,709.28									
	DM-8136 DRP software primitives maintenance in S17	12-Dec-16 A	07-Jun-17 A	100%	128	396.00	\$45,492.36	\$0.00	\$45,492.36									
	DMTC-23 Application Framework DRP R4.0	01-Aug-14 A	02-Sep-14 A	100%	22	0.00	\$0.00	\$0.00	\$0.00									
	DMTC-23 Application Framework DRP Scope Planning R5.0	02-Sep-14 A	29-Sep-14 A	100%	20	0.00	\$0.00	\$0.00	\$0.00									
	DMTC-23 Application Framework DRP Scope Planning R5.1	02-Feb-15 A	27-Feb-15 A	100%	20	5.00	\$1,410.40	\$0.00	\$1,410.40									
	DRP-PP-1 Software primitive development effort	03-Jun-19	31-May-22	0%	761	5195.30	\$554,596.48	\$0.00	\$554,596.48	86								
	DRP-PP-1 Software maintenance, debt reduction & emergent r	03-Jun-19	31-May-22	0%	761	5100.00	\$544,423.73	\$0.00	\$544,423.73	86								
	LSST ME 19-05.02C.04.02 Calibration Products	22-Jan-16 A	31-May-22		1631	18147.00	\$1,904,787.78	\$0.00	\$1,904,787.78	343								
	DLP-694 Prototype Brighter-Fatter correction available		31-May-16 A	100%	0	0.00	\$0.00	\$0.00	\$0.00									
	DM-10581 Convert the prototype AuxTel pipeline to stack conventions	30-Jun-17 A	20-Nov-17 A	100%	65	252.00	\$32,371.92	\$0.00	\$32,371.92									
	DM-10582 Data reduction for Collimated Beam Projector	27-Nov-17 A	27-Nov-17 A	100%	64	200.00	\$26,310.75	\$0.00	\$26,310.75									
	DM-10583 Enhance the AuxTel pipeline to solve for wavelength	19-Jan-18 A	22-Jun-18 A	100%	189	756.00	\$100,163.39	\$0.00	\$100,163.39									
	DM-10897 DM test stand data processing in F17	04-Jul-17 A	15-Dec-17 A	100%	65	200.00	\$25,692.00	\$0.00	\$25,692.00									
	DM-12733 Calibration Products Production in S18	18-Dec-17 A	31-Dec-18 A	100%	125	432.00	\$57,438.72	\$0.00	\$57,438.72									
	DM-12816 Collimated Beam Projector in F18	22-Oct-18 A	25-Apr-19 A	100%	188	854.90	\$115,817.26	\$0.00	\$115,817.26									
	DM-14678 Atmospheric characterization during F18	11-Jun-18 A	30-Nov-18 A	100%	129	697.19	\$93,829.00	\$0.00	\$93,829.00									
	DM-16685 Atmospheric Characterization during S19	10-Dec-18 A	23-Aug-19	80%	59	634.49	\$87,312.72	\$0.00	\$87,312.72	260								
	DM-16686 Detector Characterization and ISR during S19	17-Jan-19 A	23-Aug-19	85.45%	59	215.99	\$29,721.82	\$0.00	\$29,721.82	134								
	DM-18003 Detector Characterization in S19B	01-Apr-19 A	04-Sep-19	21.95%	66	399.32	\$45,066.00	\$0.00	\$45,066.00	399								
DM-18005 Atmospheric Characterization in S19B	01-Apr-19 A	04-Sep-19	51.47%	66	239.96	\$33,020.40	\$0.00	\$33,020.40	1038									
DM-18006 Auxiliary Telescope pipeline development in S19B	01-May-19 A	04-Sep-19	0.02%	66	220.00	\$30,274.20	\$0.00	\$30,274.20	399									
DM-3855 Calibration products preparation	22-Jan-16 A	15-Mar-16 A	100%	38	84.00	\$6,578.04	\$0.00	\$6,578.04										
DM-5401 Calibration Products Pipeline development in X16	27-Apr-16 A	31-Oct-16 A	100%	55	100.00	\$7,831.00	\$0.00	\$7,831.00										
DM-6113 Calibration Products Pipelines	26-Oct-16 A	05-Dec-16 A	100%	85	264.00	\$21,022.75	\$0.00	\$21,022.75										
DM-8151 Work on Auxiliary Telescope in S17	01-Feb-17 A	30-Jun-17 A	100%	128	500.00	\$64,230.00	\$0.00	\$64,230.00										
DM-8276 Investigate use of cospics for gain calibration	18-Jan-17 A	07-Jun-17 A	100%	62	140.00	\$17,984.40	\$0.00	\$17,984.40										
DM-8292 Provide obs packages for accessing camera test star	20-Mar-17 A	09-Jun-17 A	100%	42	100.00	\$12,846.00	\$0.00	\$12,846.00										
DRP-PP-1 Collimated Beam Projector coordinate transforms	03-Jun-19	12-Jul-19	0%	29	0.00	\$0.00	\$0.00	\$0.00	436									
DRP-PP-1 Early LSST calibration products	05-Sep-19	06-Mar-20	0%	125	1209.73	\$109,669.59	\$0.00	\$109,669.59	128									
DRP-PP-1 Advanced LSST calibration products	03-Jun-19	31-May-22	0%	761	7647.43	\$713,244.26	\$0.00	\$713,244.26	86									
DRP-PP-1 Refine Auxiliary Telescope pipeline	03-Jun-19	29-May-20	0%	251	1700.00	\$153,117.71	\$0.00	\$153,117.71	86									
DRP-PP-1 Camera package maintenance	03-Jun-19	31-May-22	0%	761	1300.00	\$121,245.84	\$0.00	\$121,245.84	86									
LSST ME 19-05.02C.04.03 Image Characterization	02-Sep-14 A	31-May-22		1964	9375.69	\$955,408.78	\$0.00	\$955,408.78	86									
DM-10355 Wavefront-based PSF estimation	22-Jun-17 A	22-Mar-18 A	100%	129	400.00	\$51,997.95	\$0.00	\$51,997.95										
DM-12736 DRP PSF fitting in S18	02-Feb-18 A	22-Jun-18 A	100%	125	432.00	\$57,438.72	\$0.00	\$57,438.72										
DM-16677 DRP PSF fitting in S19	01-Mar-19 A	26-Nov-19	40%	125	192.00	\$19,344.00	\$0.00	\$19,344.00	194									
DM-1909 Wavefront measurement and PSF reconstruction	17-Jan-17 A	08-Jun-17 A	100%	128	408.00	\$52,411.68	\$0.00	\$52,411.68										
DM-6170 Investigate PSF modelling, Piff applicability	10-Oct-16 A	13-Jan-17 A	100%	41	136.00	\$18,604.80	\$0.00	\$18,604.80										
DM-8299 DRP QA efforts in S17	19-Dec-16 A	08-Jun-17 A	100%	128	756.00	\$97,115.76	\$0.00	\$97,115.76										
DMTC-19 PSF Estimation Scope Planning R5.0	02-Sep-14 A	29-Sep-14 A	100%	20	0.00	\$0.00	\$0.00	\$0.00										
DMTC-19 PSF Estimation Scope Planning R5.1	02-Feb-15 A	27-Feb-15 A	100%	20	5.00	\$1,410.40	\$0.00	\$1,410.40										

## LSST May 2019 Month End Forecast

Activity ID	Activity Name	Start	Finish	Physical % Complete	Original Duration	Budgeted Labor Units	Budgeted Labor Cost	Budgeted Material Cost	Budgeted Total Cost no	Total Float	FY2015 2014-10-01	FY2016 2015-10-01	FY2017 2016-10-01	FY2018 2017-10-01	FY2019 2018-10-01	FY2020 2019-10-01	FY2021 2020-10-01	FY2022 2021-10-01	
LSST ME 19-05.02C.04.04 Coaddition	DRP-PP-I Full visit PSF and background estimation	03-Jun-19	30-Sep-19	0%	84	866.69	\$76,285.72	\$0.00	\$76,285.72	235									
	DRP-PP-I Physically motivated PSF	03-Jun-19	27-Nov-19	0%	126	900.00	\$80,142.00	\$0.00	\$80,142.00	67									
	DRP-PP-I Basic image characterization	03-Jun-19	26-Nov-19	0%	125	180.00	\$25,054.37	\$0.00	\$25,054.37	340									
	DRP-PP-I Refined PSF modelling	03-Jun-19	30-Nov-21	0%	633	3300.00	\$304,892.53	\$0.00	\$304,892.53	86									
	DRP-PP-I Reference catalog	01-Jun-20	31-May-22	0%	510	1800.00	\$170,710.84	\$0.00	\$170,710.84	86									
	LSST ME 19-05.02C.04.04 Coaddition																		
	DLP-152 Initial PSF-matched image coaddition available		19-Dec-16 A	100%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
	DLP-502 Prototype image artifact identification available		31-Aug-15 A	100%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
	DLP-503 Prototype direct coaddition		31-Aug-15 A	100%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
	DM-10571 DRP QA efforts in F17	12-Jul-17 A	29-Nov-17 A	100%	129	788.00	\$102,435.97	\$0.00	\$102,435.97										
	DM-12731 Background Matching	20-Nov-17 A	29-Oct-19	0.02%	359	252.00	\$33,970.92	\$0.00	\$33,970.92	88									
	DM-6176 Research coaddition	25-Aug-16 A	22-Feb-17 A	100%	105	424.00	\$49,496.98	\$0.00	\$49,496.98										
	DM-8289 PSF-Matched Coaddition	26-Nov-16 A	26-May-17 A	100%	22	52.00	\$6,679.92	\$0.00	\$6,679.92										
	DM-8290 Warped Image Comparison	30-Jan-17 A	05-Jun-18 A	100%	171	564.00	\$72,451.44	\$0.00	\$72,451.44										
	DRP-PP-I Basic background matching	01-Oct-19	03-Feb-20	0%	84	200.00	\$18,220.00	\$0.00	\$18,220.00	169									
	DRP-PP-I Basic background matching	03-Jun-19	30-Sep-19	0%	84	600.00	\$52,812.00	\$0.00	\$52,812.00	169									
	DRP-PP-I Initial deep detection suite	03-Jun-19	30-Sep-19	0%	84	0.00	\$0.00	\$0.00	\$0.00	551									
	DRP-PP-I Template generation	03-Jun-19	30-Sep-19	0%	84	900.00	\$79,218.00	\$0.00	\$79,218.00	417									
	DRP-PP-I Initial image differencing	03-Jun-19	03-Feb-20	0%	168	1800.00	\$161,208.00	\$0.00	\$161,208.00	169									
	DRP-PP-I Refine coaddition algorithms	02-Dec-19	31-May-22	0%	635	4500.00	\$423,464.67	\$0.00	\$423,464.67	86									
	DRP-PP-I Refine subtraction	02-Dec-19	31-May-22	0%	635	1800.00	\$264,817.22	\$0.00	\$264,817.22	86									
	DRP-PP-I Finalize deep detection suite	01-Jun-20	30-Nov-21	0%	382	1440.00	\$211,434.67	\$0.00	\$211,434.67	86									
	LSST ME 19-05.02C.04.05 Detection & Deblending																		
	DLP-100 Consistent multi-band deblending available		11-Apr-16 A	100%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
	DLP-101 Prototype coadd detection available		11-Apr-16 A	100%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
	DLP-103 Prototype multi-coadd peak association available		11-Apr-16 A	100%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
	DLP-486 Prototype merge & deduplication in tract & patch ove		11-Apr-16 A	100%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
	DM-10353 NMF deblerder prototyping in F17	30-Jun-17 A	27-Nov-17 A	100%	129	400.00	\$51,997.95	\$0.00	\$51,997.95										
	DM-12416 Debender development during S18	14-Dec-17 A	27-Apr-18 A	100%	125	432.00	\$57,438.72	\$0.00	\$57,438.72										
	DM-14401 Debender Development during F18	05-Apr-18 A	27-Aug-18 A	100%	129	448.00	\$60,292.78	\$0.00	\$60,292.78										
	DM-16676 Commission New Debender "Scarlet" during S19	01-Apr-19 A	04-Sep-19	56.5%	66	539.99	\$74,308.40	\$0.00	\$74,308.40	399									
	DM-3622 Overhaul debender	30-Sep-16 A	05-Dec-16 A	100%	63	199.50	\$26,367.92	\$0.00	\$26,367.92										
	DM-8140 Debender	16-Dec-16 A	06-Jun-17 A	100%	128	565.00	\$72,579.90	\$0.00	\$72,579.90										
	DRP-PP-I Object generation	03-Jun-19	27-Nov-19	0%	126	1762.62	\$196,257.60	\$0.00	\$196,257.60	67									
	DRP-PP-I Resolve patch overlaps	03-Jun-19	31-Oct-19	0%	107	1350.00	\$119,720.78	\$0.00	\$119,720.78	86									
	DRP-PP-I Multi-coadd measurement	03-Jun-19	13-Aug-20	0%	305	150.00	\$13,537.76	\$0.00	\$13,537.76	160									
	DRP-PP-I Complete source detection system	03-Jun-19	31-May-22	0%	761	4000.00	\$373,064.13	\$0.00	\$373,064.13	86									
	DRP-PP-I Refine multi-band deblending	03-Jun-19	31-May-22	0%	761	6000.00	\$652,846.78	\$0.00	\$652,846.78	86									
	DRP-PP-I Complete multi-coadd measurement	01-Dec-21	31-May-22	0%	128	810.00	\$98,840.70	\$0.00	\$98,840.70	86									
	DRP-PP-I Finalize overlap resolution	02-Dec-19	31-May-21	0%	379	1350.00	\$124,882.59	\$0.00	\$124,882.59	280									
	DRP-PP-I Investigate joint Euclid-WFIRST Processing	03-Dec-18 A	30-Nov-20	25%	504	2880.00	\$405,608.69	\$0.00	\$405,608.69	468									
	LSST ME 19-05.02C.04.06 Characterization & Measurement																		
	DLP-696 Single epoch Sersic model fitting		01-Aug-14 A	100%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
	DLP-697 Single epoch CModel minimization		01-Aug-14 A	100%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
	DLP-700 Galaxy shear fitting parameters available		31-May-16 A	100%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
	DLP-715 Fundamental centroid and shape measurements		04-Dec-15 A	100%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
	DLP-716 Fundamental flux measurements		12-Sep-14 A	100%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
	DLP-724 Forced per-epoch photometry		12-Sep-14 A	100%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
	DM-10578 Star-galaxy classification	01-Feb-18 A	31-Oct-18 A	100%	145	412.00	\$54,503.89	\$0.00	\$54,503.89										
	DM-10579 Experiments in shear measurement	31-Jul-17 A	31-Jan-18 A	100%	129	208.00	\$27,038.94	\$0.00	\$27,038.94										
DM-10580 Galaxy model fitting	10-Jul-17 A	30-Apr-18 A	100%	169	572.00	\$74,582.42	\$0.00	\$74,582.42											
DM-1108 Galaxy Fitting - Shear Precision Experiments	30-Apr-15 A	31-Aug-15 A	100%	120	229.56	\$45,814.25	\$0.00	\$45,814.25											
DM-1108a Galaxy Fitting - Shear Precision Experiments - UCD	01-May-15 A	27-Aug-15 A	100%	120	365.27	\$39,152.99	\$0.00	\$39,152.99											
DM-1111 CModel robustness	23-Feb-17 A	21-Jul-17 A	100%	55	192.50	\$22,100.58	\$0.00	\$22,100.58											
DM-12732 Shear measurement in S18	24-Jan-18 A	28-Sep-18 A	100%	125	208.00	\$27,655.68	\$0.00	\$27,655.68											
DM-12734 Galaxy model fitting in S18	14-Mar-18 A	14-Dec-18 A	100%	105	348.00	\$46,270.08	\$0.00	\$46,270.08											
DM-1382 Debender R&D	06-Nov-14 A	02-Mar-15 A	100%	20	101.00	\$28,490.08	\$0.00	\$28,490.08											
DM-1385 Multiband Processing	07-Jan-15 A	08-Jan-15 A	100%	20	124.00	\$34,977.92	\$0.00	\$34,977.92											
DM-14404 Galaxy Model Fitting during F18	18-Jun-18 A	13-Dec-18 A	100%	129	432.00	\$58,139.46	\$0.00	\$58,139.46											
DM-16683 Galaxy Modelling in S19	25-Jun-19 A	26-Nov-19	80.35%	125	392.00	\$53,943.12	\$0.00	\$53,943.12	68										
DM-1769 Measurement - Framework Improvements	15-Mar-15 A	06-Aug-15 A	100%	10	6.51	\$1,837.55	\$0.00	\$1,837.55											
DM-1769a Measurement - Framework Improvements - UCD	16-Mar-15 A	06-Aug-15 A	100%	10	16.03	\$1,718.31	\$0.00	\$1,718.31											
DM-1826 Science Pipelines DM-W15-1,2,3 Bugs & Papercuts	08-Oct-14 A	22-Dec-14 A	100%	7	0.00	\$0.00	\$0.00	\$0.00											
DM-1907 Port HSC debender	17-Mar-15 A	31-Aug-15 A	100%	23	182.22	\$51,401.37	\$0.00	\$51,401.37											
DM-1912 DRP DM-S15-4,5,6 Bugs and Papercuts	21-Apr-15 A	31-Aug-15 A	100%	66	88.90	\$21,072.15	\$0.00	\$21,072.15											
DM-1942 Test data development and HSC stack integration	30-Mar-15 A	31-Aug-15 A	100%	38	246.12	\$69,426.67	\$0.00	\$69,426.67											
DM-1968 CModel flux validation	28-Aug-15 A	31-Aug-15 A	100%	43	200.64	\$56,595.67	\$0.00	\$56,595.67											
DM-2250 Galaxy Fitting via "ngmix"	14-Apr-16 A	30-Jun-16 A	100%	55	188.00	\$20,858.60	\$0.00	\$20,858.60											
DM-3560 HSC port: object chracterization	22-Sep-15 A	17-Mar-16 A	100%	66	320.25	\$42,327.44	\$0.00	\$42,327.44											
DM-3561 Continued galaxy shear fitting experiments	31-Aug-15 A	15-Mar-16 A	100%	66	236.25	\$26,164.67	\$0.00	\$26,164.67											
DM-3583 Improved galaxy model fluxes	23-Mar-18 A	23-Mar-18 A	100%	55	199.50	\$26,367.92	\$0.00	\$26,367.92											
DM-3585 Object characterization bucket	09-Sep-15 A	11-Mar-16 A	100%	121	63.00	\$8,326.71	\$0.00	\$8,326.71											



## LSST May 2019 Month End Forecast

Activity ID	Activity Name	Start	Finish	Physical % Complete	Original Duration	Budgeted Labor Units	Budgeted Labor Cost	Budgeted Material Cost	Budgeted Total Cost no	Total Float	FY2015 2014-10-01	FY2016 2015-10-01	FY2017 2016-10-01	FY2018 2017-10-01	FY2019 2018-10-01	FY2020 2019-10-01	FY2021 2020-10-01	FY2022 2021-10-01
LSST ME 19-05.02C.04.07 Maintenance, Quality & Documents	DM-3628 HSC port: verification	31-Aug-15 A	15-Mar-16 A	100%	44	157.50	\$20,816.78	\$0.00	\$20,816.78									
	DM-5246 X16 Object Characterization Bucket	31-Mar-16 A	01-Jun-16 A	100%	45	82.29	\$10,465.86	\$0.00	\$10,465.86									
	DM-7333 Bring over new HSC code	07-Sep-16 A	19-Dec-16 A	100%	42	100.00	\$13,448.50	\$0.00	\$13,448.50									
	DM-8306 DRP science pipelines maintenance in S17	20-Dec-16 A	08-Jun-17 A	100%	128	376.00	\$48,300.96	\$0.00	\$48,300.96									
	DMTC-22 Object Characterization Pipeline R4.0	01-Aug-14 A	02-Sep-14 A	100%	22	0.00	\$0.00	\$0.00	\$0.00									
	DMTC-22 Object Characterization Pipeline Scope Planning R5.0	02-Sep-14 A	29-Sep-14 A	100%	20	0.00	\$0.00	\$0.00	\$0.00									
	DMTC-22 Object Characterization Pipeline Scope Planning R5.1	02-Feb-15 A	27-Feb-15 A	100%	20	5.00	\$1,410.40	\$0.00	\$1,410.40									
	DMTC-22 Object Characterization Pipeline Scope Planning R5.0 - UCD	02-Sep-14 A	29-Sep-14 A	100%	20	0.00	\$0.00	\$0.00	\$0.00									
	DMTC-22 Object Characterization Pipeline Scope Planning R5.1 - UCD	02-Feb-15 A	27-Feb-15 A	100%	20	5.00	\$1,410.40	\$0.00	\$1,410.40									
	DRP-PP-1 Prototype MultiFit system	03-Jun-19	06-Feb-20	0%	171	600.00	\$84,037.37	\$0.00	\$84,037.37	166								
	DRP-PP-1 Enhance measurement framework	03-Jun-19	31-Jan-20	0%	167	1790.00	\$250,609.97	\$0.00	\$250,609.97	170								
	DRP-PP-1 Prototype moving point source model	03-Jun-19	30-Sep-19	0%	84	240.00	\$33,026.40	\$0.00	\$33,026.40	253								
	DRP-PP-1 Prototype moving point source model	03-Jun-19	30-Sep-19	0%	84	480.00	\$66,052.80	\$0.00	\$66,052.80	235								
	DRP-PP-1 MOPS	01-Jun-20	02-Jun-21	0%	256	1800.00	\$167,770.62	\$0.00	\$167,770.62	212								
	DRP-PP-1 Selection maps	03-Jun-19	20-Feb-20	0%	181	844.00	\$75,681.99	\$0.00	\$75,681.99	156								
	DRP-PP-1 Integrate community contributions	02-Dec-19	31-May-21	0%	379	1080.00	\$156,194.30	\$0.00	\$156,194.30	280								
	DRP-PP-1 Upgrade photometry algorithms	03-Jun-19	31-May-22	0%	761	6200.00	\$696,716.67	\$0.00	\$696,716.67	86								
	DRP-PP-1 Support for enhanced database ingest	02-Dec-19	31-May-21	0%	379	1800.00	\$166,510.12	\$0.00	\$166,510.12	280								
	DRP-PP-1 Object classification	03-Jun-19	31-May-21	0%	505	2500.00	\$260,398.92	\$0.00	\$260,398.92	280								
	DRP-PP-1 Enhance MultiFit system	01-Dec-20	31-May-22	0%	382	1436.00	\$214,958.90	\$0.00	\$214,958.90	86								
	LSST ME 19-05.02C.04.07 Maintenance, Quality & Documents	01-Dec-17 A	31-Aug-22		1205	12564.00	\$1,514,389.65	\$0.00	\$1,514,389.65	21								
	DM-12729 Emergent work for DRP during S18	01-Dec-17 A	06-Jun-18 A	100%	125	720.00	\$95,731.20	\$0.00	\$95,731.20									
	DM-12735 QA work on DRP pipelines in S18	07-Dec-17 A	04-Jun-18 A	100%	125	752.00	\$99,985.92	\$0.00	\$99,985.92									
	DM-12737 QA tool development during S18	19-Jan-18 A	31-Aug-18 A	100%	105	196.00	\$26,060.16	\$0.00	\$26,060.16									
	DM-12863 Coverage maps in S18	14-May-18 A	26-Sep-19	17.77%	274	260.00	\$34,941.60	\$0.00	\$34,941.60	111								
	DM-14402 QA work on DRP pipelines during F18	11-Jul-18 A	13-Dec-18 A	100%	129	432.00	\$58,139.46	\$0.00	\$58,139.46									
	DM-14403 Inject fake objects in DRP during																	

## LSST May 2019 Month End Forecast

Activity ID	Activity Name	Start	Finish	Physical % Complete	Original Duration	Budgeted Labor Units	Budgeted Labor Cost	Budgeted Material Cost	Budgeted Total Cost no	Total Float	FY2015 2014-10-01	FY2016 2015-10-01	FY2017 2016-10-01	FY2018 2017-10-01	FY2019 2018-10-01	FY2020 2019-10-01	FY2021 2020-10-01	FY2022 2021-10-01
DMTC-25	IPAC Institution Support Costs - LOE - FY20 - NonLab	01-Oct-19	30-Sep-20	0%	254	0.00	\$0.00	\$6,330.71	\$6,330.71	283								
	IPAC Institution Support Costs - LOE - FY21 - NonLab	01-Oct-20	20-Aug-21	0%	226	0.00	\$0.00	\$6,552.25	\$6,552.25	283								
	LSST ME 19-05.02C.05.01 Basic Archive Access Tools																	
	LSST web UI search external catalog	01-Aug-14 A	30-Aug-19		846	13836.50	\$2,317,304.17	\$0.00	\$2,317,304.17	255								
	LSST web UI search external catalog		01-Aug-17 A	100%	0	0.00	\$0.00	\$0.00	\$0.00									
	Extra LSST query capabilities in web UI		01-Aug-17 A	100%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00								
	Research the development framework for SUI		14-Oct-14 A	100%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00								
	Access Qserv for catalog search in SUI prototype		02-Dec-14 A	100%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00								
	Define the data access APIs with database team		11-Mar-15 A	100%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00								
	Able to use some data-access APIs developed by database team		17-Nov-15 A	100%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00								
Evaluate best-of-breed tools. Technology exploration		01-Aug-14 A	100%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
Firefly server side code refactor		31-Jul-17 A	100%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
Convert major portion of GWT in Firefly to pure JavaScript		08-Apr-16 A	100%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
Portal UI look&feel and user experience improvement	12-May-17 A	28-Nov-17 A	100%	129	240.00	\$44,397.16	\$0.00	\$44,397.16										
science platform design	05-Jul-17 A	21-Dec-17 A	100%	85	180.00	\$36,822.90	\$0.00	\$36,822.90										
Firefly server deployment	26-May-17 A	01-Sep-17 A	100%	65	75.00	\$14,091.90	\$0.00	\$14,091.90										
SUI Research system framework	14-Nov-14 A	02-Mar-15 A	100%	9	441.60	\$70,701.47	\$0.00	\$70,701.47										
SUI web user interface prototype	14-Nov-14 A	27-Feb-15 A	100%	19	883.60	\$147,341.16	\$0.00	\$147,341.16										
SUI Interface through Qserv with database	28-Oct-14 A	05-Jan-15 A	100%	15	237.60	\$37,505.16	\$0.00	\$37,505.16										
SUI catalog query interface prototype	18-Nov-14 A	29-Jan-15 A	100%	15	241.20	\$38,073.42	\$0.00	\$38,073.42										
SUI requirement refinement	01-Sep-15 A	30-Sep-15 A	100%	64	200.00	\$34,603.28	\$0.00	\$34,603.28										
SUI infrastructure implementation	18-Mar-15 A	31-Jul-15 A	100%	65	160.00	\$25,256.00	\$0.00	\$25,256.00										
SUI functional design	31-Mar-15 A	04-Sep-15 A	100%	64	240.00	\$38,199.68	\$0.00	\$38,199.68										
SUI web interface and Python interaction	10-Apr-15 A	31-Jul-15 A	100%	64	200.00	\$31,570.00	\$0.00	\$31,570.00										
SUI refactor Firefly package	08-Mar-15 A	26-Aug-15 A	100%	130	560.00	\$88,396.00	\$0.00	\$88,396.00										
Convert major portion of GWT in Firefly to pure JavaScript	01-Oct-15 A	15-Jan-16 A	100%	121	696.00	\$113,038.74	\$0.00	\$113,038.74										
Prepare for S15 end-to-end system and Firefly release	20-Aug-15 A	20-Aug-15 A	100%	11	266.00	\$41,988.10	\$0.00	\$41,988.10										
Firefly infrastructure improvement to support new functions	01-Oct-15 A	29-Feb-16 A	100%	102	160.00	\$25,957.36	\$0.00	\$25,957.36										
Create an LSST web UI prototype	01-Sep-16 A	30-Nov-16 A	100%	33	124.00	\$20,257.88	\$0.00	\$20,257.88										



LSST May 2019 Month End Forecast																			
Activity ID	Activity Name		Start	Finish	Physical % Complete	Original Duration	Budgeted Labor Units	Budgeted Labor Cost	Budgeted Material Cost	Budgeted Total Cost no	Total Float	FY2015 2014-10-01	FY2016 2015-10-01	FY2017 2016-10-01	FY2018 2017-10-01	FY2019 2018-10-01	FY2020 2019-10-01	FY2021 2020-10-01	FY2022 2021-10-01
DM-1873	SUI 2D data visualization (XY plot)	30-Apr-15 A	30-Apr-15 A	100%	64	160.00	\$25,256.00	\$0.00	\$25,256.00			SUI 2D data visualization (XY plot)							
	DM-2048	Start requirements gathering for pipeline QA visualiz	25-Aug-15 A	31-Aug-15 A	100%	64	144.00	\$27,781.28	\$0.00	\$27,781.28		Start requirements gathering for pipeline QA visualization needs							
	DM-2049	SUI Build the visualization components that could be	31-Mar-15 A	30-Jun-15 A	100%	86	320.00	\$50,512.00	\$0.00	\$50,512.00		SUI Build the visualization components that could be used independently							
	DM-2847	SUI Firefly server side Python job management	26-Jun-15 A	25-Aug-15 A	100%	42	80.00	\$12,628.00	\$0.00	\$12,628.00		SUI Firefly server side Python job management							
	DM-3593	Firefly support for pipeline visualization needs (W16)	01-Oct-15 A	01-Oct-15 A	100%	42	160.00	\$25,697.60	\$0.00	\$25,697.60		Firefly support for pipeline visualization needs (W16)							
	DM-3595	New functions for XY 2D plot (W16)	08-Sep-15 A	18-Feb-16 A	100%	36	200.00	\$32,674.00	\$0.00	\$32,674.00		New functions for XY 2D plot (W16)							
	DM-3596	More bug fixes in Firefly JS code	12-Apr-17 A	26-May-17 A	100%	106	165.00	\$29,767.65	\$0.00	\$29,767.65		More bug fixes in Firefly JS code							
	DM-3599	Firefly support for Camera team visualization needs	01-Oct-15 A	29-Feb-16 A	100%	121	120.00	\$19,489.44	\$0.00	\$19,489.44		Firefly support for Camera team visualization needs (W16)							
	DM-3603	Expose more Firefly visualization functions through J	23-Sep-15 A	01-Oct-15 A	100%	42	40.00	\$6,424.40	\$0.00	\$6,424.40		Expose more Firefly visualization functions through JavaScript API (W16)							
	DM-3604	Expose more Firefly visualization functions through F	08-Aug-16 A	14-Sep-16 A	100%	44	40.00	\$6,534.80	\$0.00	\$6,534.80		Expose more Firefly visualization functions through Python API (W16)							
	DM-4680	Provide API for tabular data display using Firefly	31-May-16 A	21-Jun-16 A	100%	64	30.00	\$5,011.03	\$0.00	\$5,011.03		Provide API for tabular data display using Firefly							
	DM-4681	Provide a beta version of LSST web UI	12-Aug-16 A	30-Nov-16 A	100%	85	240.00	\$40,253.02	\$0.00	\$40,253.02		Provide a beta version of LSST web UI							
	DM-4689	Firefly Java/JS code refactoring and bug fixes(F16)	25-May-16 A	12-Jan-17 A	100%	105	345.00	\$53,181.00	\$0.00	\$53,181.00		Firefly Java/JS code refactoring and bug fixes(F16)							
	DM-5171	New XY functions to be developed (F16)	12-Jul-16 A	07-Nov-16 A	100%	127	195.00	\$30,245.76	\$0.00	\$30,245.76		New XY functions to be developed (F16)							
	DM-5445	Convert GWT code to pure JavaScript (X16, part3 v	17-Mar-16 A	31-May-16 A	100%	55	1049.25	\$151,556.06	\$0.00	\$151,556.06		Convert GWT code to pure JavaScript (X16, part3 visualization)							
	DM-5477	Firefly support for Camera team visualization needs	29-Apr-16 A	26-May-16 A	100%	43	34.10	\$4,950.55	\$0.00	\$4,950.55		Firefly support for Camera team visualization needs (X16)							
	DM-5591	Archive in a box (F16)	27-Jul-16 A	28-Jul-17 A	100%	85	150.00	\$23,744.04	\$0.00	\$23,744.04		Archive in a box (F16)							
	DM-5947	Jupyter widget using Firefly	02-Aug-16 A	31-May-17 A	100%	105	105.00	\$21,114.22	\$0.00	\$21,114.22		Jupyter widget using Firefly							
	DM-6069	Camera team visualization support (F16)	02-Aug-16 A	21-Nov-16 A	100%	127	45.00	\$7,434.75	\$0.00	\$7,434.75		Camera team visualization support (F16)							
	DM-6281	More visualization features in S17	16-Dec-16 A	31-May-17 A	100%	106	405.00	\$74,066.55	\$0.00	\$74,066.55		More visualization features in S17							
	DM-6375	New image visualization functions (F16)	14-Sep-16 A	17-Nov-16 A	100%	105	105.00	\$15,906.29	\$0.00	\$15,906.29		New image visualization functions (F16)							
	DM-6979	Firefly strategy response to RFC-193 (AST astrome	01-Aug-18 A	31-Aug-18 A	100%	40	150.00	\$29,968.50	\$0.00	\$29,968.50		Firefly strategy response to RFC-193 (AST astrometry adoption)							
	DM-7218	Bug fixes in the new JS Firefly code (S17)	11-Aug-16 A	13-Mar-17 A	100%	128	165.00	\$30,619.05	\$0.00	\$30,619.05		Bug fixes in the new JS Firefly code (S17)							
	DM-7284	Integrate Firefly Python API in afw.display (S17)	07-Oct-16 A	30-May-17 A	100%	62	102.00	\$20,361.09	\$0.00	\$20,361.09		Integrate Firefly Python API in afw.display (S17)							
	DM-8366	Replace Highcharts with Plotly.js as the charting libra	24-Mar-17 A	22-May-17 A	100%	66	450.00	\$82,875.90	\$0.00	\$82,875.90		Replace Highcharts with Plotly.js as the charting library in Firefly							
	DM-8400	New visualization features and improvements in F17	27-Apr-17 A	29-Sep-17 A	100%	129	472.50	\$85,595.88	\$0.00	\$85,595.88		New visualization features and improvements in F17							
	DM-8492	Camera visualization support	16-Dec-16 A	24-May-17 A	100%	128	112.50	\$21,457.13	\$0.00	\$21,457.13		Camera visualization support							
	DM-8702	Improve and fix bugs of Firefly Python API	16-Feb-17 A	02-Jun-17 A	100%	61	450.00	\$82,875.90	\$0.00	\$82,875.90		Improve and fix bugs of Firefly Python API							
	DM-8770	Firefly Python interfaces	06-Jul-17 A	20-Mar-18 A	100%	129	255.00	\$52,453.72	\$0.00	\$52,453.72		Firefly Python interfaces							
	DMTC-27	Data Visualizers R4.0	01-Aug-14 A	02-Sep-14 A	100%	22	0.00	\$0.00	\$0.00	\$0.00		Data Visualizers R4.0							
	DMTC-27	Data Visualizers Scope Planning R5.0	02-Sep-14 A	29-Sep-14 A	100%	20	0.00	\$0.00	\$0.00	\$0.00		Data Visualizers Scope Planning R5.0							
	DMTC-27	Data Visualizers Scope Planning R5.1	02-Feb-15 A	27-Feb-15 A	100%	20	10.00	\$1,578.50	\$0.00	\$1,578.50		Data Visualizers Scope Planning R5.1							
	LSST ME 19-05.02C.05.03 Alert/Notification Toolkit		01-Aug-14 A	30-Nov-16 A		589	160.00	\$26,600.51	\$0.00	\$26,600.51									
	DLP-576	Evaluate best-of-breed tools. Technology exploration		01-Aug-14 A	100%	0	0.00	\$0.00	\$0.00	\$0.00		Evaluate best-of-breed tools. Technology exploration.							
	DM-1874	SUI the alert subscription system specification	30-Apr-15 A	30-Apr-15 A	100%	66	120.00	\$19,384.64	\$0.00	\$19,384.64		SUI the alert subscription system specification							
	DM-3609	The Alert subscription system requirement gathering	30-Nov-16 A	30-Nov-16 A	100%	64	30.00	\$5,637.37	\$0.00	\$5,637.37		The Alert subscription system requirement gathering (F16)							
	DMTC-2E	Alert/Notification Toolkit R4.0	01-Aug-14 A	02-Sep-14 A	100%	22	0.00	\$0.00	\$0.00	\$0.00		Alert/Notification Toolkit R4.0							
	DMTC-2E	Alert/Notification Toolkit Scope Planning R5.0	02-Sep-14 A	29-Sep-14 A	100%	20	0.00	\$0.00	\$0.00	\$0.00		Alert/Notification Toolkit Scope Planning R5.0							
	DMTC-2E	Alert/Notification Toolkit Scope Planning R5.1	02-Feb-15 A	27-Feb-15 A	100%	20	10.00	\$1,578.50	\$0.00	\$1,578.50		Alert/Notification Toolkit Scope Planning R5.1							
	LSST ME 19-05.02C.05.04 User Assistance/Help Desk		01-Aug-14 A	27-Feb-15 A		143	10.00	\$1,578.50	\$0.00	\$1,578.50									
	DLP-577	Evaluate best-of-breed tools. Technology exploration		01-Aug-14 A	100%	0	0.00	\$0.00	\$0.00	\$0.00		Evaluate best-of-breed tools. Technology exploration.							
	DMTC-2E	User Assistance/Help Desk R4.0	01-Aug-14 A	02-Sep-14 A	100%	22	0.00	\$0.00	\$0.00	\$0.00		User Assistance/Help Desk R4.0							
	DMTC-2E	User Assistance/Help Desk Scope Planning R5.0	01-Sep-14 A	30-Sep-14 A	100%	20	0.00	\$0.00	\$0.00	\$0.00		User Assistance/Help Desk Scope Planning R5.0							
	DMTC-2E	User Assistance/Help Desk Scope Planning R5.1	02-Feb-15 A	27-Feb-15 A	100%	20	10.00	\$1,578.50	\$0.00	\$1,578.50		User Assistance/Help Desk Scope Planning R5.1							
LSST ME 19-05.02C.05.05 User Workspace Toolkit		01-Aug-14 A	31-May-18 A		846	772.50	\$140,681.43	\$0.00	\$140,681.43										
DLP-256	First draft definition of workspace		17-Nov-15 A	100%	0	0.00	\$0.00	\$0.00	\$0.00		First draft definition of workspace								
DLP-518	Evaluate best-of-breed tools. Technology exploration		20-Mar-15 A	100%	0	0.00	\$0.00	\$0.00	\$0.00		Evaluate best-of-breed tools. Technology exploration.								
DLP-578	Propose a workspace structure for discussion.		01-Aug-14 A	100%	0	0.00	\$0.00	\$0.00	\$0.00		Propose a workspace structure for discussion.								
DM-10853	SUIT portal integration with PDAC v2 Science Platfo	26-Jul-17 A	09-Feb-18 A	100%	64	195.00	\$37,039.73	\$0.00	\$37,039.73										



LSST May 2019 Month End Forecast																				
Activity ID	Activity Name		Start	Finish	Physical % Complete	Original Duration	Budgeted Labor Units	Budgeted Labor Cost	Budgeted Material Cost	Budgeted Total Cost no	Total Float	FY2015 2014-10-01	FY2016 2015-10-01	FY2017 2016-10-01	FY2018 2017-10-01	FY2019 2018-10-01	FY2020 2019-10-01	FY2021 2020-10-01	FY2022 2021-10-01	
<div></div>	DM-8771	Python API and widget development to support visua	14-Mar-18 A	02-Oct-18 A	100%	85	200.80	\$41,765.61	\$0.00	\$41,765.61					<div></div>	<div></div>				
	DM-8772	Jupyter widget development to support visualization i	03-Sep-18 A	29-Mar-19 A	100%	129	160.00	\$33,109.89	\$0.00	\$33,109.89					<div></div>	<div></div>				
	DM-8773	Python API and Jupyter widget development to supp	04-Dec-18 A	24-Sep-19	80.37%	80	200.00	\$42,803.60	\$0.00	\$42,803.60	385				<div></div>	<div></div>				
	LSST ME 19-05.02C.05.08 Applications		18-Jan-18 A	27-Nov-19		485	3016.61	\$627,953.03	\$0.00	\$627,953.03	434				<div></div>	<div></div>				
	DM-12091	Portal workflow, look&feel improvement	30-Jan-18 A	30-Nov-18 A	100%	105	280.00	\$55,900.00	\$0.00	\$55,900.00					<div></div>	<div></div>				
	DM-13641	SUIT UX work	01-Aug-18 A	30-Apr-19 A	100%	129	280.00	\$54,299.03	\$0.00	\$54,299.03					<div></div>	<div></div>				
	DM-17262	Application Support	01-May-19 A	27-Nov-19	4.07%	126	1057.41	\$235,868.98	\$0.00	\$235,868.98	434				<div></div>	<div></div>				
	DM-4431	setup mechanism to measure the portal performance	01-Apr-19 A	30-Apr-19 A	100%	42	160.00	\$31,375.20	\$0.00	\$31,375.20					<div></div>	<div></div>				
	DM-8397	PDAC v4 (concentrate on IVOA standard support)	11-Dec-18 A	31-May-19 A	100%	100	400.40	\$83,100.12	\$0.00	\$83,100.12					<div></div>	<div></div>				
	DM-8399	PDAC v3: features, improvements, and bug fixes	18-Jan-18 A	30-Nov-18 A	100%	82	198.80	\$39,889.06	\$0.00	\$39,889.06					<div></div>	<div></div>				
	DM-8731	SUIT portal bug fixes and code refactoring	08-Jun-18 A	07-Jan-19 A	100%	129	120.00	\$21,361.59	\$0.00	\$21,361.59					<div></div>	<div></div>				
	DM-8733	PDAC v3 part 2	03-Sep-18 A	01-Nov-18 A	100%	44	120.00	\$24,176.16	\$0.00	\$24,176.16					<div></div>	<div></div>				
	DM-8741	Bug fixes in SUIT S19	15-Nov-18 A	22-Oct-19	33.01%	100	400.00	\$81,982.88	\$0.00	\$81,982.88	93				<div></div>	<div></div>				
	LSST ME 19-05.02C.05.10 Integration & Test		02-Nov-17 A	14-Jan-22		1025	2697.48	\$626,338.86	\$0.00	\$626,338.86	181					<div></div>	<div></div>			
	DM-12547	SUIT and Firefly integration and test	02-Nov-17 A	29-Mar-19 A	100%	105	160.20	\$32,250.28	\$0.00	\$32,250.28					<div></div>	<div></div>				
	DM-8764	SUIT integration and test	08-Jun-18 A	29-Mar-19 A	100%	129	160.00	\$32,887.32	\$0.00	\$32,887.32					<div></div>	<div></div>				
	DM-8765	SUIT test as the portal integrated in LSP deplymen	31-Jan-19 A	24-Sep-19	92.86%	80	200.00	\$42,285.84	\$0.00	\$42,285.84	239				<div></div>	<div></div>				
	IPAC 043	Application tests cycles	01-Dec-20	14-Jan-22	0%	287	2177.28	\$518,915.42	\$0.00	\$518,915.42	181					<div></div>	<div></div>			
	LSST ME 19-05.02C.06 Science Data Archive and Applicati		01-Aug-14 A	14-Jan-22		1891	68960.07	\$12,821,089.37	\$44,498.49	\$12,865,587.85	181					<div></div>	<div></div>			
	DM-DAX-1	WISE data ingest to PDAC		01-Nov-17 A	100%	0	0.00	\$0.00	\$0.00	\$0.00					<div></div>	<div></div>				
	DM-DAX-10	Middleware support for multifit		03-Jun-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	319					<div></div>	<div></div>			
	DM-DAX-11	Transformed EFD schema		31-May-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00					<div></div>	<div></div>				
	DM-DAX-2	dbserv V1 API (TAP, w/ async. requests)		03-Jun-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	319					<div></div>	<div></div>			
	DM-DAX-3	imgserv V1 API (SODA)		03-Jun-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	319					<div></div>	<div></div>			
	DM-DAX-4	metaserv V1 API (SIAv2)		03-Jun-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	319					<div></div>	<div></div>			
	DM-DAX-5	Database ingest in support of HSC reprocessing (ie,		02-Aug-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	275					<div></div>	<div></div>			
	DM-DAX-6	Prototype level 1 database		01-Nov-17 A	100%	0	0.00	\$0.00	\$0.00	\$0.00					<div></div>	<div></div>				
	DM-DAX-7	Butler interface to retrieve images from data backbo		03-Jun-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	465					<div></div>	<div></div>			
	DM-DAX-8	Supertask-based system capable of efficient process		30-Aug-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	255					<div></div>	<div></div>			
	DM-DAX-9	Provenance system, details TBD.		03-Jun-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	319					<div></div>	<div></div>			
	LSST ME 19-05.02C.06.00 Management, Leadership, & Other		01-Aug-14 A	14-Jan-22		1891	22354.87	\$4,198,114.60	\$44,498.49	\$4,242,613.08	181					<div></div>	<div></div>			
	DAX-031	Database Systems Security Audit	03-Jun-19	27-Nov-19	0%	126	180.72	\$31,972.48	\$0.00	\$31,972.48	67					<div></div>	<div></div>			
	DAX-049	Qserv KPMs	03-Jun-19	29-Oct-21	0%	613	257.49	\$47,180.57	\$0.00	\$47,180.57	106					<div></div>	<div></div>			
	DAX-050	Sizing Models	03-Jun-19	29-Oct-21	0%	613	353.85	\$64,835.22	\$0.00	\$64,835.22	106					<div></div>	<div></div>			
	DAX-051	Software Maintenance	03-Jun-19	29-Oct-21	0%	613	141.21	\$25,873.21	\$0.00	\$25,873.21	106					<div></div>	<div></div>			
	DAX-052a	T/CAM	03-Jun-19	14-Jan-22	0%	666	3756.04	\$691,409.20	\$0.00	\$691,409.20	181					<div></div>	<div></div>			
	DM-10682	F17 Support SUIT for PDAC	22-May-17 A	11-Dec-17 A	100%	129	240.00	\$39,064.32	\$0.00	\$39,064.32					<div></div>	<div></div>				
	DM-12758	S18 PDAC HSC Ingest	02-Jul-19	31-Jul-19	0%	21	104.00	\$25,285.05	\$0.00	\$25,285.05	423					<div></div>	<div></div>			
	DM-14454	F18 Deploy DAX Services to lspdev	03-Jun-19	02-Jan-20	0%	147	132.00	\$27,122.34	\$0.00	\$27,122.34	318					<div></div>	<div></div>			
	DM-14456	F18 PDAC SUIT Support	12-Jun-18 A	10-Dec-18 A	100%	129	72.00	\$17,119.32	\$0.00	\$17,119.32					<div></div>	<div></div>				
	DM-14457	F18 PDAC Gaia DR2 Ingest	03-Jun-19	04-Mar-20	0%	189	132.00	\$27,122.34	\$0.00	\$27,122.34	276					<div></div>	<div></div>			
	DM-5008	F16 Data Access Model Refresh	30-May-17 A	30-May-17 A	100%	42	132.00	\$24,940.08	\$0.00	\$24,940.08					<div></div>	<div></div>				
	DM-5033	X16 Data Access and Database Documentation	25-Mar-16 A	31-Aug-16 A	100%	33	291.00	\$52,391.49	\$0.00	\$52,391.49					<div></div>	<div></div>				
	DM-5110	S17 DAX&DB Docs	31-May-17 A	31-May-17 A	100%	43	44.00	\$7,183.00	\$0.00	\$7,183.00					<div></div>	<div></div>				
	DM-5111	F17 DAX&DB Docs	08-Jun-17 A	01-Dec-17 A	100%	129	236.00	\$38,695.48	\$0.00	\$38,695.48					<div></div>	<div></div>				
	DM-5112	F17 Data Access Model Refresh	12-Dec-18 A	12-Dec-18 A	100%	129	80.00	\$13,216.08	\$0.00	\$13,216.08					<div></div>	<div></div>				
	DM-5300	X16 Design Discussions	30-Mar-16 A	24-May-16 A	100%	55	255.00	\$47,350.95	\$0.00	\$47,350.95					<div></div>	<div></div>				
	DM-6216	DAX Services Containers & Ops	27-Jul-16 A	27-Oct-16 A	100%	22	40.00	\$7,427.60	\$0.00	\$7,427.60					<div></div>	<div></div>				
	DM-6217	DAX Services Improvements	16-Nov-16 A	24-Nov-16 A	100%	20	40.00	\$7,427.60	\$0.00	\$7,427.60					<div></div>	<div></div>				
	DM-6218	NCSA Dax Services Deploy	16-Nov-16 A	16-Nov-16 A	100%	22	40.00	\$7,427.60	\$0.00											

LSST May 2019 Month End Forecast																		
Activity ID	Activity Name	Start	Finish	Physical % Complete	Original Duration	Budgeted Labor Units	Budgeted Labor Cost	Budgeted Material Cost	Budgeted Total Cost no	Total Float	FY2015 2014-10-01	FY2016 2015-10-01	FY2017 2016-10-01	FY2018 2017-10-01	FY2019 2018-10-01	FY2020 2019-10-01	FY2021 2020-10-01	FY2022 2021-10-01
<div></div>	DMTC-32 SLAC Institution Support Costs - LOE - FY22 - Nonf	01-Oct-21	14-Jan-22	0%	74	0.00	\$0.00	\$2,220.51	\$2,220.51	181								
	LSST ME 19-05.02C.06.01 Science Data Archive	01-Aug-14 A	27-Nov-19		1351	3388.07	\$628,823.36	\$0.00	\$628,823.36	339								
	LSST ME 19-05.02C.06.01.01 Database Catalogs, Alerts and	01-Aug-14 A	27-Nov-19		1351	2787.14	\$521,975.95	\$0.00	\$521,975.95	339								
	DAX-0 COM-Ready Deep Drilling Database	03-Jun-19	27-Nov-19	0%	126	431.71	\$76,378.69	\$0.00	\$76,378.69	67								
	DAX-0 Calibration Database	03-Jun-19	27-Nov-19	0%	126	183.83	\$32,522.57	\$0.00	\$32,522.57	67								
	DLP-7: Working Prototype of AP/L1 Database		01-Nov-17 A	100%	0	0.00	\$0.00	\$0.00	\$0.00									
	DLP-8: Data Ingest into MySQL		17-Nov-15 A	100%	0	0.00	\$0.00	\$0.00	\$0.00									
	DLP-8: AP/L1 Database Design		03-Jun-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	465								
	DLP-8: AP-ready Provenance		03-Jun-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	465								
	DM-10 W15 Metadata Store for production tracking (design)	31-Oct-14 A	23-Feb-15 A	100%	60	73.10	\$13,114.87	\$0.00	\$13,114.87									
	DM-11 F17 Ingest Improvements	03-Jun-19	01-Jul-19	0%	21	28.00	\$6,807.41	\$0.00	\$6,807.41	423								
	DM-11 W15 Initial version of global catalog for production tr	09-Dec-14 A	25-Feb-15 A	100%	58	79.70	\$14,298.98	\$0.00	\$14,298.98									
	DM-12 S18 Reformatted EFD Schema	10-Jul-17 A	25-Apr-18 A	100%	41	84.00	\$19,731.63	\$0.00	\$19,731.63									
	DM-12 S18 L1/AP Oracle Experiment	01-Jun-18 A	29-Jun-18 A	100%	44	84.00	\$19,731.63	\$0.00	\$19,731.63									
	DM-12 S18 Qserv Ingest Improvements	01-Feb-19 A	31-Jul-19	15.2%	85	312.00	\$73,288.91	\$0.00	\$73,288.91	423								
	DM-16 S19 PPDP Prototype	01-Feb-19 A	31-May-19 A	100%	66	124.00	\$21,685.12	\$0.00	\$21,685.12									
	DM-17 S15 MetaServ v2	04-Mar-15 A	31-Jul-15 A	100%	64	266.30	\$47,776.88	\$0.00	\$47,776.88									
	DM-17 S15 MetaServ v2 (Monkewitz S) - IPAC	01-Jul-15 A	31-Jul-15 A	100%	64	215.00	\$27,186.75	\$0.00	\$27,186.75									
	DM-20 F18 Calibration Database	03-Jun-19	30-Aug-19	0%	64	104.00	\$25,284.67	\$0.00	\$25,284.67	255								
	DM-20 F17 L1/AP DB prototype	01-Dec-17 A	02-Aug-19	80%	44	40.00	\$6,758.80	\$0.00	\$6,758.80	275								
	DM-20 X16 Revisit Design of AlertProd & L1 Db	31-Mar-16 A	01-Jun-16 A	100%	55	75.00	\$13,926.75	\$0.00	\$13,926.75									
	DM-20 W16 Improve Data Provenance Design	30-Oct-15 A	27-Jan-16 A	100%	101	274.50	\$48,489.21	\$0.00	\$48,489.21									
	DM-210 S15 DB Data Ingest	10-Aug-15 A	10-Aug-15 A	100%	38	36.00	\$4,552.20	\$0.00	\$4,552.20									
	DM-62 L1 DB Prototype I	23-Jun-16 A	28-Sep-16 A	100%	127	356.00	\$66,852.68	\$0.00	\$66,852.68									
	DMTC Catalogs Alerts and Meta-data R4.0	01-Aug-14 A	02-Sep-14 A	100%	22	0.00	\$0.00	\$0.00	\$0.00									
	DMTC Catalogs Alerts and Meta-data Scope Planning R5.0	02-Sep-14 A	29-Sep-14 A	100%	20	0.00	\$0.00	\$0.00	\$0.00									
	DMTC Catalogs Alerts and Meta-data Scope Planning R5.1	02-Feb-15 A	27-Feb-15 A	100%	20	10.00	\$1,794.10	\$0.00	\$1,794.10									
	DMTC Catalogs Alerts and Meta-data R4.0 - IPAC	01-Aug-14 A	02-Sep-14 A	100%	22	0.00	\$0.00	\$0.00	\$0.00									
	DMTC Catalogs Alerts and Meta-data Scope Planning R5.0	02-Sep-14 A	29-Sep-14 A	100%	20	0.00	\$0.00	\$0.00	\$0.00									
	DMTC Catalogs Alerts and Meta-data Scope Planning R5.1	02-Feb-15 A	27-Feb-15 A	100%	20	10.00	\$1,794.10	\$0.00	\$1,794.10									
	LSST ME 19-05.02C.06.01.02 Image and File Archive	02-Sep-14 A	27-Nov-19		1329	600.93	\$106,847.41	\$0.00	\$106,847.41	339								
	DAX-0 COM-Ready Image/File Archive	03-Jun-19	27-Nov-19	0%	126	361.43	\$63,944.95	\$0.00	\$63,944.95	67								
	DLP-7: AP-ready Image and File Archive		03-Jun-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	465								
	DM-10 W15 Image and File Archive	10-Dec-14 A	26-Feb-15 A	100%	40	57.60	\$8,427.46	\$0.00	\$8,427.46									
	DM-17 S15 Image & File Archive v2	31-Jul-15 A	31-Jul-15 A	100%	22	27.90	\$5,005.54	\$0.00	\$5,005.54									
	DM-62 NCSA Stripe 82 Image Ingest	07-Oct-16 A	01-Dec-16 A	100%	20	144.00	\$27,675.36	\$0.00	\$27,675.36									
	DMTC Image Archive Scope Planning R5.0	02-Sep-14 A	29-Sep-14 A	100%	20	0.00	\$0.00	\$0.00	\$0.00									
	DMTC Image Archive Scope Planning R5.1	02-Feb-15 A	27-Feb-15 A	100%	20	10.00	\$1,794.10	\$0.00	\$1,794.10									
	LSST ME 19-05.02C.06.02 Data Access Services	01-Aug-14 A	01-Nov-21		1839	36358.72	\$6,753,724.72	\$0.00	\$6,753,724.72	105								
	DLP-25 Prototype Web Service for SUI		01-Sep-15 A	100%	0	0.00	\$0.00	\$0.00	\$0.00									
	DLP-836 New logging for DM		17-Nov-15 A	100%	0	0.00	\$0.00	\$0.00	\$0.00									
	DM-15657 S19 Google Cloud DAX Support	01-Apr-19 A	30-Apr-19 A	100%	59	120.00	\$20,985.60	\$0.00	\$20,985.60									
	DM-16795 S19 Web Services Refactoring	31-Jan-19 A	31-May-19 A	100%	125	592.00	\$103,528.96	\$0.00	\$103,528.96									
	DM-16796 S19 LSP K8S Tooling	31-Jan-19 A	31-May-19 A	100%	125	192.00	\$33,576.96	\$0.00	\$33,576.96									
	LSST ME 19-05.02C.06.02.01 Data Access Client Framework	01-Aug-14 A	02-Aug-19		1269	3665.34	\$669,043.68	\$0.00	\$669,043.68	421								
	DLP-8: AP-ready Butler Framework		03-Jun-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	465								
	DM-10 W15 Butler	02-Mar-15 A	02-Mar-15 A	100%	40	27.00	\$4,844.07	\$0.00	\$4,844.07									
	DM-10 F17 Butler DB Storage	10-Aug-17 A	18-Nov-17 A	100%	65	180.00	\$29,385.00	\$0.00	\$29,385.00									
	DM-10 F17 Butler Refactoring	05-Jun-17 A	28-Nov-17 A	100%	129	180.00	\$29,736.18	\$0.00	\$29,736.18									
	DM-12 Middleware - W15 Productionize Data Butler	01-Jul-15 A	31-Jul-15 A	100%	6	85.70	\$15,375.44	\$0.00	\$15,375.44									
	DM-12 S18 Butler Gen 2 Critical Support	02-Apr-18 A	02-Apr-18 A	100%	125	299.93	\$70,454.00	\$0.00	\$70,454.00									
	DM-14 F18 Butler Gen2 Critical Support	29-Jun-18 A	26-Oct-18 A	100%	129	96.00	\$22,825.76	\$0.00	\$22,825.76									
	DM-18 S15 Butler	02-Jun-15 A	17-Aug-15 A	100%	66	107.50	\$19,286.58	\$0.00	\$19,286.58									
	DM-19 S15 WebServ v2	04-Mar-15 A	31-Aug-15 A	100%	64	148.35	\$26,615.47	\$0.00	\$26,615.47									
	DM-24 W16 Butler (v4)	23-Sep-15 A	17-Mar-16 A	100%	101	554.00	\$98,180.52	\$0.00	\$98,180.52									
	DM-25 W16 Improvements to db	23-Sep-15 A	10-Feb-16 A	100%	42	123.00	\$22,453.65	\$0.00	\$22,453.65									
	DM-43 S17 Butler Refactoring	20-Jan-16 A	01-Jun-17 A	100%	85	106.25	\$17,345.31	\$0.00	\$17,345.31									
	DM-43 X16 Revisit Public Interfaces / ADQL	28-Mar-16 A	31-May-16 A	100%	43	45.00	\$8,356.05	\$0.00	\$8,356.05									
	DM-52 X16 Butler	23-Mar-16 A	19-Jul-16 A	100%	85	235.00	\$41,992.85	\$0.00	\$41,992.85									
	DM-60 F17 Butler S3 Storage	11-Sep-17 A	18-Nov-17 A	100%	65	180.00	\$30,097.80	\$0.00	\$30,097.80									
	DM-60 S17 Butler DB Storage	19-Apr-17 A	19-Apr-17 A	100%	43	160.00	\$26,120.00	\$0.00	\$26,120.00									
	DM-62 Butler Repository Refactor	09-Jun-16 A	19-Jul-16 A	100%	42	160.00	\$29,710.40	\$0.00	\$29,710.40									
	DM-62 F16 Butler Storage/Format Refactor	21-Feb-17 A	31-May-17 A	100%	65	140.00	\$26,290.60	\$0.00	\$26,290.60									
	DM-62 Butler Composite Dataset Design	03-Aug-16 A	15-Nov-16 A	100%	85	200.00	\$37,765.06	\$0.00	\$37,765.06									
	DM-62 Butler Repo of Repos Design	03-Jun-19	02-Aug-19	0%	44	80.00	\$16,469.60	\$0.00	\$16,469.60	421								
	DM-71 Butler Refactoring	29-Aug-16 A	06-Sep-17 A	100%	60	48.00	\$9,115.92	\$0.00	\$9,115.92									
	DM-74 Supertask V1	29-Sep-16 A	30-Nov-16 A	100%	40	128.00	\$24,163.52	\$0.00	\$24,163.52									
	DM-84 S17 Supertask V1	08-Feb-17 A	30-May-17 A	100%	128	371.61	\$60,665.81	\$0.00	\$60,665.81									
	DMTC Data Access Services R4.0	01-Aug-14 A	02-Sep-14 A	100%	22	0.00	\$0.00	\$0.00	\$0.00									
	DMTC Data Access Services Scope Planning R5.0	02-Sep-14 A	29-Sep-14 A	100%	20	0.00	\$0.00	\$0.00	\$0.00									
	DMTC Data Access Services Scope Planning R5.1	02-Feb-15 A	27-Feb-15 A	100%	20	10.00	\$1,794.10	\$0.00	\$1,794.10									
	LSST ME 19-05.02C.06.02.02 Web Services Framework	01-Aug-14 A	01-Nov-21		1839	4755.00	\$874,522.05	\$0.00	\$874,522.05	105								

LSST May 2019 Month End Forecast																			
Activity ID	Activity Name	Start	Finish	Physical % Complete	Original Duration	Budgeted Labor Units	Budgeted Labor Cost	Budgeted Material Cost	Budgeted Total Cost no	Total Float		FY2015 2014-10-01	FY2016 2015-10-01	FY2017 2016-10-01	FY2018 2017-10-01	FY2019 2018-10-01	FY2020 2019-10-01	FY2021 2020-10-01	FY2022 2021-10-01
<div></div>	DAX-0 COM-Ready DAX Web Services	03-Jun-19	27-Nov-19	0%	126	1200.00	\$212,304.00	\$0.00	\$212,304.00	67									
	DAX-0 Dax Web Service Improvements (includes VO interf	03-Jun-19	01-Nov-21	0%	614	2000.00	\$366,495.37	\$0.00	\$366,495.37	105									
	DM-10 F17 DAX Services Disconnected Queries	31-Jan-18 A	30-Apr-18 A	100%	42	72.00	\$10,023.12	\$0.00	\$10,023.12										
	DM-12 S18 Web Services Refactoring	14-Feb-18 A	23-May-18 A	100%	125	320.00	\$75,168.11	\$0.00	\$75,168.11										
	DM-12 S18 Web Services K8S Tooling	01-Jun-18 A	30-Jun-18 A	100%	41	80.00	\$18,792.03	\$0.00	\$18,792.03										
	DM-12 S18 PDAC Notebook/API Integration	01-Jun-18 A	30-Jun-18 A	100%	41	100.00	\$23,490.03	\$0.00	\$23,490.03										
	DM-14 F18 Web Services Refactoring	01-Aug-18 A	11-Dec-18 A	100%	129	163.00	\$38,756.23	\$0.00	\$38,756.23										
	DM-25 F17 DAX Services Auth'n	01-Jun-17 A	31-May-18 A	100%	44	72.00	\$10,373.76	\$0.00	\$10,373.76										
	DM-34 W16 End-to-End Integration (Data Access portion)	13-Aug-15 A	30-Sep-15 A	100%	42	88.00	\$13,370.15	\$0.00	\$13,370.15										
	DM-35 W16 Async Queries in WebServ	01-May-17 A	25-May-17 A	100%	38	49.50	\$9,191.66	\$0.00	\$9,191.66										
	DM-36 W16 Webserv Improvements	05-Jan-16 A	05-Jan-16 A	100%	20	40.50	\$7,266.11	\$0.00	\$7,266.11										
	DM-48 F17 Webserv Improvements	05-Jul-17 A	30-Apr-18 A	100%	43	72.00	\$10,023.12	\$0.00	\$10,023.12										
	DM-62 F16 VO investigations	14-Dec-16 A	26-Apr-17 A	100%	127	40.00	\$7,511.54	\$0.00	\$7,511.54										
	DM-85 S17 VO and DAX Services	01-May-17 A	31-May-17 A	100%	106	448.00	\$69,962.72	\$0.00	\$69,962.72										
	DMTC Data Definition Services R4.0	01-Aug-14 A	02-Sep-14 A	100%	22	0.00	\$0.00	\$0.00	\$0.00										
	DMTC Data Definition Services Scope Planning R5.0	02-Sep-14 A	29-Sep-14 A	100%	20	0.00	\$0.00	\$0.00	\$0.00										
	DMTC Data Definition Services Scope Planning R5.1	02-Feb-15 A	27-Feb-15 A	100%	20	10.00	\$1,794.10	\$0.00	\$1,794.10										
	LSST ME 19-05.02C.06.02.03 Query Services	01-Aug-14 A	29-Oct-21		1838	24753.57	\$4,613,783.82	\$0.00	\$4,613,783.82	106									
	DAX-0 Qserv Multi-Master Fault Tolerance	03-Jun-19	27-Nov-19	0%	126	361.43	\$63,944.95	\$0.00	\$63,944.95	67									
	DAX-0 Qserv Result Caching	03-Jun-19	27-Nov-19	0%	126	271.08	\$47,958.71	\$0.00	\$47,958.71	67									
	DAX-0 Qserv Partial Results	03-Jun-19	27-Nov-19	0%	126	271.08	\$47,958.71	\$0.00	\$47,958.71	67									
	DAX-0 COM-Ready Qserv	03-Jun-19	27-Nov-19	0%	126	451.79	\$79,931.19	\$0.00	\$79,931.19	67									
	DAX-0 Qserv Scale Testing 75% DR1	03-Jun-19	27-Nov-19	0%	126	180.72	\$31,972.48	\$0.00	\$31,972.48	67									
	DAX-0 Qserv Resource Management	03-Jun-19	27-Nov-19	0%	126	451.79	\$79,931.19	\$0.00	\$79,931.19	67									
	DAX-0 Qserv Software Migration Plan	02-Dec-19	30-Nov-20	0%	253	180.00	\$32,764.94	\$0.00	\$32,764.94	86									
	DAX-0 Qserv Monitoring	02-Dec-19	30-Nov-20	0%	253	360.00	\$65,529.88	\$0.00	\$65,529.88	86									
	DAX-0 Qserv Scale Testing 100% DR1	02-Dec-19	30-Nov-20	0%	253	360.00	\$65,529.88	\$0.00	\$65,529.88	86									
	DAX-0 Schema Evolution Process	02-Dec-19	30-Nov-20	0%	253	180.00	\$32,764.94	\$0.00	\$32,764.94	86									
	DAX-0 Qserv Query Coverage Improvements	03-Jun-19	29-Oct-21	0%	613	2000.00	\$366,460.62	\$0.00	\$366,460.62	106									
	DLP-4' Qserv Data Distribution		29-Jun-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00										
	DLP-4' Async Queries in Qserv		01-Nov-17 A	100%	0	0.00	\$0.00	\$0.00	\$0.00										
	DLP-6' Qserv Query Cancellation		12-Jan-16 A	100%	0	0.00	\$0.00	\$0.00	\$0.00										
	DLP-6' Shared Scans		26-May-17 A	100%	0	0.00	\$0.00	\$0.00	\$0.00										
	DLP-8' Qserv uses C++-based Geometry Code		17-Nov-15 A	100%	0	0.00	\$0.00	\$0.00	\$0.00										
	DLP-8' Distributed Database and Table Management		29-Oct-15 A	100%	0	0.00	\$0.00	\$0.00	\$0.00										
	DLP-8' Multi-node Multi-query Integration Testing Harness		17-Nov-15 A	100%	0	0.00	\$0.00	\$0.00	\$0.00										
	DLP-8' CSS		17-Nov-15 A	100%	0	0.00	\$0.00	\$0.00	\$0.00										
	DLP-8' Automated Testbed for Qserv		01-Aug-14 A	100%	0	0.00	\$0.00	\$0.00	\$0.00										
	DLP-8' New xrootd client		01-Aug-14 A	100%	0	0.00	\$0.00	\$0.00	\$0.00										
	DM-10 W15 Qserv Refactoring	10-Oct-14 A	27-Feb-15 A	100%	58	295.20	\$52,961.83	\$0.00	\$52,961.83										
	DM-10 W15 Qserv Integration Testing	10-Oct-14 A	26-Feb-15 A	100%	40	28.80	\$2,053.73	\$0.00	\$2,053.73										
	DM-10 W15 Distributed database/table management	21-Jan-15 A	25-Feb-15 A	100%	48	82.00	\$14,711.62	\$0.00	\$14,711.62										
	DM-10 W15 Database loading	12-Dec-14 A	19-Dec-14 A	100%	30	46.80	\$4,329.83	\$0.00	\$4,329.83										
	DM-10 S15 Query management	22-Jun-15 A	20-Aug-15 A	100%	65	237.00	\$42,520.17	\$0.00	\$42,520.17										
	DM-10 W15 Qserv CSS v2	15-Oct-14 A	15-Jan-15 A	100%	40	160.60	\$28,813.25	\$0.00	\$28,813.25										
	DM-10 S15 Data Distribution Design	01-May-15 A	31-Aug-15 A	100%	44	550.40	\$98,747.26	\$0.00	\$98,747.26										
	DM-10 S15 Data Distribution Design (Monkewitz S) - IPAC	06-Apr-15 A	31-Aug-15 A	100%	44	64.50	\$8,156.03	\$0.00	\$8,156.03										
	DM-10 W15 Qserv stability	07-Jan-15 A	26-Feb-15 A	100%	29	247.50	\$40,685.34	\$0.00	\$40,685.34										
	DM-10 F17 Qserv Cancellation	22-Jun-17 A	05-Oct-17 A	100%	64	160.00	\$26,749.20	\$0.00	\$26,749.20										
	DM-10 F17 Qserv Large Results	17-Jul-17 A	02-Mar-18 A	100%	65	320.00	\$52,240.00	\$0.00	\$52,240.00										
	DM-10 F17 Qserv Data Distribution	06-Oct-17 A	15-Jun-18 A	100%	129	480.00	\$79,296.48	\$0.00	\$79,296.48										
	DM-10 F17 Qserv Release Mgmt	05-Jun-17 A	21-Nov-17 A	100%	129	32.00	\$5,286.43	\$0.00	\$5,286.43										
	DM-12 S15 Multi-node multi-query test harness for Qserv	06-Mar-15 A	14-Aug-15 A	100%	64	161.25	\$28,929.86	\$0.00	\$28,929.86										
	DM-12 S18 Qserv Next-to-data Processing Prototype	05-Jul-17 A	04-Dec-18 A	100%	125	332.00	\$77,986.91	\$0.00	\$77,986.91										
	DM-12 S18 Qserv Monitoring Dashboard	01-Mar-19 A	31-Jul-19	84%	85	460.00	\$98,296.47	\$0.00	\$98,296.47	423									
	DM-12 S18 Qserv Refactoring	22-Jan-18 A	31-May-18 A	100%	125	1573.80	\$369,686.16	\$0.00	\$369,686.16										
	DM-12 S18 Qserv K8S Tooling	24-Jan-18 A	05-Apr-18 A	100%	125	1033.80	\$242,839.97	\$0.00	\$242,839.97										
	DM-12 S18 Qserv Release Engineering	02-Feb-18 A	30-May-18 A	100%	125	20.00	\$4,698.01	\$0.00	\$4,698.01										
	DM-14 F18 Qserv Release Engineering	20-Jun-18 A	08-Aug-18 A	100%	129	65.47	\$15,567.00	\$0.00	\$15,567.00										
	DM-14 F18 Qserv K8S Tooling	01-Aug-18 A	28-Sep-18 A	100%	129	240.00	\$57,064.39	\$0.00	\$57,064.39										
	DM-14 F18 Qserv Data Synthesizer	03-Jun-19	28-Aug-19	0%	62	188.31	\$45,783.23	\$0.00	\$45,783.23	403									
	DM-14 F18 Qserv Next-to-data Processing Prototype	03-Jun-19	30-Aug-19	0%	64	200.00	\$48,624.37	\$0.00	\$48,624.37	401									
	DM-14 F18 Qserv Query Cost Estimation	01-Mar-19 A	31-May-19 A	100%	147	205.00	\$43,352.94	\$0.00	\$43,352.94										
	DM-16 W16 Technology Research	19-Aug-15 A	10-Mar-16 A	100%	79	152.25	\$28,271.30	\$0.00	\$28,271.30										
	DM-16 S19 Qserv K8S Tooling	31-Jan-19 A	31-May-19 A	100%	125	188.00	\$32,877.44	\$0.00	\$32,877.44										
	DM-16 S19 Qserv Refactoring	31-Jan-19 A	31-May-19 A	100%	125	72.00	\$12,591.36	\$0.00	\$12,591.36										
	DM-17 S15 Database & Table Management	18-Mar-15 A	17-Jul-15 A	100%	64	301.00	\$54,002.41	\$0.00	\$54,002.41										
	DM-17 S15 Large Scale Qserv Tests	29-Apr-15 A	26-Aug-15 A	100%	64	193.50	\$27,743.38	\$0.00	\$27,743.38										
	DM-17 S15 Qserv Scalability & Performance Tuning	06-May-15 A	28-Aug-15 A	100%	65	430.50	\$77,236.01	\$0.00	\$77,236.01										
	DM-17 S15 Qserv Scalability & Performance Tuning (Monke	27-Apr-15 A	28-Aug-15 A	100%	65	64.50	\$8,156.03	\$0.00	\$8,156.03										
	DM-17 S15 Qserv Performance Analysis	26-Aug-15 A	26-Aug-15 A	100%	44	25.80	\$4,628.78	\$0.00	\$4,628.78										
	DM-17 S15 Qserv Refactoring	26-Feb-15 A	26-Aug-15 A	100%	66	529.50	\$84,187.60	\$0.00	\$84,187.60										



LSST May 2019 Month End Forecast												FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022
Activity ID	Activity Name	Start	Finish	Physical % Complete	Original Duration	Budgeted Labor Units	Budgeted Labor Cost	Budgeted Material Cost	Budgeted Total Cost no	Total Float		2014-10-01	2015-10-01	2016-10-01	2017-10-01	2018-10-01	2019-10-01	2020-10-01	2021-10-01
	DM-17	W16 Query Coverage	10-Feb-15 A	11-Mar-16 A	100%	123	183.00	\$13,429.12	\$0.00	\$13,429.12									
	DM-17	S15 Query Coverage for Qserv	19-Feb-15 A	23-Jul-15 A	100%	42	137.50	\$24,668.88	\$0.00	\$24,668.88									
	DM-17	S15 Query Coverage for Qserv Integration Testing (Monkewitz S) - IPAC	01-Jul-15 A	31-Jul-15 A	100%	42	43.00	\$5,437.35	\$0.00	\$5,437.35									
	DM-18	S15 Qserv Authorization	29-Aug-15 A	29-Aug-15 A	100%	21	43.00	\$7,714.63	\$0.00	\$7,714.63									
	DM-19	S15 Implement Query Cancellation	19-Feb-15 A	05-May-15 A	100%	64	189.20	\$25,112.60	\$0.00	\$25,112.60									
	DM-19	S15 Data Distribution & Replica Mgmt Prototype	28-Aug-15 A	31-Aug-15 A	100%	86	774.00	\$138,863.34	\$0.00	\$138,863.34									
	DM-19	S15 Data Distribution & Replica Mgmt Prototype (Monkewitz S) - IPAC	31-May-15 A	31-Aug-15 A	100%	86	64.50	\$8,156.03	\$0.00	\$8,156.03									
	DM-20	W16 Multi-table shared scans	01-Dec-15 A	26-Feb-16 A	100%	79	450.00	\$83,560.50	\$0.00	\$83,560.50									
	DM-20	F16 Qserv KPMs	08-Nov-16 A	30-Apr-17 A	100%	22	96.00	\$14,744.64	\$0.00	\$14,744.64									
	DM-20	F17 Qserv Large Scale Tests	06-Jun-17 A	03-Sep-19	81.31%	402	100.00	\$16,790.20	\$0.00	\$16,790.20	128								
	DM-20	F18 Qserv Large Scale Tests (KPM50)	03-Jun-19	30-Aug-19	0%	64	250.00	\$60,780.46	\$0.00	\$60,780.46	401								
	DM-20	W16 Distributed Loader	21-Mar-16 A	21-Mar-16 A	100%	44	229.00	\$29,971.52	\$0.00	\$29,971.52									
	DM-20	W16 Data Distribution and Replica Mgmt Prototype	23-Sep-15 A	31-Mar-16 A	100%	121	540.00	\$99,684.04	\$0.00	\$99,684.04									
	DM-21	F18 Improve Query Coverage in Qserv	11-Jul-18 A	30-Nov-18 A	100%	129	420.00	\$99,862.69	\$0.00	\$99,862.69									
	DM-21	F18 Qserv Multi-Master Implementation	01-Mar-19 A	22-Nov-19	34.62%	189	970.00	\$186,083.87	\$0.00	\$186,083.87	342								
	DM-21	W16 Optimize Secondary Index - Research	28-Oct-15 A	27-Feb-16 A	100%	60	225.00	\$41,780.25	\$0.00	\$41,780.25									
	DM-21	F18 Qserv Non-partitioned Table Support	03-Jun-19	02-Aug-19	0%	44	240.00	\$58,349.24	\$0.00	\$58,349.24	421								
	DM-21	F17 Qserv Containers and Ops	07-Jul-17 A	30-Nov-17 A	100%	129	188.00	\$26,483.76	\$0.00	\$26,483.76									
	DM-21	S19 Qserv Improve Query Coverage	07-Dec-18 A	31-May-19 A	100%	40	160.00	\$27,980.80	\$0.00	\$27,980.80									
	DM-21	W16 Implement Async Queries in Qserv	01-Mar-16 A	01-Mar-16 A	100%	39	40.50	\$7,520.45	\$0.00	\$7,520.45									
	DM-214	W15 C++ geometry	01-Nov-14 A	26-Feb-15 A	100%	40	126.00	\$19,745.82	\$0.00	\$19,745.82									
	DM-26	W16 Refactor Selected Elements in Qserv	01-Sep-15 A	20-Feb-16 A	100%	60	240.00	\$44,565.60	\$0.00	\$44,565.60									
	DM-26	F17 Qserv Refactoring	31-May-17 A	21-Nov-17 A	100%	129	200.00	\$33,040.20	\$0.00	\$33,040.20									
	DM-26	F18 Qserv Refactoring	21-Jun-18 A	19-Nov-18 A	100%	129	300.00	\$71,330.49	\$0.00	\$71,330.49									
	DM-28	W16 Implement Database & Table Mgmt v2	28-Oct-15 A	12-Dec-15 A	100%	42	117.00	\$21,358.35	\$0.00	\$21,358.35									
	DM-28	S15 Qserv CSS v2	16-Jul-15 A	26-Aug-15 A	100%	26	144.00	\$25,835.04	\$0.00	\$25,835.04									
	DM-31	W16 Qserv Release and Testing	30-Sep-15 A	15-Mar-16 A	100%	121	90.00	\$15,779.83	\$0.00	\$15,779.83									
	DM-31	S17 Data Distribution & Replication	30-Mar-17 A	30-May-17 A	100%	85	420.00	\$68,565.00	\$0.00	\$68,565.00									
	DM-31	X16 Qserv Refactoring	12-Jan-16 A	01-Jun-16 A	100%	43	114.00	\$12,777.66	\$0.00	\$12,777.66									
	DM-32	W16 Make Query Cancellation Robust	18-Sep-15 A	08-Jan-16 A	100%	61	195.00	\$35,787.97	\$0.00	\$35,787.97									
	DM-34	S15 Qserv Release and Testing	02-Apr-15 A	29-Aug-15 A	100%	7	40.00	\$7,176.40	\$0.00	\$7,176.40									
	DM-34	X16 Large Results	18-Mar-16 A	27-May-16 A	100%	43	75.00	\$13,926.75	\$0.00	\$13,926.75									
	DM-35	W16 Support Dynamic CSS Metadata in Czar	24-Sep-15 A	27-Oct-15 A	100%	61	159.00	\$27,962.06	\$0.00	\$27,962.06									
	DM-42	X16 Secondary Index	15-Mar-16 A	01-Aug-19	82.45%	721	266.50	\$47,756.78	\$0.00	\$47,756.78	422								
	DM-44	Qserv Refactoring #2	07-Dec-15 A	01-Mar-16 A	100%	39	159.00	\$26,168.31	\$0.00	\$26,168.31									
	DM-44	F17 Qserv Disconnected Queries	16-May-17 A	05-Oct-17 A	100%	42	80.00	\$13,060.00	\$0.00	\$13,060.00									
	DM-47	F17 Qserv MySQL connection cleanup	17-Oct-16 A	08-Nov-17 A	100%	44	40.00	\$6,758.80	\$0.00	\$6,758.80									
	DM-48	X16 Fine-tune Shared Scans	29-Mar-16 A	29-Apr-16 A	100%	33	114.00	\$21,168.66	\$0.00	\$21,168.66									
	DM-48	F17 Qserv Integration Test Improvements	30-Oct-17 A	03-Nov-17 A	100%	43	40.00	\$6,530.00	\$0.00	\$6,530.00									
	DM-51	F18 DAX&DB Docs	09-Nov-18 A	26-Nov-19	18.46%	125	60.00	\$10,492.80	\$0.00	\$10,492.80	340								
	DM-54	S17 Qserv Refactoring	02-Jun-16 A	28-Jun-17 A	100%	128	240.00	\$39,180.00	\$0.00	\$39,180.00									
	DM-62	Qserv Loader Improvements	22-Jul-16 A	29-Nov-16 A	100%	127	412.00	\$77,368.83	\$0.00	\$77,368.83									
	DM-62	Qserv Containers and Ops	04-Aug-16 A	04-Aug-16 A	100%	44	64.00	\$4,723.84	\$0.00	\$4,723.84									
	DM-62	Qserv Improvements	16-Jun-16 A	30-Sep-16 A	100%	42	328.00	\$57,326.16	\$0.00	\$57,326.16									
	DM-62	NCSA Qserv Deploy	13-Oct-16 A	16-Nov-16 A	100%	22	136.00	\$21,673.68	\$0.00	\$21,673.68									
	DM-62	NCSA Stripe 82 Catalog Ingest	23-Nov-16 A	23-Nov-16 A	100%	22	80.00	\$14,855.20	\$0.00	\$14,855.20									
	DM-70	Qserv Release Mgmt	04-Aug-16 A	03-Nov-16 A	100%	65	48.00	\$9,124.32	\$0.00	\$9,124.32									
	DM-74	Qserv Improvements II	14-Oct-16 A	16-Nov-16 A	100%	108	148.00	\$28,257.06	\$0.00	\$28,257.06									
	DM-84	S17 Qserv Release Mgmt	25-Jan-17 A	06-Oct-17 A	100%	125	48.00	\$7,836.00	\$0.00	\$7,836.00									
	DM-84	S17 Add WISE to PDAC	12-May-17 A	30-May-17 A	100%	128	520.00	\$84,890.00	\$0.00	\$84,890.00									
	DM-85	S17 Qserv Containers & Ops	06-Feb-17 A	18-May-17 A	100%	128	188.00	\$26,171.48	\$0.00	\$26,171.48									
	DMTC	Query Services R4.0	01-Aug-14 A	02-Sep-14 A	100%	22	0.00	\$0.00	\$0.00	\$0.00									
	DMTC	Query Services Scope Planning R5.0	02-Sep-14 A	29-Sep-14 A	100%	20	0.00	\$0.00	\$0.00	\$0.00									
	DMTC	Query Services Scope Planning R5.1	02-Feb-15 A	27-Feb-15 A	100%	20	10.00	\$1,794.10	\$0.00	\$1,794.10									
LSST ME 19-05.02C.06.02.04 Image and File Services		02-Sep-14 A	31-May-19 A		1203	1636.80	\$285,573.85	\$0.00	\$285,573.85										
DM-10	W15 Image Cutout Service	29-Jan-15 A	26-Feb-15 A	100%	38	50.00	\$8,970.507												

## LSST May 2019 Month End Forecast

Activity ID	Activity Name	Start	Finish	Physical % Complete	Original Duration	Budgeted Labor Units	Budgeted Labor Cost	Budgeted Material Cost	Budgeted Total Cost no	Total Float	FY2015 2014-10-01	FY2016 2015-10-01	FY2017 2016-10-01	FY2018 2017-10-01	FY2019 2018-10-01	FY2020 2019-10-01	FY2021 2020-10-01	FY2022 2021-10-01
DM-056	DAX-056 SuperTask Multinode	03-Jun-19	27-Nov-19	0%	126	664.19	\$117,507.80	\$0.00	\$117,507.80	67								
	DAX-057 SuperTask Multicore	03-Jun-19	27-Nov-19	0%	126	1392.00	\$246,272.64	\$0.00	\$246,272.64	67								
	DAX-058 Cmdline Activator Improvements	03-Jun-19	27-Nov-19	0%	126	451.79	\$79,931.19	\$0.00	\$79,931.19	67								
	DM-10684 F17 Supertask MVP	22-Jun-17 A	03-Oct-17 A	100%	129	192.00	\$31,718.60	\$0.00	\$31,718.60									
	DM-12755 S18 Supertask "Laptop" activator	01-Jun-18 A	29-Jun-18 A	100%	40	84.00	\$19,731.80	\$0.00	\$19,731.80									
	DM-14661 F18 Supertask/Laptop Activator	23-Jul-18 A	16-Nov-18 A	100%	65	280.00	\$65,771.61	\$0.00	\$65,771.61									
	DM-16793 S19 PipelineTask	18-Dec-18 A	31-May-19 A	100%	59	128.00	\$22,384.64	\$0.00	\$22,384.64									
	LSST ME 19-05.02C.06.04 Middleware, Infrastructure, and Tooling	07-Jun-17 A	29-Oct-21		1033	664.00	\$121,322.68	\$0.00	\$121,322.68	106								
	LSST ME 19-05.02C.06.04.01 Logging	07-Jun-17 A	29-Oct-21		1033	664.00	\$121,322.68	\$0.00	\$121,322.68	106								
	DAX-0 Logging API Improvements	03-Jun-19	29-Oct-21	0%	613	640.00	\$117,267.40	\$0.00	\$117,267.40	106								
	DM-10 F17 Logging Improvements	07-Jun-17 A	13-Jun-17 A	100%	41	24.00	\$4,055.28	\$0.00	\$4,055.28									
	LSST ME 19-05.02C.07 LSST Data Facility	01-Aug-14 A	29-Nov-21		1857	189009.28	\$22,980,497.79	\$19,304,616.99	\$42,285,114.78	472								
	DM-NC-SA-1 Provide regular reprocessing service for HSC data		01-Nov-17 A	100%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00								
	DM-NC-SA-10 Sustained archiving service that is OCS commandable		31-May-19 A	100%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00								
	DM-NC-SA-11 Verified acquisition of raw and crosstalk-corrected exposures		01-Sep-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00	1							
	DM-NC-SA-1 Verified acquisition of raw and crosstalk-corrected exposures	01-Jun-18 A	01-Sep-20	0%	318	0.00	\$0.00	\$0.00	\$0.00	\$0.00	1							
	DM-NC-SA-12 EFD ETL Service		04-Nov-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00	210							
	DM-NC-SA-13 Header Writing Service for Spectrograph use case		03-Jan-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00	171							
	DM-NC-SA-1 Header Writing Service for Spectrograph use case	01-Jun-18 A	03-Jan-20	0%	148	0.00	\$0.00	\$0.00	\$0.00	\$0.00	171							
	DM-NC-SA-14 Data Backbone endpoints in Chile for ingestion and access, distribution over WAT		31-Oct-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00	212							
	DM-NC-SA-1 Data Backbone endpoints in Chile for ingestion and access, distribution over WAT	01-Jun-18 A	31-Oct-19	0%	361	0.00	\$0.00	\$0.00	\$0.00	\$0.00	212							
	DM-NC-SA-15 Batch Processing Service for offline spectrograph data processing		03-Mar-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00	131							
	DM-NC-SA-1 Batch Processing Service for offline spectrograph data processing	01-Jun-18 A	03-Mar-20	0%	188	0.00	\$0.00	\$0.00	\$0.00	\$0.00	131							
	DM-NC-SA-16 Perform ISR processing on ComCam-scale data.		01-Apr-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00	110							
	DM-NC-SA-1 Perform ISR processing on ComCam-scale data	03-Jun-19	01-Apr-20	0%	209	0.00	\$0.00	\$0.00	\$0.00	\$0.00	110							
	DM-NC-SA-17 QA on WCS, PSF, etc returned to Observatory using JupyterLab		03-Mar-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00	131							
	DM-NC-SA-1 QA on WCS, PSF, etc returned to Observatory using JupyterLab	01-Jun-18 A	03-Mar-20	0%	188	0.00	\$0.00	\$0.00	\$0.00	\$0.00	131							
	DM-NC-SA-18 Validated disaster response recovery for data and calibration products		04-Nov-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00	738							
	DM-NC-SA-19 8x7 incident response system		04-Nov-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00	210							
	DM-NC-SA-2 Provide access to results of regular reprocessing (NB the form this takes depends upon available DAX functionality)		01-Nov-17 A	100%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00								
	DM-NC-SA-20 ComCam Archiving Service		30-Sep-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00	279							
	DM-NC-SA-21 L1 Offline Processing Service, Raft Scale, ComCam		30-Sep-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00	279							
	DM-NC-SA-22 Information in consolidated database available to QA portal		04-Nov-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00	255							
	DM-NC-SA-23 Operational processes for preparing for & producing production batch service		30-Apr-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00	271							
	DM-NC-SA-24 Production batch service for data release processing		29-Nov-21	0%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00	215							
	DM-NC-SA-25 Demonstrate operational coordination with and production batch service		02-Nov-21	0%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00	232							
	DM-NC-SA-26 Demonstrate full delivery of Data Facility ConOps		25-Aug-21	0%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00	280							
	DM-NC-SA-27 Deliver header service code		01-Dec-17 A	100%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00								
	DM-NC-SA-28 IIP control code		01-Nov-17 A	100%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00								
	DM-NC-SA-29 Deliver IIP image client code		31-Mar-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00								
	DM-NC-SA-3 Provide database for metadata, provenance, location and demonstrate ingest at small scale		01-Nov-17 A	100%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00								
	DM-NC-SA-4 Minimal support for the small operational schema including file metadata and provenance, for every file, and record of file		29-Jun-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00								
	DM-NC-SA-5 Level 1 archiving system able to acquire pixel data from the Aux Tel DAQ, header metadata via OCS, assemble FITS images		31-May-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00								
	DM-NC-SA-6 Ability to transfer files originating from Tucson to NCSA and ingest files at NCSA, including metadata and provenance		31-Oct-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00								
	DM-NC-SA-7 Capability to paint displays for Tucson and NCSA		29-Jun-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00								
	DM-NC-SA-8 Test instance of feeds to LSST mini broker in online (live stream) and offline (replaying from storage)		03-Jun-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00	1104							
	DM-NC-SA-9 Test instance of alert distribution hosting service and L1 database in Development & Integration		31-May-19 A	100%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00								
	DMTC-4500 Start NCSA S18		01-Dec-17 A	100%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00								
	LSST ME 19-05.02C.07.00 Processing Control and Site Infrastructure	01-Aug-14 A	30-Apr-18 A		865	27530.99	\$3,531,184.32	\$96,228.54	\$3,627,412.85									
	DM-10692 1.2) Overall Facility Planning and High-Level Engineering	06-Jul-17 A	07-Sep-17 A	100%	65	447.49	\$59,481.00	\$0.00	\$59,481.00									
	DM-10693 1.3) Service Management Service Operation Workflow Development	07-Jul-17 A	13-Feb-18 A	100%	65	123.85	\$15,077.00	\$0.00	\$15,077.00									
	DM-10694 1.4) Service Management Framework Implementation	07-Jul-17 A	20-Dec-17 A	100%	65	73.78	\$8,740.00	\$0.00	\$8,740.00									
	DM-10695 1.5) Service Management - Emergent (F17a)	07-Sep-17 A	07-Sep-17 A	100%	65	44.73	\$4,772.00	\$0.00	\$4,772.00									
	DM-10696 1.6) FY17 Procurement Activity #2 Planning	06-Jul-17 A	07-Sep-17 A	100%	22	57.23	\$7,443.00	\$0.00	\$7,443.00									
	DM-10697 1.7) FY17 Procurement Activity #3 Planning	05-Jul-17 A	04-Oct-17 A	100%	65	133.49	\$17,096.00	\$0.00	\$17,096.00									
	DM-10698 1.8) FY18 Acquisition Planning	31-Aug-17 A	04-Oct-17 A	100%	65	124.74	\$16,823.00	\$0.00	\$16,823.00									
	DM-10699 1.9) FY17 sizing Model Refresh 2	01-Sep-17 A	01-Sep-17 A	100%	65	84.46	\$11,390.00	\$0.00	\$11,390.00									
	DM-11836 Facility Planning & Management	06-Oct-17 A	06-Oct-17 A	100%	20	265.75	\$36,160.46	\$0.00	\$36,160.46									
	DM-11837 Service Management (FY17b)	06-Oct-17 A	06-Oct-17 A	100%	20	117.50	\$13,919.04	\$0.00	\$13,919.04									
	DM-1265 Procurement Contract	24-Feb-15 A	24-Feb-15 A	100%	2	125.50	\$17,659.55	\$0.00	\$17,659.55									
	DM-1377 Security Plan for Jan 2015	06-Oct-14 A	05-Feb-15 A	100%	40	78.20	\$11,425.02	\$78,200.00	\$89,625.02									
	DM-2227 LOE - S15 (misc)	14-Apr-15 A	03-Aug-15 A	100%	7	40.00	\$5,844.00	\$0.00	\$5,844.00									
	DM-3751 Design specification	14-Sep-15 A	14-Mar-16 A	100%	44	300.00	\$38,742.87	\$0.00	\$38,742.87									
	DM-3757 TOWG / Technical Proposal Working Group	14-Sep-15 A	05-Feb-16 A	100%	102	232.50	\$33,174.53	\$0.00	\$33,174.53									
	DM-3761 Sizing model storage costing update	11-Sep-15 A	14-Sep-15 A	100%	20	22.50	\$2,729.25	\$0.00	\$2,729.25									
	DM-3786 Sizing model technology and costing refresh	09-Nov-15 A	31-Jan-16 A	100%	58	150.00	\$18,832.50	\$0.00	\$18,832.50									
	DM-3788 FY16 Hardware Purchasing Plan	16-Sep-15 A	04-Mar-16 A	100%	42	45.00	\$5,813.85	\$0.00	\$5,813.85									
	DM-3906 Consult on Base Site Commissioning Cluster	01-Jul-16 A	15-Jul-16 A	100%	121	45.00	\$5,616.56	\$0.00	\$5,616.56									
	DM-3907 FY15 Hardware Purchasing Plan	22-Sep-15 A	01-Oct-15 A	100%	22	37.50	\$5,067.40	\$0.00	\$5,067.40									
	DM-5610 x16 Operations Planning in LOPT, TOWG, and DM replanning (ConOps development)	02-May-16 A	05-Dec-16 A	100%	55	216.00	\$31,345.20	\$0.00	\$31,345.20									
	DM-5611 x16 Joint Coordination Council	01-Jul-16 A	29-Jul-16 A	100%	55	28.00	\$4,078.92	\$0.00	\$4,078.92									
	DM-6394 DM replanning: ConOps Development	24-Jun-16 A	02-Sep-16 A	100%	62	417.78	\$61,487.29	\$0.00	\$61,487.29									

LSST May 2019 Month End Forecast

Activity ID	Activity Name	Start	Finish	Physical % Complete	Original Duration	Budgeted Labor Units	Budgeted Labor Cost	Budgeted Material Cost	Budgeted Total Cost no	Total Float	FY2015 2014-10-01	FY2016 2015-10-01	FY2017 2016-10-01	FY2018 2017-10-01	FY2019 2018-10-01	FY2020 2019-10-01	FY2021 2020-10-01	FY2022 2021-10-01
LSST ME 19-05.02C.07.00.01 Satellite Processing Center C	DM-6399	DM replanning: NCSA WBS broken down to Level 3	24-Jun-16 A	02-Sep-16 A	100%	22	47.48	\$6,512.62	\$0.00	\$6,512.62								
	DM-6400	DM replanning: phased WBS elements for minimal d	05-Aug-16 A	15-Dec-16 A	100%	20	379.80	\$52,466.84	\$0.00	\$52,466.84								
	DM-6401	DM replanning: instantiating Project Reporting Group	01-Jul-16 A	01-Sep-16 A	100%	19	126.60	\$19,315.36	\$0.00	\$19,315.36								
	DM-6403	DM replanning: participation in PM working group	01-Jul-16 A	01-Jul-16 A	100%	22	18.99	\$2,871.48	\$0.00	\$2,871.48								
	DM-6404	Operations Planning (LOPT & TOWG)	01-Jul-16 A	25-Aug-16 A	100%	62	75.96	\$11,485.91	\$0.00	\$11,485.91								
	DM-6405	Verification Planning with Systems Engineering	02-Apr-18 A	30-Apr-18 A	100%	62	427.28	\$63,229.86	\$0.00	\$63,229.86								
	DM-7631	Replanning, ops planning, commissioning planning (F16)	04-Oct-16 A	04-Dec-16 A	100%	62	418.47	\$64,567.00	\$0.00	\$64,567.00								
	DM-7632	Develop Planning Packages	30-Jun-17 A	28-Sep-17 A	100%	62	303.71	\$46,986.44	\$0.00	\$46,986.44								
	DM-7633	Prepare acquisition strategy for FY17	24-Oct-16 A	24-Oct-16 A	100%	21	60.00	\$9,029.40	\$0.00	\$9,029.40								
	DM-7634	Develop the Service Catalog	04-Nov-16 A	01-Dec-16 A	100%	19	101.60	\$16,906.24	\$0.00	\$16,906.24								
	DM-8506	Costing Model Re-design	06-Apr-17 A	13-Feb-18 A	100%	62	120.55	\$16,257.83	\$0.00	\$16,257.83								
	DM-8511	Degenerate Data Backbone Product Planning	05-Jan-17 A	28-Apr-17 A	100%	62	160.00	\$16,248.20	\$0.00	\$16,248.20								
	DM-8512	Planning Deployment in Chile	05-May-17 A	14-Jun-17 A	100%	62	160.80	\$16,022.97	\$0.00	\$16,022.97								
	DM-8515	Service Management Definition and Refinement	06-Jan-17 A	05-May-17 A	100%	62	248.97	\$29,492.97	\$0.00	\$29,492.97								
	DM-8516	Enterprise Monitoring Integration (Phase 1)	06-Jan-17 A	05-May-17 A	100%	62	64.63	\$7,656.06	\$0.00	\$7,656.06								
	DM-8517	Replanning, commissioning, and operations planning	06-Jan-17 A	03-Mar-17 A	100%	62	247.60	\$34,256.56	\$0.00	\$34,256.56								
	DM-9656	Replanning, Commissioning, Operation Planning (S17b)	06-Apr-17 A	02-Jun-17 A	100%	62	765.60	\$100,156.79	\$0.00	\$100,156.79								
	DM-9657	Service Management Definition & Refinement (S17b)	03-Apr-17 A	02-Jun-17 A	100%	62	242.88	\$28,771.54	\$0.00	\$28,771.54								
	DM-9658	Enterprise Monitoring Design - Phase 2	02-Jun-17 A	31-Aug-17 A	100%	62	52.80	\$6,254.68	\$0.00	\$6,254.68								
	DMTC-45	PC & SI Management Engineering and Integration - LOE - FY14 - Labor	01-Aug-14 A	30-Sep-14 A	100%	42	0.00	\$0.00	\$0.00	\$0.00								
	DMTC-45	PC & SI Management Engineering and Integration - LOE - FY15 - Labor	01-Oct-14 A	27-Feb-15 A	100%	101	358.00	\$48,112.60	\$0.00	\$48,112.60								
	DMTC-45	PC & SI Management Engineering and Integration - LOE - FY15 - Labor	02-Mar-15 A	01-Sep-15 A	100%	130	1229.26	\$173,734.52	\$0.00	\$173,734.52								
	DMTC-45	PC & SI Management Engineering and Integration - LOE - FY16 - Labor	01-Sep-15 A	29-Feb-16 A	100%	123	3240.00	\$440,553.60	\$0.00	\$440,553.60								
	DMTC-45	PC & SI Management Engineering and Integration - LOE - X16 - Labor	01-Mar-16 A	31-May-16 A	100%	66	1694.69	\$219,355.73	\$0.00	\$219,355.73								
	DMTC-45	PC & SI Management Engineering and Integration - LOE - F16 - Labor	01-Jun-16 A	31-Aug-16 A	100%	65	456.00	\$62,079.84	\$0.00	\$62,079.84								
	DMTC-45	PC & SI Management Engineering and Integration - LOE - F16B - Labor	01-Sep-16 A	30-Nov-16 A	100%	62</												



## LSST May 2019 Month End Forecast

[illegible]





Activity ID	Activity Name	Start	Finish	Physical % Complete	Original Duration	Budgeted Labor Units	Budgeted Labor Cost	Budgeted Material Cost	Budgeted Total Cost no	Total Float		FY2015 2014-10-01	FY2016 2015-10-01	FY2017 2016-10-01	FY2018 2017-10-01	FY2019 2018-10-01	FY2020 2019-10-01	FY2021 2020-10-01	FY2022 2021-10-01
	DM-22	File Management Technology	06-Apr-15 A	31-Aug-15 A	100%	130	280.00	\$39,292.00	\$0.00	\$39,292.00	218		File Management Technology						
	DM-22	Understand GPFS and commercial filesystems betw	09-Mar-15 A	06-Apr-15 A	100%	20	12.00	\$1,753.20	\$0.00	\$1,753.20		Understand GPFS and commercial filesystems between data centers							
	DM-37	Refine file system policies and services	12-Oct-15 A	23-Oct-15 A	100%	44	52.50	\$6,012.25	\$0.00	\$6,012.25		Refine file system policies and services							
	DM-38	Evaluate file management services	03-Jun-19	23-Oct-19	0%	101	480.00	\$56,954.47	\$0.00	\$56,954.47		Evaluate file management services							
	DMTC	File System Services Scope Planning R5.0	02-Sep-14 A	29-Sep-14 A	100%	20	0.00	\$0.00	\$0.00	\$0.00		File System Services Scope Planning R5.0							
	DMTC	File System Services Scope Planning R5.1	02-Feb-15 A	27-Feb-15 A	100%	20	10.00	\$1,461.00	\$0.00	\$1,461.00		File System Services Scope Planning R5.1							
	LSST ME 19-05.02C.07.03 Environment and Tools					865	1311.30	\$152,066.06	\$26,259.61	\$178,325.67									
	DLP-422	Evaluate OpenStack as a development environment		29-Jan-15 A	100%	0	0.00	\$0.00	\$0.00	\$0.00		Evaluate OpenStack as a development environment							
	DM-1259	Evaluate Cinder OpenStack Storage Service	06-Oct-14 A	03-Jun-15 A	100%	81	645.70	\$66,377.96	\$0.00	\$66,377.96		Evaluate Cinder OpenStack Storage Service							
	DM-1273	Plan OpenStack v1 Deployment	08-Dec-14 A	04-Sep-15 A	100%	10	95.00	\$14,348.82	\$0.00	\$14,348.82		Plan OpenStack v1 Deployment							
	DM-2239	Develop use cases for TOWG	06-Apr-15 A	23-Aug-15 A	100%	44	64.00	\$9,467.60	\$0.00	\$9,467.60	Develop use cases for TOWG								
	DM-8330	Instantiate VM with Jupyter Hub and GPFS access	31-Mar-17 A	30-Jun-17 A	100%	62	101.60	\$11,723.60	\$0.00	\$11,723.60	Instantiate VM with Jupyter Hub and GPFS access								
	DMTC-54	Acquire/Maintain Software Engineering Tools - LOE	01-Jul-15 A	31-Aug-15 A	100%	130	180.00	\$21,834.00	\$0.00	\$21,834.00	Acquire/Maintain Software Engineering Tools - LOE - FY15 - Labor								
	DMTC-54	Acquire/Maintain Software Engineering Tools - LOE	01-Sep-15 A	29-Feb-16 A	100%	123	90.00	\$11,234.20	\$0.00	\$11,234.20	Acquire/Maintain Software Engineering Tools - LOE - FY16 - Labor								
	DMTC-54	Acquire/Maintain Software Engineering Tools - LOE	01-Mar-16 A	31-Aug-16 A	100%	131	90.00	\$11,299.50	\$0.00	\$11,299.50	Acquire/Maintain Software Engineering Tools - LOE - FY16 - Labor								
	DMTC-54	Acquire/Maintain Software Engineering Tools - LOE	01-Sep-16 A	30-Nov-16 A	100%	62	45.00	\$5,780.39	\$0.00	\$5,780.39	Acquire/Maintain Software Engineering Tools - LOE - FY17 - Labor								
	LSST ME 19-05.02C.07.03.01 Software Development Tools					865	0.00	\$0.00	\$26,259.61	\$26,259.61									
	DLP-4:	DevOps assessment		31-Aug-15 A	100%	0	0.00	\$0.00	\$0.00	\$0.00	DevOps assessment								
	DLP-4:	Integration of DevOps to OpenStack		15-Jul-16 A	100%	0	0.00	\$0.00	\$0.00	\$0.00	Integration of DevOps to OpenStack								
	DMTC	Acquire/Maintain Software Engineering Tools - LOE	01-Aug-14 A	30-Sep-14 A	100%	42	0.00	\$0.00	\$0.00	\$0.00	Acquire/Maintain Software Engineering Tools - LOE - FY14 - Labor								
	DMTC	Acquire/Maintain Software Engineering Tools - LOE	01-Aug-14 A	30-Sep-14 A	100%	42	0.00	\$0.00	\$0.00	\$0.00	Acquire/Maintain Software Engineering Tools - LOE - FY14 - NonLabor								
	DMTC	Acquire/Maintain Software Engineering Tools - LOE	01-Sep-15 A	30-Sep-15 A	100%	151	0.00	\$0.00	\$7,763.79	\$7,763.79	Acquire/Maintain Software Engineering Tools - LOE - FY15 - NonLabor								
	DMTC	Acquire/Maintain Software Engineering Tools - LOE	01-Oct-15 A	30-Sep-16 A	100%	254	0.00	\$0.00	\$8,035.55	\$8,035.55	Acquire/Maintain Software Engineering Tools - LOE - FY16 - NonLabor								
	DMTC	Acquire/Maintain Software Engineering Tools - LOE	03-Oct-16 A	29-Sep-17 A	100%	254	0.00	\$0.00	\$8,316.81	\$8,316.81	Acquire/Maintain Software Engineering Tools - LOE - FY17 - NonLabor								
	DMTC	Acquire/Maintain Software Engineering Tools - LOE	02-Oct-17 A	29-Dec-17 A	100%	63	0.00	\$0.00	\$2,143.46	\$2,143.46	Acquire/Maintain Software Engineering Tools - LOE - FY18 - NonLabor								
	LSST ME 19-05.02C.07.04 Site Infrastructure					1616	11509.62</												





LSST May 2019 Month End Forecast																			
Activity ID	Activity Name	Start	Finish	Physical % Complete	Original Duration	Budgeted Labor Units	Budgeted Labor Cost	Budgeted Material Cost	Budgeted Total Cost no	Total Float	FY2015 2014-10-01	FY2016 2015-10-01	FY2017 2016-10-01	FY2018 2017-10-01	FY2019 2018-10-01	FY2020 2019-10-01	FY2021 2020-10-01	FY2022 2021-10-01	
DM-12280	Define Service-level monitoring for Base AA system	01-Dec-17 A	01-Dec-17 A	100%	63	60.50	\$6,233.92	\$0.00	\$6,233.92					Define Service-level monitoring for Base AA system					
	Service Management - 24/7 Incident Response	18-Dec-17 A	30-Apr-19 A	100%	63	35.25	\$3,632.16	\$0.00	\$3,632.16					Service Management - 24/7 Incident Response					
	Service Management - General Incident Response	02-Nov-17 A	31-Aug-18 A	100%	63	60.50	\$6,233.92	\$0.00	\$6,233.92					Service Management - General Incident Response					
	Facility Planning and High-Level Engineering	19-Feb-18 A	20-Apr-18 A	100%	62	566.42	\$68,943.66	\$0.00	\$68,943.66					Facility Planning and High-Level Engineering					
	Service Management FY18a	01-Jan-18 A	22-Mar-18 A	100%	62	260.00	\$26,790.40	\$0.00	\$26,790.40					Service Management FY18a					
	Facility Management and Planning (FY18b-1)	01-Jun-18 A	29-Jun-18 A	100%	65	669.91	\$85,609.52	\$0.00	\$85,609.52					Facility Management and Planning (FY18b-1)					
	Project Financial and Technical Reporting FY18b	31-Jul-18 A	27-Sep-18 A	100%	63	154.16	\$15,884.68	\$0.00	\$15,884.68					Project Financial and Technical Reporting FY18b					
	Operations Rehearsal Planning	01-Aug-18 A	29-Mar-19 A	100%	63	93.47	\$12,384.84	\$0.00	\$12,384.84					Operations Rehearsal Planning					
	SST Responsibilities & Commitments	31-Jul-18 A	28-Sep-18 A	100%	63	41.55	\$7,035.08	\$0.00	\$7,035.08					SST Responsibilities & Commitments					
	Cycle Planning October-December	01-Aug-18 A	28-Sep-18 A	100%	42	164.73	\$20,429.95	\$0.00	\$20,429.95					Cycle Planning October-December					
	Prepare LDF FFY19 acquisition plan	31-Jul-18 A	31-Jan-19 A	100%	63	136.06	\$18,299.11	\$0.00	\$18,299.11					Prepare LDF FFY19 acquisition plan					
	Prepare LDF FFY19 contract and budget plan	31-Jul-18 A	31-Jan-19 A	100%	54	93.87	\$11,623.88	\$0.00	\$11,623.88					Prepare LDF FFY19 contract and budget plan					
	Project Financial and Technical Reporting FY19a-1	01-Oct-18 A	20-Dec-18 A	100%	64	287.70	\$24,378.57	\$0.00	\$24,378.57					Project Financial and Technical Reporting FY19a-1					
	Cycle Planning January through March	01-Nov-18 A	23-Jan-19 A	100%	41	241.00	\$22,996.42	\$0.00	\$22,996.42					Cycle Planning January through March					
	SST Responsibilities & Commitments	31-Oct-18 A	21-Dec-18 A	100%	64	70.00	\$9,331.70	\$0.00	\$9,331.70					SST Responsibilities & Commitments					
	SST Responsibilities & Commitments FY19a-2	01-Feb-19 A	29-Mar-19 A	100%	61	24.80	\$3,306.09	\$0.00	\$3,306.09					SST Responsibilities & Commitments FY19a-2					
	Project Financial and Technical Reporting FY19a-2	31-Jan-19 A	30-Apr-19 A	100%	61	337.28	\$28,575.80	\$0.00	\$28,575.80					Project Financial and Technical Reporting FY19a-2					
	Cycle Planning April through June	01-Feb-19 A	30-Apr-19 A	100%	61	446.40	\$43,491.53	\$0.00	\$43,491.53					Cycle Planning April through June					
	Operations Rehearsal #1	01-May-19 A	01-May-19 A	100%	5	52.00	\$6,076.72	\$0.00	\$6,076.72					Operations Rehearsal #1					
	Project Financial and Technical Reporting FY19b-1	01-May-19 A	03-Sep-19	65%	65	168.00	\$14,230.80	\$0.00	\$14,230.80	254				Project Financial and Technical Reporting FY19b-1					
	Cycle Planning July through September 2019	01-May-19 A	01-Aug-19	15%	43	320.00	\$27,112.00	\$0.00	\$27,112.00	276				Cycle Planning July through September 2019					
	PC & SI Management Engineering and Integration -	02-Oct-17 A	29-Dec-17 A	100%	63	1533.75	\$179,926.65	\$0.00	\$179,926.65					PC & SI Management Engineering and Integration - LOE - F17 - Labor					
	LOE Data Facility Management, Service Architecture	01-Jan-18 A	30-Mar-18 A	100%	62	1585.67	\$188,717.22	\$0.00	\$188,717.22					LOE Data Facility Management, Service Architecture, and Project Controls Jan 18 - March 18					
	LSST Data Facility Management and High-Level Sta	02-Apr-18 A	29-Jun-18 A	100%	65	1667.22	\$219,688.19	\$0.00	\$219,688.19					LSST Data Facility Management and High-Level Staff Functions FY18b					
	LOE Data Facility Management, Service Architectur	02-Jul-18 A	28-Sep-18 A	100%	63	1408.60	\$181,850.16	\$0.00	\$181,850.16					LOE Data Facility Management, Service Architecture, and Project Controls July-September 2018					
	LSST Data Facility Management and High-Level Sta	01-Jul-19	30-Sep-19	0%	64	3887.62	\$531,258.30	\$0.00	\$531,258.30	255				LSST Data Facility Management and High-Level Staff Functions FY19b					
	LSST Data Facility Management and High-Level Sta	01-Oct-19	31-Mar-20	0%	124	3600.00	\$504,366.75	\$0.00	\$504,366.75	255				LSST Data Facility Management and High-Level Staff Functions FY20a					
	LSST Data Facility Management and High-Level Sta	01-Apr-20	30-Sep-20	0%	130	3600.00	\$504,366.75	\$0.00	\$504,366.75	255				LSST Data Facility Management and High-Level Staff Functions FY20b					
	LSST Data Facility Management and High-Level Sta	01-Oct-20	31-Mar-21	0%	124	3150.00	\$448,452.00	\$0.00	\$448,452.00	255				LSST Data Facility Management and High-Level Staff Functions FY21a					
	LSST Data Facility Management and High-Level Sta	01-Apr-21	30-Sep-21	0%	130	3150.00	\$448,452.00	\$0.00	\$448,452.00	255				LSST Data Facility Management and High-Level Staff Functions FY21b					
	LSST ME 19-05.02C.07.06 LDF-offered Services & Reusable P	21-Jun-17 A	30-Sep-21		1015	9072.88	\$1,147,795.61	\$0.00	\$1,147,795.61	255									
	LSST ME 19-05.02C.07.06.01 LDF-offered Services	02-Oct-17 A	30-Sep-21		1015	5326.70	\$676,137.14	\$0.00	\$676,137.14	255									
	A1370 LOE LDF-offered Services October-December 2018	03-Dec-18 A	31-Dec-18 A	100%	19	48.75	\$4,603.28	\$0.00	\$4,603.28					LOE LDF-offered Services October-December 2018					
	A2280 LOE LDF-offered Services January-March 2019	01-Jan-19 A	29-Mar-19 A	100%	61	50.40	\$4,625.21	\$0.00	\$4,625.21					LOE LDF-offered Services January-March 2019					
	A5040 LOE LDF-offered Services April - June 2019	01-Apr-19 A	28-Jun-19	67%	65	76.80	\$7,047.94	\$0.00	\$7,047.94	215				LOE LDF-offered Services April - June 2019					
	Periodic Dataset Reprocessing	05-Oct-17 A	17-Jan-18 A	100%	63	208.00	\$25,569.44	\$0.00	\$25,569.44					Periodic Dataset Reprocessing					
	Periodic Dataset reprocessing FY18a	17-Jan-18 A	30-Mar-18 A	100%	62	127.78	\$15,708.00	\$0.00	\$15,708.00					Periodic Dataset reprocessing FY18a					
	Alert Pipeline dataflow and environment	31-Jul-18 A	31-Aug-18 A	100%	65	105.53	\$17,868.76	\$0.00	\$17,868.76					Alert Pipeline dataflow and environment					
	Dataset Reprocessing Campaigns (FY18b-1)	30-Nov-17 A	25-Jun-18 A	100%	65	249.18	\$30,632.16	\$0.00	\$30,632.16					Dataset Reprocessing Campaigns (FY18b-1)					
	Dataset Reprocessing Campaigns (FY18b-2)	30-Jun-18 A	28-Sep-18 A	100%	63	290.40	\$35,699.10	\$0.00	\$35,699.10					Dataset Reprocessing Campaigns (FY18b-2)					
	First-order QA on ISR pipelines for offline L1 Proces	31-Jul-18 A	14-Nov-18 A	100%	63	105.42	\$17,849.52	\$0.00	\$17,849.52					First-order QA on ISR pipelines for offline L1 Processing Services					
	Dataset Reprocessing Campaigns FY19a-1	15-Oct-18 A	02-Jan-19 A	100%	64	162.00	\$14,866.74	\$0.00	\$14,866.74					Dataset Reprocessing Campaigns FY19a-1					
	Support LSP access and services for workshops, dei	01-Nov-18 A	21-Dec-18 A	100%	64	46.00	\$5,076.56	\$0.00	\$5,076.56					Support LSP access and services for workshops, demos, and other events					
	Production-style processing of simulated imsim LSST	12-Oct-18 A	31-Dec-18 A	100%	64	172.00	\$15,792.90	\$0.00	\$15,792.90					Production-style processing of simulated imsim LSSTCam data					
	Dataset Reprocessing Campaigns FY19a-2	30-Apr-19 A	30-Apr-19 A	100%	61	173.60	\$15,931.27	\$0.00	\$15,931.27					Dataset Reprocessing Campaigns FY19a-2					
	LDF Preparations for Operations Rehearsal #1	01-May-19 A	01-May-19 A	100%	61	119.04	\$14,861.25	\$0.00	\$14,861.25					LDF Preparations for Operations Rehearsal #1					
	Dataset Reprocessing Campaigns FY19b-1	01-May-19 A	03-Sep-19	27.49%	65	179.20	\$16,445.18	\$0.00	\$16,445.18	254				Dataset Reprocessing Campaigns FY19b-1					
	Integrate Archiver Influx DB with our Grafana	01-Jul-19	30-Aug-19	0%	44	40.00	\$3,013.60	\$0.00	\$3,013.60	215				Integrate Archiver Influx DB with our Grafana					
	LOE LDF-offered Services	02-Oct-17 A	29-Dec-17 A	100%	63	88.25	\$10,848.57	\$0.00	\$10,848.57					LOE LDF-offered Services					
	LOE LDF-offered Service Jan 18 - Mar 18	01-Jan-18 A	30-Mar-18 A	100%	62	205.89	\$32,304.00	\$0.00	\$32,304.00					LOE LDF-offered Service Jan 18 - Mar 18					
	LDF-offered Services FY18b	02-Apr-18 A	29-Jun-18 A	100%	65	220.22	\$29,820.00	\$0.00	\$29,820.00					LDF-offered Services FY18b					
	LOE LDF-Offered Service July - September 2018	02-Jul-18 A	28-Sep-18 A	100%	63	246.17	\$36,086.01	\$0.00	\$36,086.01					LOE LDF-Offered Service July - September 2018					
	LDF-offered Services FY19b	30-Aug-19	30-Sep-19	0%	20	252.06	\$32,069.23	\$0.00	\$32,069.23	215				LDF-offered Services FY19b					
	LDF-offered Services FY20a	01-Oct-19	31-Mar-20	0%	124	540.00	\$71,112.60	\$0.00	\$71,112.60	255				LDF-offered Services FY20a					
	LDF-offered Services FY20b	01-Apr-20	30-Sep-20	0%	130	540.00	\$71,112.60	\$0.00	\$71,112.60	255				LDF-offered Services FY20b					
	LDF-offered Services FY21a	01-Oct-20	31-Mar-21	0%	124	540.00	\$73,596.60	\$0.00	\$73,596.60	255				LDF-offered Services FY21a					
	LDF-offered Services FY21b	01-Apr-21	30-Sep-21	0%	130	540.00	\$73,596.60	\$0.00	\$73,596.60	255				LDF-offered Services FY21b					
	LSST ME 19-05.02C.07.06.02 Reusable Production Services	21-Jun-17 A	30-Sep-21		1015	3746.18	\$471,658.47	\$0.00	\$471,658.47	215									
	A2290 LOE Reusable Production Services January-March 2	01-Jan-19 A	29-Mar-19 A	100%	61	50.40	\$4,563.22	\$0.00	\$4,563.22					LOE Reusable Production Services January-March 2019					
	A5050 LOE Reusable Production Services April - June 2019	01-Apr-19 A	28-Jun-19	67%	65	68.80	\$6,229.15	\$0.00	\$6,229.15	254				LOE Reusable Production Services April - June 2019					
	Container Management Architecture	14-Dec-17 A	21-Dec-17 A	100%	63	364.00	\$44,193.24	\$0.00	\$44,193.24					Container Management Architecture					
	Container Environment Support	05-Feb-18 A	05-Feb-18 A	100%	63	93.50	\$15,831.42	\$0.00	\$15,831.42					Container Environment Support					
	Containerization: Initial Service	02-Feb-18 A	02-Apr-18 A	100%	62	395.08	\$50,832.70	\$0.00	\$50,832.70					Containerization: Initial Service					
	Docker Support	02-Apr-18 A	30-Apr-18 A	100%	19	30.50	\$3,703.01	\$0.00	\$3,703.01					Docker Support					
	Initial instance of LSP for Developers	21-Jun-17 A	31-Jul-18 A	100%	34	23.91	\$4,047.88	\$0.00	\$4,047.88					Initial instance of LSP for Developers					
	Support for JupyterLab and SUIT	01-Aug-18 A	31-Oct-18 A	100%	63	99.52	\$15,158.93	\$0.00	\$15,158.93					Support for JupyterLab and SUIT					
	Investigation for hosting of Alert Distribution System	21-Dec-18 A	28-Feb-19 A	100%	64	125.00	\$11,317.50	\$0.00	\$11,317.50					Investigation for hosting of Alert Distribution System and development support					
	SLAC Test Stand Data Transfer and Access at LDF	11-Oct-18 A	30-Aug-19	64.29%	64	56.00	\$6,706.93	\$0.00	\$6,706.93	401				SLAC Test Stand Data Transfer and Access at LDF					
	Support for Alert Distribution System Hosting and De	01-Apr-19 A	30-Apr-19 A	100%	61	126.00	\$11,408.04	\$0.00	\$11,408.04					Support for Alert Distribution System Hosting and Development FY19a-2					
	Support for Alert Distribution System Hosting and De	03-Jun-19	03-Sep-19	0%	65	66.40	\$6,011.86	\$0.00	\$6,011.86	254				Support for Alert Distribution System Hosting and Development (FY19b-1)					
	LOE LDF-offered Services	02-Oct-17 A	29-Dec-17 A	100%	63	197.50	\$25,966.74	\$0.00	\$25,966.74					LOE LDF-offered Services					
	LOE Reusable Production Services Jan 18-Mar 18	01-Jan-18 A	31-Mar-18 A	100%	62	178.09	\$22,895.62	\$0.00	\$22,895.62					LOE Reusable Production Services Jan 18-Mar 18					



LSST May 2019 Month End Forecast																			
Activity ID	Activity Name	Start	Finish	Physical % Complete	Original Duration	Budgeted Labor Units	Budgeted Labor Cost	Budgeted Material Cost	Budgeted Total Cost no	Total Float	FY2015 2014-10-01	FY2016 2015-10-01	FY2017 2016-10-01	FY2018 2017-10-01	FY2019 2018-10-01	FY2020 2019-10-01	FY2021 2020-10-01	FY2022 2021-10-01	
NCSA-	Reusable Production Services FY18b	02-Apr-18 A	29-Jun-18 A	100%	65	283.99	\$32,615.36	\$0.00	\$32,615.36					Reusable Production Services FY18b					
	LOE Reusable Production Service July - September	02-Jul-18 A	28-Sep-18 A	100%	63	80.27	\$10,313.43	\$0.00	\$10,313.43					LOE Reusable Production Service July - September 2018					
	Reusable Production Services FY19b	30-Aug-19	30-Sep-19	0%	20	211.23	\$26,874.81	\$0.00	\$26,874.81	215					Reusable Production Services FY19b				
	Reusable Production Services FY20a	01-Oct-19	31-Mar-20	0%	124	396.00	\$52,149.24	\$0.00	\$52,149.24	215					Reusable Production Services FY20a				
	Reusable Production Services FY20b	01-Apr-20	30-Sep-20	0%	130	396.00	\$52,149.24	\$0.00	\$52,149.24	215					Reusable Production Services FY20b				
	Reusable Production Services FY21a	01-Oct-20	31-Mar-21	0%	124	252.00	\$34,345.08	\$0.00	\$34,345.08	215					Reusable Production Services FY21a				
	Reusable Production Services FY21b	01-Apr-21	30-Sep-21	0%	130	252.00	\$34,345.08	\$0.00	\$34,345.08	215					Reusable Production Services FY21b				
	LSST ME 19-05.02C.07.07 Data, Compute and IT Security Ser					02-Oct-17 A	30-Sep-21		1015	12335.33	\$1,465,319.62	\$0.00	\$1,465,319.62	255					
	A1450	LOE Data, Compute and IT Security Service Octobe	12-Oct-18 A	31-Dec-18 A	100%	64	420.00	\$36,596.26	\$0.00	\$36,596.26					LOE Data, Compute and IT Security Service October-December 2018				
	A2300	LOE Data, Compute and IT Security Service Januar	01-Jan-19 A	29-Mar-19 A	100%	61	147.84	\$15,765.70	\$0.00	\$15,765.70					LOE Data, Compute and IT Security Service January-March 2019				
	A5060	LOE Data, Compute and IT Security Services April -	01-Apr-19 A	28-Jun-19	67%	64	35.84	\$3,955.30	\$0.00	\$3,955.30	300					LOE Data, Compute and IT Security Services April - June 2019			
	DM-12286	Data Backbone Spectrograph Support - phase 1	21-Dec-17 A	04-Apr-18 A	100%	63	145.50	\$14,509.26	\$0.00	\$14,509.26					Data Backbone Spectrograph Support - phase 1				
	DM-12834	Spectrograph Test Stand Support - DBB Phase 2	02-Feb-18 A	20-Jun-18 A	100%	62	300.25	\$33,297.46	\$0.00	\$33,297.46					Spectrograph Test Stand Support - DBB Phase 2				
	DM-13924	Consolidated database cluster initial testing	29-Jun-18 A	29-Jun-18 A	100%	65	99.24	\$12,575.88	\$0.00	\$12,575.88					Consolidated database cluster initial testing				
	DM-13925	Containerized application management (FY18b-1)	01-Jun-18 A	29-Jun-18 A	100%	65	264.23	\$34,677.50	\$0.00	\$34,677.50					Containerized application management (FY18b-1)				
	DM-13933	Integration of Initial developer support use cases of k	29-Jun-18 A	28-Sep-18 A	100%	65	118.95	\$16,405.99	\$0.00	\$16,405.99					Integration of Initial developer support use cases of Kubernetes commons				
	DM-13934	Investigations into multi-site data transfer and manag	06-Jun-18 A	31-Jul-18 A	100%	65	83.06	\$8,282.56	\$0.00	\$8,282.56					Investigations into multi-site data transfer and management (FY18b)				
	DM-13935	LDF Monitoring Service (FY18b-1)	06-Apr-18 A	29-Jun-18 A	100%	65	153.21	\$15,645.13	\$0.00	\$15,645.13					LDF Monitoring Service (FY18b-1)				
	DM-13937	Managed Database Service Support for EFD ETL S	03-Jun-19	01-Jul-19	0%	21	55.37	\$7,404.86	\$0.00	\$7,404.86	342					Managed Database Service Support for EFD ETL Service development			
	DM-13939	Support of realtime database technology performanc	30-Jun-18 A	31-Jul-18 A	100%	44	116.02	\$14,989.71	\$0.00	\$14,989.71					Support of realtime database technology performance testing				
	DM-14953	File Management for production file systems	01-Feb-19 A	28-Feb-19 A	100%	63	124.48	\$11,014.13	\$0.00	\$11,014.13					File Management for production file systems				
	DM-14954	File management for raw LSST instrument data	11-Dec-18 A	11-Dec-18 A	100%	63	77.87	\$7,804.01	\$0.00	\$7,804.01					File management for raw LSST instrument data				
	DM-14955	Disaster Recovery for managed databases	31-Jul-18 A	31-Aug-18 A	100%	63	135.06	\$14,000.31	\$0.00	\$14,000.31					Disaster Recovery for managed databases				
	DM-14956	Monitoring enhancements (FY18b-2)	31-Jul-18 A	28-Sep-18 A	100%	63	202.39	\$16,306.47	\$0.00	\$16,306.47					Monitoring enhancements (FY18b-2)				
	DM-14957	Containerized application management (FY18b-2)	17-Aug-18 A	28-Sep-18 A	100%	63	182.23	\$21,621.12	\$0.00	\$21,621.12					Containerized application management (FY18b-2)				
DM-14958	Database replication software evaluation	01-Aug-18 A	01-Jul-19	50%	21	51.46	\$6,629.59	\$0.00	\$6,629.59	444				Database replication software evaluation					
DM-14959	File management software evaluation	31-Oct-18 A	29-Aug-19	10%	63	171.79	\$17,130.56	\$0.00	\$17,130.56	402				File management software evaluation					
DM-14960	CCOB Data Backbone Ingestion Support	01-Mar-19 A	30-Jul-19	30%	41	87.06	\$8,958.52	\$0.00	\$8,958.52	424				CCOB Data Backbone Ingestion Support					
DM-15940	Elastic service management/deployment investigator	21-Dec-18 A	21-Dec-18 A	100%	64	130.00	\$14,515.80	\$0.00	\$14,515.80					Elastic service management/deployment investigations FY19a-1					
DM-15941	LDF Support for Data Management	11-Oct-18 A	11-Oct-18 A	100%	64	37.00	\$3,429.16	\$0.00	\$3,429.16					LDF Support for Data Management					
DM-15942	System and Service Monitoring Enhancements FY1E	18-Dec-18 A	21-Dec-18 A	100%	64	190.00	\$12,668.32	\$0.00	\$12,668.32					System and Service Monitoring Enhancements FY19a1					
DM-15943	Investigate computational resources at CC-IN2P3	21-Dec-18 A	29-Mar-19 A	100%	64	28.00	\$2,595.04	\$0.00	\$2,595.04					Investigate computational resources at CC-IN2P3					
DM-16965	Kubernetes Service Improvements	31-Jan-19 A	30-Apr-19 A	100%	61	86.80	\$9,579.25	\$0.00	\$9,579.25					Kubernetes Service Improvements					
DM-16966	Database services at the Base	01-Mar-19 A	29-Mar-19 A	100%	61	99.20	\$12,287.90	\$0.00	\$12,287.90					Database services at the Base					
DM-16979	Research on Bulk Download	01-Feb-19 A	27-Aug-19	99.95%	61	74.40	\$6,176.69	\$0.00	\$6,176.69	282				Research on Bulk Download					
DM-18764	Kubernetes Service Improvements FY19b	03-Jun-19	03-Sep-19	0%	65	142.00	\$13,127.24	\$0.00	\$13,127.24	254				Kubernetes Service Improvements FY19b					
DM-18765	Set Up and Test Kafka Server	01-May-19 A	03-Sep-19	5%	65	132.80	\$12,657.95	\$0.00	\$12,657.95	255				Set Up and Test Kafka Server					
DM-18799	Update Management for Oracle	04-Sep-19	04-Oct-19	0%	23	84.00	\$10,316.60	\$0.00	\$10,316.60	255				Update Management for Oracle					
DM-18807	LSP Usage/Monitoring V1	03-Jun-19	03-Sep-19	0%	65	64.98	\$5,594.75	\$0.00	\$5,594.75	254				LSP Usage/Monitoring V1					
DM-18812	Oracle Administration	01-May-19 A	26-Aug-19	49.96%	65	104.00	\$12,892.24	\$0.00	\$12,892.24	259				Oracle Administration					
DM-18820	HTCondor Infrastructure and Support at NCSA	03-Jun-19	03-Sep-19	0%	64	40.04	\$3,351.92	\$0.00	\$3,351.92	255				HTCondor Infrastructure and Support at NCSA					
DM-18823	Investigate and Prototype EFD Kafka Connect Data	01-May-19 A	02-Aug-19	50%	44	80.00	\$9,865.60	\$0.00	\$9,865.60	275				Investigate and Prototype EFD Kafka Connect Data Ingest into Oracle					
DMTC-6E	LOE Data and Compute Services	02-Oct-17 A	29-Dec-17 A	100%	63	62.50	\$6,232.50	\$0.00	\$6,232.50					LOE Data and Compute Services					
DMTC-6E	LOE Data and Compute Services Jan 18 - March 18	01-Jan-18 A	31-Mar-18 A	100%	62	94.25	\$10,087.27	\$0.00	\$10,087.27					LOE Data and Compute Services Jan 18 - March 18					
NCSA-DC	Data, Compute, and IT Security Services FY18b	02-Apr-18 A	29-Jun-18 A	100%	65	421.48	\$54,660.56	\$0.00	\$54,660.56					Data, Compute, and IT Security Services FY18b					
NCSA-DC	LOE Data, Compute and IT Security Service July-S	02-Jul-18 A	28-Sep-18 A	100%	63	354.36	\$38,681.41	\$0.00	\$38,681.41					LOE Data, Compute and IT Security Service July-September 2018					
NCSA-DC	Data, Compute, and IT Security Services FY19b	07-Oct-19	04-Nov-19																



LSST May 2019 Month End Forecast																			
Activity ID	Activity Name	Start	Finish	Physical % Complete	Original Duration	Budgeted Labor Units	Budgeted Labor Cost	Budgeted Material Cost	Budgeted Total Cost no	Total Float	FY2015 2014-10-01	FY2016 2015-10-01	FY2017 2016-10-01	FY2018 2017-10-01	FY2019 2018-10-01	FY2020 2019-10-01	FY2021 2020-10-01	FY2022 2021-10-01	
DM-13923	AuxTel Backbone development support (FY18b)	29-Jun-18 A	12-Dec-18 A	100%	65	103.84	\$11,255.92	\$0.00	\$11,255.92					<div></div> AuxTel Backbone development support (FY18b)					
	Header service software for AuxTel test stand (FY18	02-May-18 A	29-May-18 A	100%	55	122.99	\$15,119.72	\$0.00	\$15,119.72					<div></div> Header service software for AuxTel test stand (FY18b)					
	LDF-Gen 3 design & prototyping (FY18b-1)	26-Jun-18 A	29-Jun-18 A	100%	65	571.13	\$61,517.56	\$0.00	\$61,517.56					<div></div> LDF-Gen 3 design & prototyping (FY18b-1)					
	Spectrograph archiver for AuxTel test stand (FY18b)	02-Feb-18 A	31-Aug-18 A	100%	55	615.08	\$68,006.40	\$0.00	\$68,006.40					<div></div> Spectrograph archiver for AuxTel test stand (FY18b)					
	DM Catch Up Archiver	03-Jun-19	29-Aug-19	0%	63	222.62	\$25,476.34	\$0.00	\$25,476.34	402				<div></div> DM Catch Up Archiver					
	EFD ETL Use Cases and Requirements	03-Jun-19	01-Aug-19	0%	43	95.63	\$12,102.00	\$0.00	\$12,102.00	444				<div></div> EFD ETL Use Cases and Requirements					
	EFD ETL Preliminary Design	03-Jun-19	01-Aug-19	0%	43	64.24	\$8,468.21	\$0.00	\$8,468.21	444				<div></div> EFD ETL Preliminary Design					
	EFD ETL Service Prototype	03-Jun-19	01-Jul-19	0%	21	94.29	\$12,533.71	\$0.00	\$12,533.71	444				<div></div> EFD ETL Service Prototype					
	Batch Processing Use Cases & Requirements	31-Jul-18 A	28-Feb-19 A	100%	43	159.31	\$19,341.80	\$0.00	\$19,341.80					<div></div> Batch Processing Use Cases & Requirements					
	Investigate Workflow System against Requirements	03-Jun-19	29-Aug-19	0%	63	179.87	\$19,573.92	\$0.00	\$19,573.92	402				<div></div> Investigate Workflow System against Requirements					
	Batch Processing Design Document	03-Jun-19	01-Aug-19	0%	43	65.43	\$8,222.39	\$0.00	\$8,222.39	422				<div></div> Batch Processing Design Document					
	Data Backbone Design	03-Jun-19	29-Aug-19	0%	63	82.77	\$10,400.77	\$0.00	\$10,400.77	379				<div></div> Data Backbone Design					
	Support L1 package for ATS in Tucson	31-Jul-18 A	28-Sep-18 A	100%	63	187.71	\$21,110.16	\$0.00	\$21,110.16					<div></div> Support L1 package for ATS in Tucson					
	Pathfinder Early Integration Activities (FY18b	02-Jul-18 A	28-Sep-18 A	100%	63	158.24	\$17,942.00	\$0.00	\$17,942.00					<div></div> Pathfinder Early Integration Activities (FY18b					
	L1 Incremental development (FY18b-2	31-Jul-18 A	28-Sep-18 A	100%	63	213.67	\$23,525.00	\$0.00	\$23,525.00					<div></div> L1 Incremental development (FY18b-2					
	Header Service Incremental Development	24-Jul-18 A	28-Sep-18 A	100%	63	68.93	\$8,474.00	\$0.00	\$8,474.00					<div></div> Header Service Incremental Development					
	OODS use cases & design	24-Jul-18 A	19-Dec-18 A	100%	43	109.45	\$12,958.34	\$0.00	\$12,958.34					<div></div> OODS use cases & design					
	OODS initial implementation	01-Nov-18 A	25-Jan-19 A	100%	41	116.65	\$14,162.00	\$0.00	\$14,162.00					<div></div> OODS initial implementation					
	L1 Preliminary Preparation for ComCam	01-Nov-18 A	26-Nov-18 A	100%	64	93.00	\$8,948.00	\$0.00	\$8,948.00					<div></div> L1 Preliminary Preparation for ComCam					
	L1 Raft-scale Testing	03-Jun-19	30-Aug-19	0%	64	46.00	\$4,425.89	\$0.00	\$4,425.89	215				<div></div> L1 Raft-scale Testing					
	Design Archiving handoff to Data Backbone and OO	01-Nov-18 A	19-Dec-18 A	100%	35	29.00	\$3,232.93	\$0.00	\$3,232.93					<div></div> Design Archiving handoff to Data Backbone and OODS					
	Pathfinder Regression Testing Framework at LDF	01-Nov-18 A	19-Nov-18 A	100%	125	250.00	\$24,053.75	\$0.00	\$24,053.75					<div></div> Pathfinder Regression Testing Framework at LDF					
	Header Service Software Improvements FY19a1	09-Oct-18 A	07-Dec-18 A	100%	43	86.00	\$7,836.32	\$0.00	\$7,836.32					<div></div> Header Service Software Improvements FY19a1					
	Prototyping for Gen3 production interfaces FY19a-1	31-Oct-18 A	21-Dec-18 A	100%	58	390.00	\$37,027.39	\$0.00	\$37,027.39					<div></div> Prototyping for Gen3 production interfaces FY19a-1					
	Data Backbone Use Cases and Requirements	30-Aug-19	02-Oct-19	0%	23	74.00	\$8,200.68	\$0.00	\$8,200.68	379				<div></div> Data Backbone Use Cases and Requirements					
	LDF Participation in Pathfinder Integration Activities F	04-Oct-18 A	10-Dec-18 A	100%	58	255.00	\$24,416.71	\$0.00	\$24,416.71					<div></div> LDF Participation in Pathfinder Integration Activities FY19a-1					
	L1 Build and Deployment framework	01-Feb-19 A	26-Nov-19	36.24%	125	384.00	\$36,946.56	\$0.00	\$36,946.56	215				<div></div> L1 Build and Deployment framework					
	Pathfinder Integration Participation and Related Activ	01-Feb-19 A	30-Apr-19 A	100%	61	248.00	\$23,464.77	\$0.00	\$23,464.77					<div></div> Pathfinder Integration Participation and Related Activities FY19a-2					
	L1 Complete Test Stand Audit & Configuration Mana	31-Jan-19 A	14-Oct-19	77.76%	94	228.00	\$21,907.76	\$0.00	\$21,907.76	266				<div></div> L1 Complete Test Stand Audit & Configuration Management					
	Header Service FY19a-2	31-Jan-19 A	30-Apr-19 A	100%	93	76.00	\$6,925.12	\$0.00	\$6,925.12					<div></div> Header Service FY19a-2					
	Gen3 Middleware support FY19a-2	31-Jan-19 A	29-Mar-19 A	100%	61	696.88	\$64,659.60	\$0.00	\$64,659.60					<div></div> Gen3 Middleware support FY19a-2					
	First DBB Rucio Prototype	31-Jan-19 A	30-Apr-19 A	100%	61	138.88	\$13,591.19	\$0.00	\$13,591.19					<div></div> First DBB Rucio Prototype					
	Rsync Teststand Images	01-Feb-19 A	15-Jul-19	42.5%	30	122.88	\$13,246.05	\$0.00	\$13,246.05	310				<div></div> Rsync Teststand Images					
	LDF L1 work for new DAQ API 2.5	03-Sep-19	26-Nov-19	0%	61	297.60	\$28,417.82	\$0.00	\$28,417.82	215				<div></div> LDF L1 work for new DAQ API 2.5					
	NCSA Gen3 Milestone FY2019-2	01-May-19 A	03-Sep-19	81.24%	65	475.20	\$50,239.90	\$0.00	\$50,239.90	231				<div></div> NCSA Gen3 Milestone FY2019-2					
	Data Backbone v0.1 Implementation	03-Jun-19	03-Sep-19	0%	65	216.00	\$23,430.08	\$0.00	\$23,430.08	254				<div></div> Data Backbone v0.1 Implementation					
	Data Backbone v0.2 Prototype work	03-Jun-19	03-Sep-19	0%	65	32.00	\$2,965.76	\$0.00	\$2,965.76	254				<div></div> Data Backbone v0.2 Prototype work					
	Support for Data Transfer from SLAC Test Stands	04-Sep-19	04-Dec-19	0%	64	136.00	\$12,411.44	\$0.00	\$12,411.44	231				<div></div> Support for Data Transfer from SLAC Test Stands					
	Spectrograph File Transfer and Ingest on Test Syste	04-Sep-19	04-Nov-19	0%	44	56.00	\$5,770.56	\$0.00	\$5,770.56	231				<div></div> Spectrograph File Transfer and Ingest on Test Systems					
	L1 Development for the ATS System	01-May-19 A	29-Jul-19	58.11%	40	400.00	\$37,353.60	\$0.00	\$37,353.60	226				<div></div> L1 Development for the ATS System					
	L1 Verification Testing for the ATS System	06-Aug-19	12-Aug-19	0%	5	48.00	\$4,513.60	\$0.00	\$4,513.60	226				<div></div> L1 Verification Testing for the ATS System					
	Spectrograph Final Integration Activity EIA-490 for N	13-Aug-19	15-Aug-19	0%	3	48.00	\$4,513.60	\$0.00	\$4,513.60	226				<div></div> Spectrograph Final Integration Activity EIA-490 for NCSA					
	General L1 System Configuration for the ATS Syster	30-Jul-19	05-Aug-19	0%	5	52.00	\$4,828.80	\$0.00	\$4,828.80	226				<div></div> General L1 System Configuration for the ATS System					
	L1 Development for the ComCam System	16-Aug-19	27-Sep-19	0%	30	120.00	\$11,522.40	\$0.00	\$11,522.40	226				<div></div> L1 Development for the ComCam System					
	L1 Verification Testing for the ComCam System	07-Oct-19	11-Oct-19	0%	5	56.00	\$5,411.04	\$0.00	\$5,411.04	226				<div></div> L1 Verification Testing for the ComCam System					
	General L1 System Configuration for the ComCam S	30-Sep-19	04-Oct-19	0%	5	48.00	\$4,246.56	\$0.00	\$4,246.56	226				<div></div> General L1 System Configuration for the ComCam System					
	Prototype for EFD ETL & LFA in Data Backbone	04-Sep-19	01-Oct-19	0%	20	40.00	\$4,432.80	\$0.00	\$4,432.80	234				<div></div> Prototype for EFD ETL & LFA in Data Backbone					
	LOE Data and Compute Services	02-Oct-17 A	29-Dec-17 A	100%	63	845.75	\$96,136.39	\$0.00	\$96,136.39					<div></div> LOE Data and Compute Services					
	LOE LDF Service Software Jan 18 - Mar 18	01-Jan-18 A	31-Mar-18 A	100%	62	572.51	\$64,186.90	\$0.00	\$64,186.90					<div></div> LOE LDF Service Software Jan 18 - Mar 18					
	LDF Service Software FY18b	02-Apr-18 A	29-Jun																

LSST May 2019 Month End Forecast																			
Activity ID	Activity Name	Start	Finish	Physical % Complete	Original Duration	Budgeted Labor Units	Budgeted Labor Cost	Budgeted Material Cost	Budgeted Total Cost no	Total Float	FY2015 2014-10-01	FY2016 2015-10-01	FY2017 2016-10-01	FY2018 2017-10-01	FY2019 2018-10-01	FY2020 2019-10-01	FY2021 2020-10-01	FY2022 2021-10-01	
DM-12293	Monitoring Enhancements (Fall 2017)	21-Dec-17 A	06-Feb-18 A	100%	63	77.25	\$5,743.54	\$0.00	\$5,743.54										
	Disaster Recovery Improvements	12-Dec-17 A	06-Apr-18 A	100%	63	130.00	\$9,665.50	\$0.00	\$9,665.50										
	Planning: Kubernetes Installation	02-Nov-17 A	14-Dec-17 A	100%	63	7.00	\$1,342.74	\$0.00	\$1,342.74										
	Planning: Central Core Network	12-Jan-18 A	20-Feb-18 A	100%	63	15.75	\$2,371.65	\$0.00	\$2,371.65										
	Planning: L1 CCS System Phase 1	13-Nov-17 A	27-Nov-17 A	100%	63	7.00	\$1,342.74	\$0.00	\$1,342.74										
	Planning: L1 Expansion Phase 2	21-Mar-18 A	30-Apr-18 A	100%	63	15.25	\$2,410.32	\$0.00	\$2,410.32										
	Planning: Development & Integration Updates	02-Feb-18 A	20-Feb-18 A	100%	63	6.75	\$1,294.79	\$0.00	\$1,294.79										
	Planning: Establishing Data Transfer Between Sites	21-Dec-17 A	20-Feb-18 A	100%	63	6.75	\$1,294.79	\$0.00	\$1,294.79										
	Planning: Build-out of Physical Infrastructure	06-Nov-17 A	27-Nov-17 A	100%	63	7.00	\$1,342.74	\$0.00	\$1,342.74										
	Provisioning: Build-out of Physical Infrastructure	01-Jun-18 A	29-Jun-18 A	100%	63	59.00	\$6,690.61	\$0.00	\$6,690.61										
	Planning: Test Deployment Nodes	06-Nov-17 A	28-Nov-17 A	100%	63	7.00	\$1,342.74	\$0.00	\$1,342.74										
	Consolidated Database System	31-Jan-18 A	04-Apr-18 A	100%	62	52.00	\$6,387.68	\$0.00	\$6,387.68										
	Service Monitoring Use Case Development	06-Feb-18 A	17-May-18 A	100%	62	151.50	\$13,712.77	\$0.00	\$13,712.77										
	Provisioning: Kubernetes Installation	23-Jan-18 A	31-May-18 A	100%	21	73.75	\$8,918.65	\$0.00	\$8,918.65										
	Provisioning: Central Core Network	27-Jul-17 A	21-May-18 A	100%	41	77.25	\$9,083.83	\$0.00	\$9,083.83										
	Provisioning: L1 CCS System Phase 1	13-Dec-17 A	13-Dec-17 A	100%	21	40.25	\$4,167.40	\$0.00	\$4,167.40										
	Provisioning: L1 Expansion Phase 2	30-Apr-18 A	26-Nov-18 A	100%	31	153.75	\$17,191.47	\$0.00	\$17,191.47										
	Provisioning: Development & Integration Updates	15-May-18 A	09-Nov-18 A	100%	11	20.25	\$2,568.87	\$0.00	\$2,568.87										
	Provisioning: Establishing Data Transfer Between Sites	16-Apr-18 A	01-Jul-19	80%	21	56.00	\$6,588.88	\$0.00	\$6,588.88	342									
	Provisioning: Test Deployment Nodes	23-Jan-18 A	26-Feb-18 A	100%	21	17.50	\$1,731.98	\$0.00	\$1,731.98										
	Upgrade to Interim Kubernetes	31-Jan-18 A	05-Apr-18 A	100%	62	64.25	\$10,040.39	\$0.00	\$10,040.39										
	Provisioning: Spectrograph Test Stand in Tucson	27-Feb-18 A	24-May-18 A	100%	21	35.25	\$4,626.21	\$0.00	\$4,626.21										
	Design and implementation of LDM-129 logical filesystem	31-Jul-18 A	31-Jan-19 A	100%	44	62.89	\$6,889.90	\$0.00	\$6,889.90										
	Early lifetime support of Kubernetes cluster during friendly user mode	21-May-18 A	28-Sep-18 A	100%	65	290.92	\$31,729.15	\$0.00	\$31,729.15										
	Improvements to remote administrative processes	30-Jun-18 A	30-Jun-18 A	100%	34	155.78	\$17,389.08	\$0.00	\$17,389.08										
	Technical Debt	01-Aug-18 A	28-Sep-18 A	100%	63	840.13	\$91,973.66	\$0.00	\$91,973.66										
	Planning & Acquisition for Level 1 integration system expansion phase 3	31-Jul-18 A	15-Nov-18 A	100%	21	18.38	\$2,709.77	\$0.00	\$2,709.77										
	Planning: Summit AA and Network Security Monitoring Deployment	31-Jul-18 A	23-Oct-18 A	100%	21	18.38	\$2,709.77	\$0.00	\$2,709.77										
	Network Upgrade for Kubernetes cluster	01-Aug-18 A	07-Sep-18 A	100%	63	116.32	\$14,449.56	\$0.00	\$14,449.56										
	Authentication and Authorization Update	01-Aug-18 A	18-Jan-19 A	100%	43	75.35	\$9,772.16	\$0.00	\$9,772.16										
	Provisioning Summit AA System Part 1	01-Nov-18 A	28-Nov-18 A	100%	41	70.00	\$4,946.34	\$0.00	\$4,946.34										
	Security and Networking configurations at the Base and Summit	01-Feb-19 A	30-Aug-19	95%	64	93.00	\$8,653.65	\$0.00	\$8,653.65	306									
	Provisioning DTN for LSST Networking Demo	30-Oct-18 A	15-Nov-18 A	100%	25	80.00	\$7,908.00	\$0.00	\$7,908.00										
	Performance of November PM	01-Nov-18 A	30-Nov-18 A	100%	1	4.00	\$379.84	\$0.00	\$379.84										
	Planning for October PM	30-Oct-18 A	31-Oct-18 A	100%	13	46.80	\$4,896.75	\$0.00	\$4,896.75										
	Investigate requirements to migrate CI System from AWS to LDF	30-Oct-18 A	30-Aug-19	40%	64	46.00	\$5,065.06	\$0.00	\$5,065.06	129									
	Provisioning Summit AA System Part 2	01-Feb-19 A	29-Mar-19 A	100%	22	67.21	\$5,854.27	\$0.00	\$5,854.27										
	Verification of October PM	01-Nov-18 A	30-Nov-18 A	100%	4	14.00	\$1,325.19	\$0.00	\$1,325.19										
	Verification of December PM	19-Dec-18 A	19-Dec-18 A	100%	1	4.00	\$378.63	\$0.00	\$378.63										
	Performance of December PM	19-Dec-18 A	19-Dec-18 A	100%	1	4.00	\$378.63	\$0.00	\$378.63										
	Planning for November PM	01-Nov-18 A	28-Nov-18 A	100%	15	54.00	\$5,649.90	\$0.00	\$5,649.90										
	Build and establish test, integration, and production Kubernetes clusters	18-Dec-18 A	22-Aug-19	85%	58	186.00	\$17,234.53	\$0.00	\$17,234.53	135									
	Provisioning L1 Phase 3 System	30-Oct-18 A	20-Aug-19	17.5%	56	157.00	\$13,677.39	\$0.00	\$13,677.39	137									
	Verification of November PM	01-Nov-18 A	30-Nov-18 A	100%	4	14.00	\$1,325.19	\$0.00	\$1,325.19										
	Performance of October PM	30-Oct-18 A	30-Nov-18 A	100%	1	13.00	\$1,264.99	\$0.00	\$1,264.99										
	Requirements of uptime availability of the Oracle RAC	31-Oct-18 A	18-Dec-18 A	100%	64	186.00	\$23,014.25	\$0.00	\$23,014.25										
	Researching design for remote deployment of commissioning cluster services	01-Nov-18 A	28-Nov-18 A	100%	64	186.00	\$21,383.12	\$0.00	\$21,383.12										
	Plan physical hardware for redundancy	31-Jan-19 A	30-Aug-19	17.5%	64	162.00	\$17,115.76	\$0.00	\$17,115.76	129									
	Implementation of VMs for redundancy	18-Dec-18 A	29-Mar-19 A	100%	64	232.00	\$25,553.87	\$0.00	\$25,553.87										
	Planning for December PM	17-Dec-18 A	17-Dec-18 A	100%	18	58.00	\$6,028.67	\$0.00	\$6,028.67										
	Integration Plan for New Database Hardware Q1 FY19a	01-Mar-19 A	29-Mar-19 A	100%	61	138.88	\$17,170.33	\$0.00	\$17,170.33										
	Oracle Maintenance FY19a	01-Mar-19 A	29-Mar-19 A	100%	61	163.68	\$20,201.39	\$0.00	\$20,201.39										
	OODS in Chile: Plan	31-Jan-19 A	28-Feb-19 A	100%	48	192.00	\$20,429.87	\$0.00	\$20,429.87										
	OODS in Chile: Implementation	01-Apr-19 A	30-Apr-19 A	100%	18	50.48	\$4,595.28	\$0.00	\$4,595.28										
	Planning for move of equipment from NOAO closet to Base Data Center	01-Feb-19 A	29-Mar-19 A	100%	61	36.80	\$3,840.63	\$0.00	\$3,840.63										
	Filesystem in Tucson	31-Jan-19 A	29-Mar-19 A	100%	11	62.40	\$5,925.91	\$0.00	\$5,925.91										
	Kubernetes native GPFS	01-Mar-19 A	29-Mar-19 A	100%	61	80.00	\$6,201.28	\$0.00	\$6,201.28										
	LDAP Group Renaming	03-Jun-19	14-Aug-19	0%	52	72.00	\$7,601.21	\$0.00	\$7,601.21	444									
	Improvements to Yum repo syncing	03-Jun-19	27-Aug-19	0%	61	64.00	\$4,970.24	\$0.00	\$4,970.24	343									
	Hosting Yum repos	28-Aug-19	21-Nov-19	0%	61	64.00	\$4,970.24	\$0.00	\$4,970.24	343									
	Managing Yum client settings and patching	31-Jan-19 A	01-Aug-19	20%	43	64.00	\$4,970.24	\$0.00	\$4,970.24	453									
	Kubernetes puppet module re-write	31-Jan-19 A	29-Mar-19 A	100%	63	120.00	\$9,693.60	\$0.00	\$9,693.60										
	IT Event Monitoring and Alerting in Chile	03-Jun-19	06-Nov-19	0%	111	165.09	\$14,048.46	\$0.00	\$14,048.46	385									
	Update SSH Login Process	03-Sep-19	05-Mar-20	0%	126	245.11	\$23,305.17	\$0.00	\$23,305.17	306									
	Planning for January PM	31-Jan-19 A	31-Jan-19 A	100%	9	13.20	\$1,687.49	\$0.00	\$1,687.49										
	Planning for February PM	31-Jan-19 A	28-Feb-19 A	100%	19	28.00	\$3,579.52	\$0.00	\$3,579.52										
	Planning for March PM	01-Mar-19 A	29-Mar-19 A	100%	15	13.60	\$1,738.62	\$0.00	\$1,738.62										
	Performance and Verification of January PM	31-Jan-19 A	31-Jan-19 A	100%	2	32.00	\$3,572.56	\$0.00	\$3,572.56										
	Performance and Verification of February PM	01-Feb-19 A	28-Feb-19 A	100%	2	32.00	\$3,572.56	\$0.00	\$3,572.56										
	Performance and Verification of March PM	01-Mar-19 A	29-Mar-19 A	100%	1	40.00	\$3,828.64	\$0.00	\$3,828.64										
	BDC Console Server (IP KVM) for Security; Setup, Pack & Ship	01-May-19 A	03-Jun-19	80%	1	4.00	\$383.08	\$0.00	\$383.08	267									
	3003 Network Move	01-May-19 A	01-May-19 A	100%	1	4.00	\$349.00	\$0.00	\$349.00										



LSST May 2019 Month End Forecast

Activity ID	Activity Name	Start	Finish	Physical % Complete	Original Duration	Budgeted Labor Units	Budgeted Labor Cost	Budgeted Material Cost	Budgeted Total Cost no	Total Float	FY2015 2014-10-01	FY2016 2015-10-01	FY2017 2016-10-01	FY2018 2017-10-01	FY2019 2018-10-01	FY2020 2019-10-01	FY2021 2020-10-01	FY2022 2021-10-01
DM-18786	Design of Data Center Systems Deployment Plan	03-Jun-19	12-Jun-19	0%	8	16.00	\$1,644.00	\$0.00	\$1,644.00	421								
	Make Oracle RAC Nodes Rebuildable	01-May-19 A	25-Jul-19	0.04%	44	262.00	\$30,416.22	\$0.00	\$30,416.22	281								
	Provisioning Complete for ComCam OCS Bridge in Tucson	10-Jan-20	16-Jan-20	0%	5	40.00	\$4,715.20	\$0.00	\$4,715.20	162								
	Provisioning Complete for 2 ComCam Forwarders in Tucson	10-Jan-20	14-Jan-20	0%	3	37.00	\$4,331.68	\$0.00	\$4,331.68	164								
	Installation of Network and Systems Hardware at the Base (Travel and Work)	26-Nov-19	04-Dec-19	0%	5	173.33	\$18,130.13	\$0.00	\$18,130.13	162								
	Summit AA System Part 3	01-May-19 A	01-Aug-19	5.26%	55	48.00	\$5,019.68	\$0.00	\$5,019.68	276								
	Spectrograph (AT) Archiver Network Planning at Summit	03-Jun-19	02-Aug-19	0%	44	104.00	\$12,586.16	\$0.00	\$12,586.16	421								
	Test, Validate, Pack & Ship ComCam Archiver to Tucson	01-May-19 A	28-Jun-19	11.11%	20	40.00	\$3,287.60	\$0.00	\$3,287.60	235								
	Delay of Test, Validate, Pack & Ship ComCam Archiver to Tucson	03-Jun-19	30-Jul-19	0%	41	40.00	\$0.00	\$0.00	\$0.00	235								
	Test, Validate, Pack & Ship ComCam OCS Bridge to Tucson	01-May-19 A	14-Jun-19	11.11%	10	40.00	\$3,287.60	\$0.00	\$3,287.60	256								
	Plan and Prepare Provisioning Management System for Chile Base	01-Jul-19	08-Jul-19	0%	5	40.00	\$5,113.60	\$0.00	\$5,113.60	276								
	Test, Validate, Pack & Ship Two ComCam Forwarders to Tucson	29-Oct-19	11-Nov-19	0%	10	40.00	\$3,287.60	\$0.00	\$3,287.60	162								
	Plan for ComCam Tucson Provisioning	01-May-19 A	01-May-19 A	100%	1	16.00	\$1,495.12	\$0.00	\$1,495.12									
	Implement Network Re-Engineering in NCSA 3003	03-Jun-19	10-Jun-19	0%	6	80.00	\$8,437.76	\$0.00	\$8,437.76	261								
	Plan Provisioning Capability at Summit	03-Jun-19	02-Aug-19	0%	44	40.00	\$4,936.40	\$0.00	\$4,936.40	363								
	Test, Validate, Pack & Ship 2 DTN for BDC	01-May-19 A	02-Jul-19	22.22%	22	24.00	\$2,105.84	\$0.00	\$2,105.84	264								
	Test, Validate, Pack & Ship 2 Forwarders for BDC	01-May-19 A	02-Jul-19	22.22%	22	24.00	\$2,105.84	\$0.00	\$2,105.84	245								
	Test, Validate, Pack & Ship EFD ETL Servers for BDC	01-May-19 A	02-Jul-19	22.22%	22	24.00	\$2,105.84	\$0.00	\$2,105.84	245								
	Test, Validate, Pack & Ship 2 Oracle Systems for BDC	01-May-19 A	02-Jul-19	22.22%	22	40.00	\$4,096.56	\$0.00	\$4,096.56	192								
	Delay pack and ship of Systems for BDC	03-Jul-19	17-Sep-19	0%	53	40.00	\$4,096.56	\$0.00	\$4,096.56	192								
	Implementation of Data Center Deployment Plan in NCSA 3003	01-May-19 A	18-Jun-19	92.11%	12	112.00	\$13,999.04	\$0.00	\$13,999.04	283								
	Re-Deploy NCSA Test Stand Nodes via xCAT and Puppet	19-Jun-19	23-Jul-19	0%	24	160.00	\$17,527.40	\$0.00	\$17,527.40	283								
	LSST Disaster Recovery v0.5 Feedback and Planning	01-May-19 A	31-Oct-19	20%	108	637.96	\$53,338.88	\$0.00	\$53,338.88	250								
	Shipping and Installation of ComCam Systems in Tucson	12-Nov-19	09-Jan-20	0%	38	0.00	\$0.00	\$0.00	\$0.00	162								
	SSD Drawer for Oracle, Setup and Configuration	01-May-19 A	19-Aug-19	74.96%	65	130.00	\$15,444.60	\$0.00	\$15,444.60	1049								
	Rollout Native GPFS to all non-test clusters	01-Jul-19	28-Aug-19	0%	42	48.00	\$5,122.56	\$0.00	\$5,122.56	301								
	Planning for April 2019 PM	01-May-19 A	01-May-19 A	100%	13	10.00	\$1,101.10	\$0.00	\$1,101.1									



LSST May 2019 Month End Forecast												FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022
Activity ID	Activity Name	Start	Finish	Physical % Complete	Original Duration	Budgeted Labor Units	Budgeted Labor Cost	Budgeted Material Cost	Budgeted Total Cost no	Total Float		2014-10-01	2015-10-01	2016-10-01	2017-10-01	2018-10-01	2019-10-01	2020-10-01	2021-10-01
LSST ME 19-05.02C.08.01	DM-NET-6 Summit LAN installed		02-Apr-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00							♦ Summit LAN installed			
	DMTC-6E C & BS Management Engineering and Integration - I	01-Aug-14 A	30-Sep-14 A	100%	42	0.00	\$0.00	\$0.00	\$0.00										
	DMTC-6E C & BS Management Engineering and Integration - I	01-Oct-14 A	27-Feb-15 A	100%	101	360.00	\$34,171.20	\$0.00	\$34,171.20										
	DMTC-6E C & BS Management Engineering and Integration - I	02-Mar-15 A	01-Sep-15 A	100%	130	200.00	\$18,984.00	\$0.00	\$18,984.00										
	DMTC-6E C & BS Management Engineering and Integration - I	01-Sep-15 A	29-Feb-16 A	100%	123	316.83	\$30,870.23	\$0.00	\$30,870.23										
	DMTC-6E C & BS Management Engineering and Integration - I	01-Mar-16 A	31-Aug-16 A	100%	131	200.00	\$19,648.00	\$0.00	\$19,648.00										
	DMTC-6E C & BS Management Engineering and Integration - I	01-Sep-16 A	28-Feb-17 A	100%	124	560.00	\$67,703.34	\$0.00	\$67,703.34										
	DMTC-6E C & BS Management Engineering and Integration - I	01-Mar-17 A	31-Aug-17 A	100%	131	529.53	\$64,995.48	\$0.00	\$64,995.48										
	DMTC-6E C & BS Management Engineering and Integration - I	01-Sep-17 A	28-Feb-18 A	100%	123	560.00	\$70,088.62	\$0.00	\$70,088.62										
	DMTC-6E C & BS Management Engineering and Integration - I	01-Mar-18 A	31-Aug-18 A	100%	131	144.60	\$18,250.00	\$0.00	\$18,250.00										
	DMTC-6E C & BS Management Engineering and Integration - I	03-Sep-18 A	28-Feb-19 A	100%	123	910.00	\$113,445.09	\$0.00	\$113,445.09										
	DMTC-6E C & BS Management Engineering and Integration - I	01-Mar-19 A	30-Aug-19	50%	130	450.00	\$63,949.50	\$0.00	\$63,949.50	129									
	DMTC-6E C & BS Management Engineering and Integration - I	02-Dec-19	31-Dec-19	0%	20	75.00	\$11,031.00	\$0.00	\$11,031.00	67									
	DMTC-6E C & BS Management Engineering and Integration - I	02-Jan-20	25-Jun-20	0%	124	450.00	\$66,186.00	\$0.00	\$66,186.00	67									
	DMTC-6E C & BS Management Engineering and Integration - I	26-Jun-20	30-Dec-20	0%	130	0.00	\$0.00	\$0.00	\$0.00	67									
	DMTC-6E C & BS Management Engineering and Integration - I	31-Dec-20	29-Dec-21	0%	254	0.00	\$0.00	\$0.00	\$0.00	67									
	DMTC-6E C & BS Management Engineering and Integration - I	30-Dec-21	27-Jun-22	0%	126	0.00	\$0.00	\$0.00	\$0.00	67									
	DMTC-6E C & BS Management Engineering and Integration - I	01-Oct-15 A	30-Sep-16 A	100%	254	0.00	\$0.00	\$8,093.53	\$8,093.53										
	DMTC-6E C & BS Management Engineering and Integration - I	03-Oct-16 A	29-Sep-17 A	100%	254	0.00	\$0.00	\$8,304.00	\$8,304.00										
	DMTC-6E C & BS Management Engineering and Integration - I	02-Oct-17 A	28-Sep-18 A	100%	253	0.00	\$0.00	\$8,519.93	\$8,519.93										
	DMTC-6E Network Acceptance/Verification Review for Early Int	29-Mar-18 A	30-Mar-18 A	100%	2	119.00	\$18,225.20	\$0.00	\$18,225.20										
	DMTC-6E Network Acceptance/Verification Review for Full Inte	16-Sep-19	17-Sep-19	0%	2	64.00	\$9,812.64	\$0.00	\$9,812.64	246									
	DMTC-6E Network Acceptance/Verification Review for Science	03-Jun-20	04-Jun-20	0%	2	64.00	\$10,156.00	\$0.00	\$10,156.00	463									
	DMTC-6E Network Acceptance/Verification Review for Full Ope	01-Jun-21	02-Jun-21	0%	2	64.00	\$10,511.68	\$0.00	\$10,511.68	340									
	LSST ME 19-05.02C.08.01 Base Center	15-Jul-15 A	30-Mar-22		1920	5575.27	\$352,988.84	\$1,289,906.52	\$1,642,895.36	130									
	DLP-464 Install networking for normal Base Center operations		02-Dec-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	195									
	DLP-465 Install networking for normal Base Center operations		30-Dec-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	318									
	DM-NET-2 Mountain - Base Network Functional 2 x 100 Gbps		02-Apr-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00										
	DMTC-7C Base Center Facility Requirements Review	15-Jul-15 A	16-Jul-15 A	100%	5	0.00	\$0.00	\$0.00	\$0.00										
	DMTC-7C Plan to Procure Base Local Area Network	01-Nov-17 A	15-Feb-19 A	100%	43	0.00	\$0.00	\$709,070.00	\$709,070.00										
	DMTC-7C Plan to install and configure Base Local Area Networ	01-Nov-17 A	01-Feb-19 A	100%	66	596.00	\$51,541.24	\$0.00	\$51,541.24										
	DMTC-7C Base Center Facilities and Energy Costs - LOE - FY1	01-Oct-18 A	27-Sep-19 A	66.66%	245	0.00	\$0.00	\$110,864.00	\$110,864.00	229									
	DMTC-7C Base Center Facilities and Energy Costs - LOE - FY2	30-Sep-19	29-Sep-20	0%	246	0.00	\$0.00	\$130,423.76	\$130,423.76	278									
	DMTC-7C Base Center Facilities and Energy Costs - LOE - FY2	30-Sep-20	19-Aug-21	0%	219	0.00	\$0.00	\$139,548.76	\$139,548.76	278									
	DMTC-7C Summit Base IT/Network Tech FY19	06-Dec-19	11-Feb-20	0%	44	390.99	\$20,182.90	\$0.00	\$20,182.90	130									
	DMTC-7C Summit Base IT/Network Tech FY20	12-Feb-20	29-Sep-20	0%	163	394.78	\$20,378.54	\$0.00	\$20,378.54	130									
	DMTC-7C Summit Base IT/Network Tech FY21	30-Sep-20	29-Sep-21	0%	254	0.00	\$0.00	\$0.00	\$0.00	130									
	DMTC-7C Summit Base IT/Network Tech FY22	30-Sep-21	30-Mar-22	0%	126	0.00	\$0.00	\$0.00	\$0.00	130									
	DMTC-7C Base Center Facilities Network Costs	30-Sep-19	30-Sep-19	0%	1	0.00	\$0.00	\$200,000.00	\$200,000.00	229									
	IT-1042 Move CISS servers into BDC	09-Oct-19	08-Nov-19	0%	23	30.00	\$1,548.60	\$0.00	\$1,548.60	10									
	IT-1043 Move CTIO/SOAR remote observing room into Base	09-Oct-19	16-Oct-19	0%	6	8.00	\$412.96	\$0.00	\$412.96	27									
	IT-715 Prepare DevOps ITC Support	03-Jun-19	27-Sep-19	0%	83	90.00	\$4,488.30	\$0.00	\$4,488.30	134									
	IT-716 Procure Base Local Area Network	01-Oct-18 A	08-Oct-19	0.89%	90	20.00	\$2,178.40	\$0.00	\$2,178.40	-7									
	IT-716 Ex Extend Schedule for Procurement of Base Local Are	09-Oct-19	09-Oct-19	0%	0	20.00	\$0.00	\$0.00	\$0.00	-7									
	IT-716-M Base Center Beneficial Occupancy		18-Mar-19 A	100%	0	0.00	\$0.00	\$0.00	\$0.00										
	IT-716-M2 Furniture installed in Offices, purchased cabling rece		09-Oct-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	10									
	IT-717 Support Preparation of Machine Room	30-Nov-18 A	08-Jul-19	0.15%	25	60.00	\$2,992.20	\$0.00	\$2,992.20	58									
	IT-718 Ensure Facility/Utility Readiness	31-Jan-19 A	11-Jul-19	0.05%	28	452.59	\$38,834.97	\$0.00	\$38,834.97	55									
	IT-718-M Base Center Full Occupancy		11-Jul-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	55									
	IT-719 Transfer MANWAN devices from CR to BDC	01-Apr-19 A	12-Aug-19	41.18%	50	412.74	\$20,583.34	\$0.00	\$20,583.34	212									
	IT-720 Install LSST DWDM, move AURA, REUNA DWDM	01-Apr-19 A	30-Apr-19 A	100%	44	677.65	\$33,794.49	\$0.00	\$33,794.49										
	IT-721 Install and configure Base Local Area Network	01-Apr-19 A	19-Aug-19	8.62%	55	928.75	\$62,581.07	\$0.00	\$62,581.07	27									
	IT-722 Install General Network	01-May-19 A	14-Jun-19	9.09%	10	105.86	\$5,464.70	\$0.00	\$5,464.70	93									
	IT-723 Install Wifi in Base	09-Oct-19	05-Nov-19	0%	20	252.30	\$13,023.73	\$0.00	\$13,023.73	-7									
	IT-724 Install VOIP in Base	06-Nov-19	05-Dec-19	0%	20	221.00	\$11,408.02	\$0.00	\$11,408.02	-7									
	IT-725 Move NCSA equipment to Base DC	17-Jun-19	15-Jul-19	0%	20	252.30	\$12,582.20	\$0.00	\$12,582.20	93									
	IT-725-M Base Data Center Network Complete		05-Dec-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	-7									
	IT-726 Install Commissioning Cluster in BDC	06-Dec-19	07-Jan-20	0%	20	106.30	\$5,487.21	\$0.00	\$5,487.21	171									
	IT-727 Receive and Configure Infrastructure Test at Base C	06-Dec-19	15-Sep-20	0%	192	556.00	\$45,505.97	\$0.00	\$45,505.97	-7									
	IT-728 Receive and Configure Expansion/Replacement Infr	19-May-21	29-Oct-21	0%	115	0.00	\$0.00	\$0.00	\$0.00	183									
	LSST ME 19-05.02C.08.02 Chilean Data Access Center	05-Aug-15 A	21-Jul-21		1551	0.00	\$0.00	\$0.00	\$0.00	260									
	DLP-466 Install networking for ComCam-scale Chilean DAC s		26-Nov-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	196									
	DLP-467 Install networking for full-camera-scale Chilean DAC		30-Dec-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	321									
	DLP-468 Provide networking for formal Chilean DAC producti		30-Dec-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	321									
	DM-NET-1 Base - Archive Network Functional 1 Gbps		05-Aug-15 A	100%	0	0.00	\$0.00	\$0.00	\$0.00										
	DMTC-7E Receive and Configure Infrastructure Test at Chleat	26-May-21	21-Jul-21	0%	40	0.00	\$0.00	\$0.00	\$0.00	254									
	LSST ME 19-05.02C.08.03 Long-Haul Networks	01-Aug-14 A	30-Mar-22		1838	11285.92	\$898,779.35	\$27,294,530.00	\$28,193,309.35	130									
	DMTC-81 Miami - Boca Raton path diverse fiber Payment Leas	13-Feb-19 A	15-Feb-19 A	100%	196	0.00	\$0.00	\$0.00	\$0.00										
	LSST ME 19-05.02C.08.03.01 Chile National WAN	01-Aug-14 A	30-Mar-22		1838	7828.35	\$594,638.24	\$9,318,370.00	\$9,913,008.24	130									
	DM-NI Initial Network Ready (Summit)		05-Mar-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00										
	DM-NI Base LAN installed		31-Oct-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	212									
	DMTC Final integration test of the Mountain - Base network	06-Nov-17 A	30-Jul-19	57.32%	66	166.00	\$17,469.84	\$0.00	\$17,469.84	271									
LSST ME 19-05.02C.08.02	DLP-466 Install networking for ComCam-scale Chilean DAC s		26-Nov-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	196									
	DLP-467 Install networking for full-camera-scale Chilean DAC		30-Dec-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	321									
	DLP-468 Provide networking for formal Chilean DAC producti		30-Dec-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	321									
	DM-NET-1 Base - Archive Network Functional 1 Gbps		05-Aug-15 A	100%	0	0.00	\$0.00	\$0.00	\$0.00										
	DMTC-7E Receive and Configure Infrastructure Test at Chleat	26-May-21	21-Jul-21	0%	40	0.00	\$0.00	\$0.00	\$0.00	254									
	LSST ME 19-05.02C.08.03 Long-Haul Networks	01-Aug-14 A	30-Mar-22		1838	11285.92	\$898,779.35	\$27,294,530.00	\$28,193,309.35	130									

## LSST May 2019 Month End Forecast

Activity ID	Activity Name	Start	Finish	Physical % Complete	Original Duration	Budgeted Labor Units	Budgeted Labor Cost	Budgeted Material Cost	Budgeted Total Cost no	Total Float	FY2015 2014-10-01	FY2016 2015-10-01	FY2017 2016-10-01	FY2018 2017-10-01	FY2019 2018-10-01	FY2020 2019-10-01	FY2021 2020-10-01	FY2022 2021-10-01
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LSST May 2019 Month End Forecast

Activity ID	Activity Name	Start	Finish	Physical % Complete	Original Duration	Budgeted Labor Units	Budgeted Labor Cost	Budgeted Material Cost	Budgeted Total Cost no	Total Float	FY2015 2014-10-01	FY2016 2015-10-01	FY2017 2016-10-01	FY2018 2017-10-01	FY2019 2018-10-01	FY2020 2019-10-01	FY2021 2020-10-01	FY2022 2021-10-01
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## LSST May 2019 Month End Forecast

Activity ID	Activity Name	Start	Finish	Physical % Complete	Original Duration	Budgeted Labor Units	Budgeted Labor Cost	Budgeted Material Cost	Budgeted Total Cost no	Total Float	FY2015 2014-10-01	FY2016 2015-10-01	FY2017 2016-10-01	FY2018 2017-10-01	FY2019 2018-10-01	FY2020 2019-10-01	FY2021 2020-10-01	FY2022 2021-10-01
DMTC	Final Integration test of the Archive - DACs communi	29-Oct-20	28-Jan-21	0%	57	0.00	\$0.00	\$0.00	\$0.00	375								
	LSST ME 19-05.02C.08.03.02.01 Contract 1 100 Gbps Ma	01-Aug-14 A	03-Aug-21		1633	1516.38	\$114,174.80	\$12,023,080.00	\$12,137,254.80	294								
	DLF Santiago - Miami Early Integration Ready		01-Jun-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00									
	DM Sub-Contract executed with Telecommunications ensu	28-Sep-15 A	30-Sep-15 A	100%	5	0.00	\$0.00	\$1,000,000.00	\$1,000,000.00									
	DM Deploy SCL - MIA, Test 1 Gbps	01-Aug-14 A	29-Aug-14 A	100%	70	160.00	\$15,187.20	\$0.00	\$15,187.20									
	DM Manage First Data passed on 100G ring without err	29-Sep-15 A	01-Oct-15 A	100%	3	40.00	\$3,841.07	\$0.00	\$3,841.07									
	DM First Data passed on 100G ring without errors - Con		01-Oct-15 A	100%	0	0.00	\$0.00	\$0.00	\$0.00									
	DM First Data passed on 100G ring without errors Paym	02-Oct-15 A	01-Dec-15 A	100%	40	0.00	\$0.00	\$0.00	\$0.00									
	DM First Data passed on 100G ring without errors - Pay	02-Dec-15 A	09-Dec-15 A	100%	5	0.00	\$0.00	\$1,351,010.00	\$1,351,010.00									
	DM Manage 100G ring operating at 95.0% availability	02-Oct-15 A	30-Sep-16 A	100%	245	40.00	\$3,929.60	\$0.00	\$3,929.60									
	DM 100G ring operating at 95.0% availability - Complete		01-Oct-16 A	100%	0	0.00	\$0.00	\$0.00	\$0.00									
	DM 100G ring operating at 95.0% availability Payment L	15-Oct-16 A	30-Nov-16 A	100%	40	0.00	\$0.00	\$0.00	\$0.00									
	DM 100G ring operating at 95.0% availability - Payment	01-Dec-16 A	09-Dec-16 A	100%	5	0.00	\$0.00	\$293,010.00	\$293,010.00									
	DM Manage 100G ring operating at 97.0% availability	29-Sep-16 A	29-Sep-17 A	100%	247	300.41	\$31,164.94	\$0.00	\$31,164.94									
	DM Manage 100G ring operating at 98.0% availability	01-Oct-17 A	29-Jun-18 A	100%	183	460.97	\$29,899.87	\$0.00	\$29,899.87									
	DM 100G ring operating at 97.0% availability - Complete		29-Jun-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00									
	DM 100G ring operating at 97.0% availability Payment L	30-Sep-17 A	30-Apr-18 A	100%	43	0.00	\$0.00	\$0.00	\$0.00									
	DM 100G ring operating at 97.0% availability - Payment	30-Apr-18 A	30-Apr-18 A	100%	5	0.00	\$0.00	\$1,667,020.00	\$1,667,020.00									
	DM Miami - Boca Raton path diverse fiber - Complete		01-Feb-19 A	100%	0	0.00	\$0.00	\$0.00	\$0.00									
	DM Miami - Boca Raton path diverse fiber Payment Leac	13-Feb-19 A	15-Feb-19 A	100%	6	0.00	\$0.00	\$0.00	\$0.00									
	DM Miami - Boca Raton path diverse fiber - Payment Iss	13-Feb-19 A	15-Feb-19 A	100%	5	0.00	\$0.00	\$1,351,010.00	\$1,351,010.00									
	DM Manage 100G ring operating at 98.0% availability	01-Aug-18 A	13-Feb-19 A	100%	244	515.00	\$30,152.13	\$0.00	\$30,152.13									
	DM 100G ring operating at 98.0% availability - Complete		13-Feb-19 A	100%	0	0.00	\$0.00	\$0.00	\$0.00									
	DM 100G ring operating at 98.0% availability Payment L	13-Feb-19 A	15-Feb-19 A	100%	11	0.00	\$0.00	\$0.00	\$0.00									
	DM 100G ring operating at 98.0% availability - Payment	13-Feb-19 A	15-Feb-19 A	100%	5	0.00	\$0.00	\$3,001,010.00	\$3,001,010.00									
	DM Manage 100G ring operating at 99.0% availability	03-Jun-19	02-Jun-20	0%	245	0.00	\$0.00	\$0.00	\$0.00		288							
	DM 100G ring operating at 99.0% availability - Complete		02-Jun-20	0%	0	0.00	\$0.00	\$0.00	\$0.00		450							
	DM 100G ring operating at 99.0% availability Payment L	03-Jun-20	29-Jul-20	0%	40	0.00	\$0.00	\$0.00	\$0.00		488							
	DM 100G ring operating at 99.0% availability - Payment	30-Jul-20	05-Aug-20	0%	5	0.00	\$0.00	\$2,855,010.00	\$2,855,010.00		488							
	DM Manage 100G ring operating at 99.99% availability	03-Jun-20	31-May-21	0%	245	0.00	\$0.00	\$0.00	\$0.00		288							
	DM 100G ring operating at 99.99% availability - Complet		31-May-21	0%	0	0.00	\$0.00	\$0.00	\$0.00		288							
	DM 100G ring operating at 99.99% availability Payment I	01-Jun-21	27-Jul-21	0%	40	0.00	\$0.00	\$0.00	\$0.00		288							
	DM 100G ring operating at 99.99% availability - Paymen	28-Jul-21	03-Aug-21	0%	5	0.00	\$0.00	\$505,010.00	\$505,010.00		288							
	LSST ME 19-05.02C.08.03.02.02 Contract 2 FIU-CIARA M	22-Sep-15 A	20-Aug-21		1502	682.52	\$60,893.54	\$831,060.00	\$891,953.54	283								
	DM FIU-CIARA Management Contract Delivery #1 Paymr	22-Sep-15 A	28-Sep-15 A	100%	5	0.00	\$0.00	\$125,000.00	\$125,000.00									
	DM Manage FIU-CIARA Management Contract Delivery	29-Sep-15 A	30-Sep-16 A	100%	250	40.00	\$3,928.54	\$0.00	\$3,928.54									
	DM FIU-CIARA Management Contract Delivery #2 Com		30-Sep-16 A	100%	0	0.00	\$0.00	\$0.00	\$0.00									
	DM FIU-CIARA Management Contract Delivery #2 Paymr	01-Oct-16 A	27-Dec-16 A	100%	40	0.00	\$0.00	\$0.00	\$0.00									
	DM FIU-CIARA Management Contract Delivery #2 Paymr	26-Dec-16 A	30-Dec-16 A	100%	5	0.00	\$0.00	\$176,010.00	\$176,010.00									
	DM Manage FIU-CIARA Management Contract Delivery	03-Oct-16 A	29-Sep-17 A	100%	245	280.00	\$29,226.40	\$0.00	\$29,226.40									
	DM FIU-CIARA Management Contract Delivery #3 Com		01-Sep-17 A	100%	0	0.00	\$0.00	\$0.00	\$0.00									
	DM FIU-CIARA Management Contract Delivery #3 Paymr	02-Oct-17 A	30-Nov-17 A	100%	40	0.00	\$0.00	\$0.00	\$0.00									
	DM FIU-CIARA Management Contract Delivery #3 Paymr	27-Nov-17 A	30-Nov-17 A	100%	5	0.00	\$0.00	\$176,010.00	\$176,010.00									
	DM Manage FIU-CIARA Management Contract Delivery	02-Oct-17 A	28-Sep-18 A	100%	244	362.52	\$27,738.60	\$0.00	\$27,738.60									
	DM FIU-CIARA Management Contract Delivery #4 Com		31-Oct-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00									
	DM FIU-CIARA Management Contract Delivery #4 Paymr	03-Jun-19	29-Jul-19	0%	40	0.00	\$0.00	\$0.00	\$0.00		686							
	DM FIU-CIARA Management Contract Delivery #4 Paymr	30-Jul-19	05-Aug-19	0%	5	0.00	\$0.00	\$88,510.00	\$88,510.00		686							
	DM Manage FIU-CIARA Management Contract Delivery	01-Oct-18 A	27-Sep-19	66.66%	245	0.00	\$0.00	\$0.00	\$0.00		277							
	DM FIU-CIARA Management Contract Delivery #5 Com		27-Sep-19	0%	0	0.00	\$0.00	\$0.00	\$0.00		649							
	DM FIU-CIARA Management Contract Delivery #5 Paymr	30-Sep-19	26-Nov-19	0%	40	0.00	\$0.00	\$0.00	\$0.00		649							
	DM FIU-CIARA Management Contract Delivery #5 Paymr	27-Nov-19	06-Dec-19	0%	6	0.00	\$0.00	\$88,510.00	\$88,510.00		649							
	DM Manage FIU-CIARA Management Contract Delivery	30-Sep-19	29-Sep-20	0%	246	0.00	\$0.00	\$0.00	\$0.00		277							
	DM FIU-CIARA Management Contract Delivery #6 Com		29-Sep-20	0%	0	0.00	\$0.00	\$0.00	\$0.00		449							
	DM FIU-CIARA Management Contract Delivery #6 Paymr	30-Sep-20	30-Nov-20	0%	40	0.00	\$0.00	\$0.00	\$0.00		449							
	DM FIU-CIARA Management Contract Delivery #6 Paymr	01-Dec-20	09-Dec-20	0%	6	0.00	\$0.00	\$88,510.00	\$88,510.00		449							
	DM Manage FIU-CIARA Management Contract Delivery	30-Sep-20	18-Aug-21	0%	218	0.00	\$0.00	\$0.00	\$0.00		277							
	DM FIU-CIARA Management Contract Delivery #7 Com		18-Aug-21	0%	0	0.00	\$0.00	\$0.00	\$0.00		277							
	DM FIU-CIARA Management Contract Delivery #7 Paymr	19-Aug-21	19-Aug-21	0%	1	0.00	\$0.00	\$0.00	\$0.00		277							
	DM FIU-CIARA Management Contract Delivery #7 Paymr	20-Aug-21	20-Aug-21	0%	1	0.00	\$0.00	\$88,510.00	\$88,510.00		277							
	LSST ME 19-05.02C.08.03.02.03 Contract 3 Spectrum	22-Sep-15 A	17-Sep-19		1013	560.00	\$57,765.23	\$4,335,020.00	\$4,392,785.23	772								
	DLF Santiago - Boca Raton Full Integration Ready		17-Sep-19	0%	0	0.00	\$0.00	\$0.00	\$0.00		772							
	DM Contract negotiated and executed with spectrum pro	22-Sep-15 A	28-Sep-15 A	100%	5	0.00	\$0.00	\$425,000.00	\$425,000.00									
	DM Manage Agreement with Monet Cable Partner signe	01-Apr-16 A	01-Oct-16 A	100%	128	80.00	\$7,859.20	\$0.00	\$7,859.20									
	DM Manage Agreement with Monet Cable Partner signe	03-Oct-16 A	28-Apr-17 A	100%	183	70.00	\$7,117.60	\$0.00	\$7,117.60									
	DM Agreement with Monet Cable Partner signed Compl		28-Apr-17 A	100%	0	0.00	\$0.00	\$0.00	\$0.00									
	DM Agreement with Monet Cable Partner signed Payme	28-Apr-17 A	29-Aug-17 A	100%	40	0.00	\$0.00	\$0.00	\$0.00									
	DM Agreement with Monet Cable Partner signed Payme	30-Aug-17 A	30-Sep-17 A	100%	5	0.00	\$0.00	\$1,955,010.00	\$1,955,010.00									
	DM Manage First light test report	03-Jul-17 A	01-Jun-18 A	100%	183	330.00	\$34,330.36	\$0.00	\$34,330.36									
	DM First light test report - Complete Contract		01-Jun-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00									
	DM First light test report Payment Leadtime	01-Jun-18 A	30-Jun-18 A	100%	62	0.00	\$0.00	\$0.00	\$0.00									
	DM First light test report Payment Received	30-Jun-18 A	30-Jun-18 A	100%	3	0.00	\$0.00	\$1,955,010.00	\$1,955,010.00									
	DM Manage Data passing test report	31-May-19 A	31-May-19 A	100%	142	80.00	\$8,458.07	\$0.00	\$8,458.07									

LSST May 2019 Month End Forecast

Activity ID	Activity Name	Start	Finish	Physical % Complete	Original Duration	Budgeted Labor Units	Budgeted Labor Cost	Budgeted Material Cost	Budgeted Total Cost no	Total Float	FY2015 2014-10-01	FY2016 2015-10-01	FY2017 2016-10-01	FY2018 2017-10-01	FY2019 2018-10-01	FY2020 2019-10-01	FY2021 2020-10-01	FY2022 2021-10-01	
LSST ME 19-05.02C.08.03.02.04 Contract 4 US National '1	DM Data passing test report - Complete		31-May-19 A	100%	0	0.00	\$0.00	\$0.00	\$0.00										
	LSST ME 19-05.02C.08.03.02.04 Contract 4 US National '1	06-May-15 A	01-Oct-20		1421	600.00	\$61,941.78	\$787,000.00	\$848,941.78	506									
	DLF Boca Raton - Chicago Early Integration Ready		30-Sep-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	469									
	DLF Miami - Chicago Early Integration Ready		30-Sep-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	469									
	DLF Boca Raton - Chicago Full Integration Ready		30-Sep-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	469									
	DLF Miami - Chicago Full Integration Ready		30-Sep-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	469									
	DM Deploy US Links Test 1 Gbps	01-Jun-15 A	30-Jun-15 A	100%	70	100.00	\$9,492.00	\$0.00	\$0.00	\$9,492.00									
	DM US National Network Acquisition Review	06-May-15 A	06-May-15 A	100%	5	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
	DM Manage VLAN design finalized Miami-NCSA	07-May-15 A	23-Mar-17 A	100%	472	100.00	\$9,874.03	\$0.00	\$0.00	\$9,874.03									
	DM VLAN design finalized Miami-NCSA - Complete		23-Mar-17 A	100%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
	DM Manage ESNet Request	01-Oct-16 A	26-Sep-18 A	100%	363	300.00	\$31,686.62	\$0.00	\$0.00	\$31,686.62									
	DM ESNet Request - Complete		26-Sep-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
	DM Manage ESNet Implementation Phase 1	01-Oct-18 A	27-Sep-19	66.66%	256	100.00	\$10,889.13	\$0.00	\$0.00	\$10,889.13	469								
	DM ESNet Implementation Phase 1- Complete		30-Sep-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00	469								
	DM Manage ESNet Implementation Phase 2	01-Oct-19	30-Sep-20	0%	254	0.00	\$0.00	\$0.00	\$0.00	\$0.00	469								
	DM ESNet Implementation Phase 2- Complete		01-Oct-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00	506								
	DM Award of ESnet Atlanta - Chicago Fiber Optic Network	30-Sep-19	30-Sep-19	0%	1	0.00	\$0.00	\$195,000.00	\$195,000.00	\$195,000.00	469								
	DM Acceptance of ESnet Atlanta - Chicago Fiber Optic Network	01-Oct-20	01-Oct-20	0%	1	0.00	\$0.00	\$592,000.00	\$592,000.00	\$592,000.00	506								
	LSST ME 19-05.02C.08.03.04 Mountain - Base Link (Superconducting)	24-Feb-15 A	24-May-16 A		144	98.67	\$9,365.76	\$0.00	\$0.00	\$9,365.76									
	DM-25 Base Local Area Network Design	14-Mar-16 A	24-May-16 A	100%	14	98.67	\$9,365.76	\$0.00	\$0.00	\$9,365.76									
	DMTC Mountain - Base Network Acquisition Review	24-Feb-15 A	25-Feb-15 A	100%	5	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
	LSST ME 19-05.02C.09 System Level Testing & Science Validation	01-Dec-17 A	28-Jan-22		1373	8131.04	\$824,195.90	\$0.00	\$0.00	\$824,195.90	172								
	DLP-579 Usability and developer efficiency		01-Dec-17 A	100%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
	DMTC-0900 Prep for ops rehearsal for commissioning #1	03-Jun-19	02-Jul-19	0%	22	0.00	\$0.00	\$0.00	\$0.00	\$0.00	275								
	DMTC-0900 Prep for ops rehearsal for commissioning #2	03-Jul-19	02-Aug-19	0%	22	0.00	\$0.00	\$0.00	\$0.00	\$0.00	275								
	DMTC-0900 Prep for ops rehearsal for commissioning #3	05-Oct-20	03-Nov-20	0%	22	0.00	\$0.00	\$0.00	\$0.00	\$0.00	1								
	DMTC-0900 Prep for ops rehearsal for DRP #1	04-Nov-20	07-Dec-20	0%	22	0.00	\$0.00	\$0.00	\$0.00	\$0.00	117								
	DMTC-0900 Prep for ops rehearsal for DRP #2	08-Dec-20	08-Jan-21	0%	22	0.00	\$0.00	\$0.00	\$0.00	\$0.00	397								
	DMTC-0900 Prep for ops rehearsal for DRP #3	11-Jan-21	10-Feb-21	0%	22	0.00	\$0.00	\$0.00	\$0.00	\$0.00	397								
	DMTC-0900 Prep for final ops rehearsal	11-Feb-21	15-Mar-21	0%	22	0.00	\$0.00	\$0.00	\$0.00	\$0.00	397								
	LSST ME 19-05.02C.09.01 Archive Center Integration	10-Oct-19	19-Oct-19		260	595.00	\$110,317.42	\$0.00	\$0.00	\$110,317.42	367								
	DMTC-63 Archive Center Early Integration	10-Oct-19	06-Dec-20	0%	40	335.00	\$61,804.15	\$0.00	\$0.00	\$61,804.15	547								
	DMTC-83 Archive Center Full Integration - NCSA	24-Aug-20	19-Oct-20	0%	40	260.00	\$48,513.27	\$0.00	\$0.00	\$48,513.27	367								
	LSST ME 19-05.02C.09.03 Chilean Data Access Center Integration	03-Nov-21	11-Jan-22		45	0.00	\$0.00	\$0.00	\$0.00	\$0.00	183								
	DMTC-83 Chilean Data Access Center Full Integration - NOAC	03-Nov-21	11-Jan-22	0%	45	0.00	\$0.00	\$0.00	\$0.00	\$0.00	183								
	LSST ME 19-05.02C.09.04 US Data Access Center Integration	10-Oct-19	28-Jan-22		584	7536.04	\$713,878.48	\$0.00	\$0.00	\$713,878.48	172								
	DMTC-64 US DAC Early Integration	10-Oct-19	11-Dec-19	0%	43	700.00	\$97,943.00	\$0.00	\$0.00	\$97,943.00	503								
	DMTC-64 US DAC Full Integration	24-Mar-21	18-May-21	0%	40	0.00	\$0.00	\$0.00	\$0.00	\$0.00	222								
	DMTC-83 US Data Access Center Ops Final Integration - NCSA	03-Dec-21	28-Jan-22	0%	40	0.00	\$0.00	\$0.00	\$0.00	\$0.00	172								
	DMTC-83 Data Product Documentation and Aids	05-Feb-21	06-Aug-21	0%	130	1400.00	\$122,724.00	\$0.00	\$0.00	\$122,724.00	213								
	DMTC-83 Data Product Documentation and Aids #1	06-Oct-21	02-Dec-21	0%	40	1800.00	\$163,314.00	\$0.00	\$0.00	\$163,314.00	172								
	DMTC-83 Data Product Documentation and Aids #2	03-Dec-21	28-Jan-22	0%	40	3636.04	\$329,897.48	\$0.00	\$0.00	\$329,897.48	172								
	LSST ME 19-05.02C.09.05 Headquarters Network Integration	02-Dec-19	03-Feb-20		40	0.00	\$0.00	\$0.00	\$0.00	\$0.00	494								
DMTC-83 Headquarters Network Integration	02-Dec-19	03-Feb-20	0%	40	0.00	\$0.00	\$0.00	\$0.00	\$0.00	494									
LSST ME 19-05.02C.10 Science Quality and Reliability Engineering	27-Aug-15 A	31-May-22		1713	57385.25	\$6,374,863.65	\$279,168.25	\$6,654,031.90	\$343										
LSST ME 19-05.02C.10.01 Management, Leadership, & Other	01-Mar-16 A	14-Jan-22		1495	16822.21	\$1,833,874.21	\$279,168.25	\$2,113,042.46	438										
DMTC-03 Science Data Quality Integration and Test - LOE - X	01-Mar-16 A	31-May-16 A	100%	66	526.37	\$46,954.52	\$0.00	\$0.00	\$46,954.52										
DMTC-03 Science Data Quality Integration and Test - LOE - F	01-Jun-16 A	31-Aug-16 A	100%	65	785.36	\$80,281.47	\$0.00	\$0.00	\$80,281.47										
DMTC-03 Science Data Quality Integration and Test - LOE - S	01-Sep-16 A	30-Nov-16 A	100%	62	569.50	\$58,903.51	\$0.00	\$0.00	\$58,903.51										
DMTC-03 Science Data Quality Integration and Test - LOE - F	01-Dec-16 A	28-Feb-17 A	100%	62	836.41	\$89,148.30	\$0.00	\$0.00	\$89,148.30										
DMTC-03 Science Data Quality Integration and Test - LOE - S	01-Mar-17 A	31-May-17 A	100%	62	836.41	\$89,148.30	\$0.00	\$0.00	\$89,148.30										
DMTC-03 Science Data Quality Integration and Test - LOE - F	01-Jun-17 A	31-Aug-17 A	100%	69	2598.39	\$222,605.32	\$0.00	\$0.00	\$222,605.32										
DMTC-03 Science Data Quality Integration and Test - LOE - F	01-Nov-17 A	30-Nov-17 A	100%	22	804.00	\$78,724.71	\$0.00	\$0.00	\$78,724.71										
DMTC-03 Science Data Quality Integration and Test - LOE - F	01-Sep-17 A	30-Nov-17 A	100%	64	774.00	\$83,719.44	\$0.00	\$0.00	\$83,719.44										
DMTC-03 Science Data Quality Integration and Test - LOE - F	01-Dec-17 A	28-Feb-18 A	100%	59	1102.00	\$113,968.82	\$0.00	\$0.00	\$113,968.82										
DMTC-03 Science Data Quality Integration and Test - LOE - F	01-Mar-18 A	31-May-18 A	100%	59	703.00	\$82,576.91	\$0.00	\$0.00	\$82,576.91										
DMTC-03 Science Data Quality Integration and Test - LOE - F	01-Jun-18 A	31-Aug-18 A	100%	72	667.03	\$82,237.80	\$0.00	\$0.00	\$82,237.80										
DMTC-03 Science Data Quality Integration and Test - LOE - F	03-Sep-18 A	02-Jan-19 A	100%	72	667.03	\$84,244.95	\$0.00	\$0.00	\$84,244.95										
DMTC-03 Science Data Quality Integration and Test - LOE - F	03-Dec-18 A	28-Feb-19 A	100%	51	1080.00	\$141,003.00	\$0.00	\$0.00	\$141,003.00										
DMTC-03 SQuaRE Support Costs - LOE - FY16 - NonLabor	01-Mar-16 A	30-Sep-16 A	100%	152	0.00	\$0.00	\$5,516.78	\$5,516.78	\$5,516.78										
DMTC-03 SQuaRE Support Costs - LOE - FY17 - NonLabor	03-Oct-16 A	29-Sep-17 A	100%	254	0.00	\$0.00	\$65,709.90	\$65,709.90	\$65,709.90										
DMTC-03 SQuaRE Support Costs - LOE - FY18 - NonLabor	02-Oct-17 A	28-Sep-18 A	100%	253	0.00	\$0.00	\$65,909.73	\$65,909.73	\$65,909.73										
DMTC-03 SQuaRE Support Costs - LOE - FY19 - NonLabor	01-Oct-18 A	30-Sep-19	67%	254	0.00	\$0.00	\$66,116.61	\$66,116.61	\$66,116.61	181									
DMTC-03 SQuaRE Support Costs - LOE - FY20 - NonLabor	01-Oct-19	30-Sep-20	0%	254	0.00	\$0.00	\$66,330.69	\$66,330.69	\$66,330.69	181									
DMTC-03 SQuaRE Support Costs - LOE - FY21 - NonLabor	01-Oct-20	30-Sep-21	0%	254	0.00	\$0.00	\$7,364.02	\$7,364.02	\$7,364.02	181									
DMTC-03 SQuaRE Support Costs - LOE - FY22 - NonLabor	01-Oct-21	14-Jan-22	0%	74	0.00	\$0.00	\$2,220.51	\$2,220.51	\$2,220.51	181									
DMTC-03 Science Data Quality Integration and Test - LOE - F	01-Mar-19 A	31-May-19 A	100%	66	1364.53	\$178,150.16	\$0.00	\$0.00	\$178,150.16										
SQ-MGT Management & Conferences	03-Jun-19	14-Jan-22	0%	666	3508.19	\$402,207.00	\$0.00	\$0.00	\$402,207.00	438									
LSST ME 19-05.02C.10.02 Quality Control, Dataspace Service	27-Aug-15 A	31-May-22		1713	40563.04	\$4,540,989.44	\$0.00	\$4,540,989.44	86										
DLP-334 SQuaRE release improved or changed CI system		08-Apr-16 A	100%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00										
DLP-337 Release new stack documentation infrastructure		31-May-16 A	100%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00										
DLP-340 Operating system testing for public stack releases inc		08-Apr-16 A	100%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00										



LSST May 2019 Month End Forecast

Activity ID	Activity Name	Start	Finish	Physical % Complete	Original Duration	Budgeted Labor Units	Budgeted Labor Cost	Budgeted Material Cost	Budgeted Total Cost no	Total Float	FY2015 2014-10-01	FY2016 2015-10-01	FY2017 2016-10-01	FY2018 2017-10-01	FY2019 2018-10-01	FY2020 2019-10-01	FY2021 2020-10-01	FY2022 2021-10-01
DLP-341	Deploy stack user support and discussion forum		08-Apr-16 A	100%	0	0.00	\$0.00	\$0.00	\$0.00									
	DLP-342	Publish updated introductory software guide to devel		08-Apr-16 A	100%	0	0.00	\$0.00	\$0.00	\$0.00								
	DLP-344	Release SQuaSH-in-a-box automated deployment p		01-Nov-17 A	100%	0	0.00	\$0.00	\$0.00	\$0.00								
	DLP-345	Prototype metrics collection system deployed		31-May-16 A	100%	0	0.00	\$0.00	\$0.00	\$0.00								
	DLP-346	SQuaSH Prototype using existing architectural comp		25-Jul-17 A	100%	0	0.00	\$0.00	\$0.00	\$0.00								
	DLP-351	Intermediate Performance Metrics routinely calculate		31-May-16 A	100%	0	0.00	\$0.00	\$0.00	\$0.00								
	DLP-352	Metrics of Interest integrated in running stack or post		01-Nov-17 A	100%	0	0.00	\$0.00	\$0.00	\$0.00								
	DM-10099	Upgrade Jenkins system to Blue Ocean and re-visit t	07-Apr-17 A	31-Jan-18 A	100%	65	297.01	\$30,200.00	\$0.00	\$30,200.00								
	DM-10134	Stack releases and distribution improvements	01-Nov-18 A	29-Mar-19 A	100%	65	60.00	\$6,100.80	\$0.00	\$6,100.80								
	DM-10135	SQuaSH internal improvements	30-Dec-16 A	03-Mar-17 A	100%	65	68.00	\$5,194.52	\$0.00	\$5,194.52								
	DM-10176	SQuaSH Usability improvements	11-Apr-17 A	30-Jun-17 A	100%	65	68.00	\$5,194.52	\$0.00	\$5,194.52								
	DM-10181	Generic (based on Jointcal) squash visualisation	17-Oct-17 A	30-Apr-18 A	100%	65	84.00	\$6,416.76	\$0.00	\$6,416.76								
	DM-10387	Jupyterlab usability investigations	02-May-17 A	22-Aug-17 A	100%	65	84.00	\$6,416.76	\$0.00	\$6,416.76								
	DM-10635	Science Pipelines Documentation Launch	15-Jun-17 A	29-Aug-17 A	100%	65	240.00	\$18,333.60	\$0.00	\$18,333.60								
	DM-10741	All-Hands Meeting 2017	21-Aug-17 A	30-Sep-17 A	100%	65	180.00	\$13,750.20	\$0.00	\$13,750.20								
	DM-10742	SQuaSH front end architecture migration	30-Jun-17 A	26-Oct-17 A	100%	65	168.00	\$12,833.52	\$0.00	\$12,833.52								
	DM-10743	Support of operational services	05-Jun-17 A	18-Sep-17 A	100%	65	96.00	\$7,333.44	\$0.00	\$7,333.44								
	DM-10744	JupyterLab second round of prototyping	08-Jun-17 A	31-Aug-17 A	100%	65	208.00	\$15,889.12	\$0.00	\$15,889.12								
	DM-10750	SQuaRE Science Effort	01-Jun-17 A	30-Nov-17 A	100%	65	180.00	\$24,127.20	\$0.00	\$24,127.20								
	DM-11830	Jupyterlab deployment	07-Sep-17 A	30-Nov-17 A	100%	22	268.00	\$21,190.76	\$0.00	\$21,190.76								
	DM-11833	Support of SQuaRE operational services F17B	30-Nov-17 A	31-Jan-18 A	100%	22	96.00	\$7,590.72	\$0.00	\$7,590.72								
	DM-11848	Butler Working Group	08-Sep-17 A	16-Nov-17 A	100%	22	160.00	\$16,838.40	\$0.00	\$16,838.40								
	DM-11854	Documentation Platform Engineering	07-Sep-17 A	22-Nov-17 A	100%	22	140.00	\$11,069.80	\$0.00	\$11,069.80								
	DM-12002	SQuaRE metrics and verification effort (non-Pitt)	22-Sep-17 A	16-Nov-17 A	100%	22	60.00	\$6,314.40	\$0.00	\$6,314.40								
	DM-12437	Continuous Integration and Builds Support	10-Apr-17 A	29-Nov-17 A	100%	22	270.00	\$21,348.90	\$0.00	\$21,348.90								
	DM-12784	CI and build/chain/deploy improvements S18-A	27-Aug-15 A	30-Apr-18 A	100%	59	330.00	\$26,093.10	\$0.00	\$26,093.10								
	DM-12786	squre-s18-jellybean-1	01-Dec-17 A	28-Feb-18 A	100%	59	330.00	\$26,093.10	\$0.00	\$26,093.10								
	DM-12787	Science Quality Monitoring and Testing	27-Nov-17 A															



LSST May 2019 Month End Forecast																			
Activity ID	Activity Name	Start	Finish	Physical % Complete	Original Duration	Budgeted Labor Units	Budgeted Labor Cost	Budgeted Material Cost	Budgeted Total Cost no	Total Float		FY2015 2014-10-01	FY2016 2015-10-01	FY2017 2016-10-01	FY2018 2017-10-01	FY2019 2018-10-01	FY2020 2019-10-01	FY2021 2020-10-01	FY2022 2021-10-01
DM-18720	Extending LiD to support other subsystems	03-Jun-19	23-Aug-19	0%	59	120.00	\$13,070.40	\$0.00	\$13,070.40	442									
	Support of production services S19B	01-Apr-19 A	23-Aug-19	10.99%	59	40.00	\$4,356.80	\$0.00	\$4,356.80	260									
	DM Verificational Plan Document for CoDR	02-Jun-16 A	03-Jun-16 A	100%	55	112.00	\$18,929.12	\$0.00	\$18,929.12										
	LSST the Docs Production Deployment	06-Apr-16 A	28-Apr-16 A	100%	22	64.00	\$4,723.84	\$0.00	\$4,723.84										
	generation of conda binary packages for DM softwar	01-Jun-16 A	02-Jun-16 A	100%	43	128.00	\$9,447.68	\$0.00	\$9,447.68										
	Ci Deploy and Distribution Improvements part IV	29-Mar-16 A	31-May-16 A	100%	22	32.00	\$2,361.92	\$0.00	\$2,361.92										
	Release engineering Part Three	16-Feb-16 A	12-Jul-16 A	100%	43	90.00	\$9,899.86	\$0.00	\$9,899.86										
	Integration and test monitoring implementation Part I	13-Apr-16 A	01-Jun-16 A	100%	12	64.00	\$4,723.84	\$0.00	\$4,723.84										
	Verification via precursor datasets	02-Jun-16 A	19-Jan-17 A	100%	55	104.00	\$17,577.04	\$0.00	\$17,577.04										
	QA Tasks & Supertasks	21-Mar-16 A	23-Mar-16 A	100%	33	88.00	\$9,614.48	\$0.00	\$9,614.48										
	QA Tasks & Supertasks II	29-Mar-16 A	28-Feb-19 A	100%	65	40.00	\$5,180.40	\$0.00	\$5,180.40										
	SQuaRE documentation & design documents	23-Mar-16 A	02-Jun-16 A	100%	55	100.00	\$8,846.80	\$0.00	\$8,846.80										
	ci_lauren service / SQuaSH MVP	13-Apr-16 A	02-Jun-16 A	100%	55	456.00	\$36,776.56	\$0.00	\$36,776.56										
	SQuaRE ad-hoc developer requests	05-Apr-16 A	07-Jun-16 A	100%	22	108.00	\$8,264.64	\$0.00	\$8,264.64										
	LSST the Docs Production Fall 2016	03-May-16 A	23-Feb-17 A	100%	43	96.00	\$7,085.76	\$0.00	\$7,085.76										
	SQuaSH capability extension: multiple testdata serv	29-Jul-16 A	23-Dec-16 A	100%	65	368.00	\$33,254.88	\$0.00	\$33,254.88										
	sqre-f16-docs-ad-hoc-1	01-Apr-16 A	09-Sep-16 A	100%	65	48.00	\$3,542.88	\$0.00	\$3,542.88										
	Stack API documentation	23-Dec-16 A	19-Jan-17 A	100%	42	64.00	\$4,723.84	\$0.00	\$4,723.84										
	sqre-f16-dm-1	27-May-16 A	01-Sep-16 A	100%	65	140.00	\$16,604.12	\$0.00	\$16,604.12										
	sqre-f16-releng-1	05-Aug-16 A	30-Nov-16 A	100%	22	64.00	\$8,552.00	\$0.00	\$8,552.00										
	sqre-f16-qserv	21-Nov-16 A	30-Nov-16 A	100%	42	96.00	\$7,085.76	\$0.00	\$7,085.76										
	sqre-f16-arch	20-Jun-16 A	25-Jul-16 A	100%	44	16.00	\$1,180.96	\$0.00	\$1,180.96										
	sqre-f16-jenkins	06-Jun-16 A	01-Aug-16 A	100%	43	32.00	\$2,361.92	\$0.00	\$2,361.92										
	CI/Build/Deploy improvements for Sims	06-Mar-17 A	13-Mar-17 A	100%	42	16.00	\$1,180.96	\$0.00	\$1,180.96										
	sqre-f16-backups	22-Nov-16 A	30-Nov-16 A	100%	43	32.00	\$2,361.92	\$0.00	\$2,361.92										
	sqre-f16-ci-adhoc	05-Aug-16 A	01-Sep-16 A	100%	65	32.00	\$2,361.92	\$0.00	\$2,361.92										
	sqre-f16-osx	31-Jul-16 A	01-Sep-16 A	100%	22	64.00	\$10,816.64	\$0.00	\$10,816.64										
	Gitlfs maintenance - protocol upgrade etc	07-Jul-16 A	16-Feb-17 A	100%	22	32.00	\$5,408.32	\$0.00	\$5,408.32										
	sqre-f16-slack	08-Feb-17 A	08-Feb-17 A	100%	43	32.00	\$5,408.32	\$0.00	\$5,408.32										
	sqre-f16-conda	14-Jun-16 A	30-Nov-16 A	100%	43	64.00	\$10,816.64	\$0.00	\$10,816.64										
	sqre-f16-logging	30-Nov-16 A	30-Nov-16 A	100%	22	32.00	\$5,408.32	\$0.00	\$5,408.32										
	sqre-f16-verification	01-Sep-16 A	14-Sep-16 A	100%	65	64.00	\$7,770.24	\$0.00	\$7,770.24										
	CI Improvements: Jenkins updates	07-Sep-16 A	30-Nov-16 A	100%	62	60.00	\$4,530.54	\$0.00	\$4,530.54										
	Ad-hoc Docs & Comms requests Part II	02-Sep-16 A	30-Nov-16 A	100%	62	60.00	\$4,530.54	\$0.00	\$4,530.54										
	Ad-hoc developer requests Part II	20-Sep-16 A	20-Sep-16 A	100%	62	32.00	\$2,416.29	\$0.00	\$2,416.29										
	validate_base framework for metric measurements	26-Sep-16 A	30-Nov-16 A	100%	43	60.00	\$4,507.80	\$0.00	\$4,507.80										
	Documentation Working Group	09-Sep-16 A	04-Nov-16 A	100%	62	84.00	\$6,342.76	\$0.00	\$6,342.76										
	DocHub Planning	30-Nov-16 A	30-Nov-16 A	100%	43	28.00	\$2,103.64	\$0.00	\$2,103.64										
	Release Engineering and Automation	30-Sep-16 A	23-Mar-17 A	100%	43	92.00	\$7,508.84	\$0.00	\$7,508.84										
	Chatops for Slack	12-Oct-16 A	22-Nov-16 A	100%	20	8.00	\$590.48	\$0.00	\$590.48										
	Liveness and uptime monitoring	18-Nov-16 A	30-Nov-16 A	100%	43	7.50	\$563.48	\$0.00	\$563.48										
	Pytest and Flake8 integration with CI and scon	06-Apr-17 A	31-May-17 A	100%	62	60.00	\$4,530.54	\$0.00	\$4,530.54										
	logging.lsst.codes improvements 2	03-Dec-16 A	15-Mar-17 A	100%	19	60.00	\$4,583.40	\$0.00	\$4,583.40										
	SQuaSH ad-hoc usability improvements	06-Feb-17 A	06-Feb-17 A	100%	62	87.66	\$8,436.00	\$0.00	\$8,436.00										
	Ad-hoc developer requests	05-Dec-16 A	21-Mar-17 A	100%	19	120.00	\$12,122.70	\$0.00	\$12,122.70										
	Architectural Design document of the QC system	30-Jun-17 A	30-Jun-17 A	100%	43	120.00	\$9,166.80	\$0.00	\$9,166.80										
	Documentation Engineering - API/DocHub/LTD/Dep	20-Jan-17 A	21-Mar-17 A	100%	40	120.00	\$9,166.80	\$0.00	\$9,166.80										
	DM Management/Community support ad-hoc reques	12-Dec-16 A	20-Jan-17 A	100%	43	30.00	\$2,291.70	\$0.00	\$2,291.70										
	SQuaSH in-task metric capture	16-Feb-17 A	31-May-17 A	100%	40	270.00	\$20,625.30	\$0.00	\$20,625.30										
	SQuaSH toolchain update	24-Dec-16 A	07-Mar-17 A	100%	21	60.00	\$7,539.30	\$0.00	\$7,539.30										
	Binary production and developer workflow	11-Jan-17 A	05-May-17 A	100%	43	60.00	\$4,583.40	\$0.00	\$4,583.40										
	Maintainance documentation for SQuaSH and Jenki	31-Jan-17 A	29-Jul-19	3.23%	40	60.00	\$4,583.40	\$0.00	\$4,583.40	323									
	CI usability improvements	16-Dec-16 A	09-Feb-17 A	100%	62	30.00	\$2,291.70	\$0.00	\$2,291.70										
	Release engineering	17-May-16 A	06-Apr-17 A	100%	62	142.00	\$17,488.34	\$0.00	\$17,488.34										
	Extend OSX build capacity	27-Jan-17 A	09-Feb-17 A	100%	21	30.00	\$5,247.60	\$0.00	\$5,247.60										
	Log shipper for metric capture	01-Mar-17 A	29-Mar-19 A	100%	40	90.00	\$15,742.80	\$0.00	\$15,742.80										
	Nebula-based services	10-Feb-17 A	12-Apr-17 A	100%	40	60.00	\$7,539.30	\$0.00	\$7,539.30										
	Extend ChatOps services	20-Dec-16 A	15-Feb-17 A	100%	43	30.00	\$2,291.70	\$0.00	\$2,291.70										
	Investigate extending monitoring to QC metric values	12-Jan-17 A	15-Feb-17 A	100%	62	60.00	\$4,583.40	\$0.00	\$4,583.40										
	API service infrastructure	27-Feb-17 A	20-Mar-17 A	100%	65	120.00	\$9,166.80	\$0.00	\$9,166.80										
	SQuaSH code stability and performance improveme	08-Mar-17 A	31-May-17 A	100%	65	60.00	\$4,583.40	\$0.00	\$4,583.40										
	Supertask Working Group	27-Mar-17 A	30-May-17 A	100%	65	92.00	\$7,027.88	\$0.00	\$7,027.88										
	Support of production-deployed services	24-Mar-17 A	27-Apr-17 A	100%	65	120.00	\$12,201.60	\$0.00	\$12,201.60										
	Jupyterlab-based stack environment prototype	06-Apr-17 A	27-Apr-17 A	100%	65	120.00	\$9,166.80	\$0.00	\$9,166.80										
	Project internal Jupyter notebook service		01-Nov-17 A	100%	0	0.00	\$0.00	\$0.00	\$0.00										
	Notebook service capabilities are suitable for the con		04-Nov-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	210									
	Notebook service stable for commissioning and other		04-Nov-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	254									
	Notebook service ready for verification & validation		10-Feb-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	328									
	Notebook service ready for general science users		07-Aug-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	546									
	Vacation and Sick leave balance	01-Jun-17 A	30-Jun-17 A	100%	10	285.04	\$21,773.95	\$0.00	\$21,773.95										
	SquaRE Engineering, Science, and Integration Addit	01-Jun-17 A	31-Aug-17 A	100%	65	450.00	\$34,375.50	\$0.00	\$34,375.50										
	SQuaRE support contract	01-Jun-18 A	31-Jul-18 A	100%	65	403.66	\$56,000.00	\$0.00	\$56,000.00										

## LSST May 2019 Month End Forecast

Activity Name	Start	Finish	Physical % Complete	Original Duration	Budgeted Labor Units	Budgeted Labor Cost	Budgeted Material Cost	Budgeted Total Cost no	Total Float	FY2015 2014-10-01	FY2016 2015-10-01	FY2017 2016-10-01	FY2018 2017-10-01	FY2019 2018-10-01	FY2020 2019-10-01	FY2021 2020-10-01	FY2022 2021-10-01	
Documentation Tooling - User Guides & Tutorials	SQ-DO-C	Documentation Tooling - User Guides & Tutorials	03-Jun-19	31-May-22	0%	761	3947.23	\$520,000.00	\$0.00	\$520,000.00	86							
	SQ-DO-F	Bug Tracking, Helpdesk & Community Management	02-Dec-19	31-May-22	0%	635	2925.00	\$407,325.40	\$0.00	\$407,325.40	86							
	SQ-DO-F	Release Engineering - Release Management and Di	03-Jun-19	30-Nov-21	0%	633	1194.34	\$136,548.26	\$0.00	\$136,548.26	86							
	SQ-DO-F	Release Engineering - Build System	03-Jun-19	27-Nov-19	0%	126	117.98	\$13,000.00	\$0.00	\$13,000.00	67							
	SQ-DO-E	Developer Services	03-Jun-19	30-Nov-21	0%	632	1836.92	\$210,000.00	\$0.00	\$210,000.00	87							
	SQ-DO-Z	Bugfixing and Maintainance for deployed DO compor	03-Jun-19	31-May-22	0%	761	849.14	\$98,000.00	\$0.00	\$98,000.00	86							
	SQ-DS-J-3	JupyterLab 1.0 - ComCam Deployment	03-Jun-19	05-Aug-19	0%	45	2200.00	\$262,426.96	\$0.00	\$262,426.96	318							
	SQ-DS-J-4	JupyterLab 2.0 - Science Validation Priorities	06-Aug-19	10-Feb-20	0%	128	1260.00	\$153,361.20	\$0.00	\$153,361.20	328							
	SQ-DS-J-5	JupyterLab 3.0 - General science user Priorities	11-Feb-20	07-Aug-20	0%	128	1260.00	\$154,956.60	\$0.00	\$154,956.60	546							
	SQ-DS-N	Notebook software environments	01-Jun-20	30-Nov-20	0%	128	225.00	\$25,648.93	\$0.00	\$25,648.93	86							
	SQ-DS-P-1	Improvements to QC Portals	01-Jun-20	30-Nov-21	0%	382	1620.00	\$208,249.63	\$0.00	\$208,249.63	86							
	SQ-DS-R	Configuration management and containers for JL de	01-Dec-20	30-Nov-21	0%	254	900.00	\$105,604.72	\$0.00	\$105,604.72	86							
	SQ-DS-X-1	Notebook execution interface	03-Jun-19	26-Nov-19	0%	125	22.69	\$2,500.00	\$0.00	\$2,500.00	68							
	SQ-DS-Z	Bugfixing and Maintainance for deployed JL compone	02-Dec-19	31-May-22	0%	635	900.00	\$104,802.41	\$0.00	\$104,802.41	86							
	SQ-QC-A	Harness to perform QA tests one the alert stream	03-Jun-19	26-Nov-19	0%	125	653.00	\$75,757.23	\$0.00	\$75,757.23	68							
	SQ-QC-E	QC Harness Component Integration	03-Jun-19	27-Nov-19	0%	126	900.00	\$99,171.00	\$0.00	\$99,171.00	67							
	SQ-QC-E	QC Support & Maintainance	02-Dec-19	30-Nov-21	0%	507	720.00	\$83,057.95	\$0.00	\$83,057.95	86							
	SQ-QC-Z	Bugfixing and Maintainance for deployed QC compor	02-Dec-19	30-Nov-21	0%	507	1008.00	\$126,855.99	\$0.00	\$126,855.99	86							
	LSST ME 19-05.03C Camera Construction				08-Dec-17 A	30-Dec-20		1625	0.00	\$0.00	\$0.00	\$0.00	704					
	LSST ME 19-05.03C.00 Camera Level 2 Milestones				08-Dec-17 A	30-Dec-20		1625	0.00	\$0.00	\$0.00	\$0.00	\$0.00	704				
CAMM8010	ComCam MIE hardware Ready to Ship to Tucson		30-May-19 A	30-May-19 A	100%	0	0.00	\$0.00	\$0.00	\$0.00								
CAMM8010-	ComCam MIE hardware Ready to Ship to Tucson-S		30-May-19 A	30-May-19 A	100%	13	0.00	\$0.00	\$0.00	\$0.00								
CAMM8020	ComCam DAQ/CCS Ready to ship to Tucson		30-May-19 A	30-May-19 A	100%	0	0.00	\$0.00	\$0.00	\$0.00								
CAMM8020-	ComCam DAQ/CCS Ready to ship to Tucson-Status		30-May-19 A	30-May-19 A	100%	13	0.00	\$0.00	\$0.00	\$0.00								
CAMM8040	COMP: DAQ V4		03-Jun-19	03-Jun-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	319							
CAMM8040-	COMP: DAQ V4-Status		03-Jun-19	03-Jun-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	319							
CAMM8050	COMP: GDS Available for Tucson		03-Jun-19	02-Dec-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	236							
CAMM8050-	COMP: GDS Available for Tucson-Status		03-Jun-19	02-Dec-19	0%	127	0.00	\$0.00	\$0.00	\$0.00	236							
CAMM8060	COMP: WDS Available for Tucson		28-Feb-18 A	28-Feb-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00								
CAMM8060-	COMP: WDS Available for Tucson-Status		28-Feb-18 A	28-Feb-18 A	100%	905	0.00	\$0.00	\$0.00	\$0.00								
CAMM8070	COMP: SDS Available for Tucson		28-Feb-18 A	28-Feb-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00								
CAMM8070-	COMP: SDS Available for Tucson-Status		28-Feb-18 A	28-Feb-18 A	100%	905	0.00	\$0.00	\$0.00	\$0.00								
CAMM8080	COMP: Final Camera Verification Testing Starting at		30-Sep-20	30-Sep-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	-3							
CAMM8080-	COMP: Final Camera Verification Testing Starting at		30-Sep-20	30-Sep-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	-3							
CAMM8090	COMP: Camera Pre-Ship Review at SLAC		16-Dec-20	16-Dec-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	-3							
CAMM8090-	COMP: Camera Pre-Ship Review at SLAC-Status		07-Dec-20	16-Dec-20	0%	8	0.00	\$0.00	\$0.00	\$0.00	-3							
CAMM8100	COMP: Camera Verification documentation package		04-Dec-20	04-Dec-20	0%	0	653.00	\$0.00	\$0.00	\$0.00	-3							
CAMM8100-	COMP: Camera Verification documentation package		30-Sep-20	04-Dec-20	0%	46	0.00	\$0.00	\$0.00	\$0.00	-3							
CAMM8110	COMP: Camera Ready to Ship (Camera ready to pr		23-Nov-20	23-Nov-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	4							
CAMM8110-	COMP: Camera Ready to Ship (Camera ready to pr		30-Sep-20	23-Nov-20	0%	39	0.00	\$0.00	\$0.00	\$0.00	4							
CAMM8120	COMP: Camera Maintenance Refrigeration Cabinet		04-Dec-20	04-Dec-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	-3							
CAMM8120-	COMP: Camera Maintenance Refrigeration Cabinet		30-Sep-20	04-Dec-20	0%	46	0.00	\$0.00	\$0.00	\$0.00	-3							
CAMM8130	COMP: Camera Telescope Refrigeration Cabinets F		30-Apr-19 A	30-Apr-19 A	100%	0	0.00	\$0.00	\$0.00	\$0.00								
CAMM8130-	COMP: Camera Telescope Refrigeration Cabinets F		30-Apr-19 A	30-Apr-19 A	100%	54	0.00	\$0.00	\$0.00	\$0.00								
CAMM8140	COMP: Camera Refrigerant Ready for Shipment to		03-Jan-20	03-Jan-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	215							
CAMM8140-	COMP: Camera Refrigerant Ready for Shipment to		03-Jun-19	03-Jan-20	0%	148	0.00	\$0.00	\$0.00	\$0.00	215							
CAMM8150	COMP: Chile servicing equipment ready for shipmen		31-Jan-19 A	31-Jan-19 A	100%	0	0.00	\$0.00	\$0.00	\$0.00								
CAMM8150-	COMP: Chile servicing equipment ready for shipmen		31-Jan-19 A	31-Jan-19 A	100%	1251	0.00	\$0.00	\$0.00	\$0.00								
CAMM8160	COMP: BOT ready for shipment to Chile		17-Aug-20	17-Aug-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	54							
CAMM8160-	COMP: BOT ready for shipment to Chile-Status		17-Aug-20	17-Aug-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	54							
CAMM8170	COMP: Camera Integration stand ready for summit		16-Dec-20	16-Dec-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	8							
CAMM8170-	COMP: Camera Integration stand ready for summit-		30-Sep-20	16-Dec-20	0%	54	0.00	\$0.00	\$0.00	\$0.00	8							
CAMM8180	COMP: RTM9 Accepted		15-Oct-18 A	15-Oct-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00								
CAMM8180-	COMP: RTM9 Accepted-Status		15-Oct-18 A	15-Oct-18 A	100%	10	0.00	\$0.00	\$0.00	\$0.00								
CAMM8190	COMP: RTM9 Integrated and Tested		10-Oct-19	10-Oct-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	939							
CAMM8190-	COMP: RTM9 Integrated and Tested-Status		03-Jun-19	10-Oct-19	0%	92	0.00	\$0.00	\$0.00	\$0.00	939							
CAMM8200	COMP: RTM21 Accepted		19-Sep-19	19-Sep-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	954							
CAMM8200-	COMP: RTM21 Accepted-Status		03-Jun-19	19-Sep-19	0%	77	0.00	\$0.00	\$0.00	\$0.00	954							
CAMM8210	COMP: CRTM4 Accepted		21-Jun-19	21-Jun-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	162							
CAMM8220	COMP: RTM21 and CRTM 4 Integrated and Tested		29-Jan-20	29-Jan-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	939							
CAMM8220-	COMP: RTM21 and CRTM 4 Integrated and Tested		11-Oct-19	29-Jan-20	0%	73	0.00	\$0.00	\$0.00	\$0.00	939							
CAMM8225	COMP: L1-L2 acceptance Review		10-Oct-19	10-Oct-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	202							
CAMM8225-	COMP: L1-L2 acceptance Review-Status		10-Oct-19	10-Oct-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	202							
CAMM8230	COMP: L3 Acceptance Review		10-Oct-19	10-Oct-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	202							
CAMM8230-	COMP: L3 Acceptance Review-Status		10-Oct-19	10-Oct-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	202							
CAMM8240	COMP: r-band acceptance Review		17-Jan-20	17-Jan-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	202							
CAMM8240-	COMP: r-band acceptance Review-Status		10-Oct-19	17-Jan-20	0%	67	0.00	\$0.00	\$0.00	\$0.00	202							
CAMM8250	COMP: CCS available to commissioning team for Au		01-Aug-18 A	01-Aug-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00								
CAMM8250-	COMP: CCS available to commissioning team for Au		02-Jan-18 A	01-Aug-18 A	100%	149	0.00	\$0.00	\$0.00	\$0.00								
CAMM8255	COMP: CCS available to commissioning team for Cc		23-Aug-19	23-Aug-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	185							
CAMM8255-	COMP: CCS available to commissioning team for Cc		03-Jun-19	23-Aug-19	0%	59	0.00	\$0.00	\$0.00	\$0.00	185							
CAMM8260	COMP: CCS available to commissioning team for ful		15-Jan-20	15-Jan-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	185							

LSST May 2019 Month End Forecast																			
Activity ID	Activity Name		Start	Finish	Physical % Complete	Original Duration	Budgeted Labor Units	Budgeted Labor Cost	Budgeted Material Cost	Budgeted Total Cost no	Total Float	FY2015 2014-10-01	FY2016 2015-10-01	FY2017 2016-10-01	FY2018 2017-10-01	FY2019 2018-10-01	FY2020 2019-10-01	FY2021 2020-10-01	FY2022 2021-10-01
C	CAMM8260-	COMP: CCS available to commissioning team for full camera	14-Oct-19	15-Jan-20	0%	63	0.00	\$0.00	\$0.00	\$0.00	185								
	CAMM8270	COMP: CCS installation on summit for Camera		11-Oct-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	185								
	CAMM8270-	COMP: CCS installation on summit for Camera-Status	26-Aug-19	11-Oct-19	0%	34	0.00	\$0.00	\$0.00	\$0.00	185								
	CAMM8280	COMP: CCS installed for DAQ teststand at NCSA		01-Aug-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00									
	CAMM8280-	COMP: CCS installed for DAQ teststand at NCSA-S	02-Jan-18 A	01-Aug-18 A	100%	149	0.00	\$0.00	\$0.00	\$0.00									
	CAMM8290	COMP: DAQ support for TCS at Tucson		28-Feb-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00									
	CAMM8290-	COMP: DAQ support for TCS at Tucson-Status	28-Feb-18 A	28-Feb-18 A	100%	40	0.00	\$0.00	\$0.00	\$0.00									
	CAMM8300	COMP: Full production grade ADAQ system for DM		03-Jun-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	319								
	CAMM8300-	COMP: Full production grade ADAQ system for DM	03-Jun-19	03-Jun-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	319								
	CAMM8310	COMP: ADAQ support for AuxTel at Tucson		30-Mar-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00									
	CAMM8310-	COMP: ADAQ support for AuxTel at Tucson-Status	30-Mar-18 A	30-Mar-18 A	100%	62	0.00	\$0.00	\$0.00	\$0.00									
	CAMM8320	COMP: AuxTel ADAQ installation at summit		01-Aug-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00									
	CAMM8320-	COMP: AuxTel ADAQ installation at summit-Status	02-Apr-18 A	01-Aug-18 A	100%	87	0.00	\$0.00	\$0.00	\$0.00									
	CAMM8330	COMP: Networking on summit ready for Camera software		26-Nov-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	979								
	CAMM8340	COMP: Networking on summit ready for Camera software		02-Dec-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	195								
	CAMM8350	COMP: Networking on summit ready for Camera software		30-Dec-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	318								
	CAMM8360	COMP: Crosstalk correction API definition from DM		02-Sep-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	786								
	CAMM8360-	COMP: Crosstalk correction API definition from DM-Status	02-Sep-20	02-Sep-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	786								
	CAMM8370	AVAIL: Comm Cam Shutter from LSST		08-Dec-17 A	100%	0	0.00	\$0.00	\$0.00	\$0.00									
	CAMM8370-	AVAIL: Comm Cam Shutter from LSST-Status	08-Dec-17 A	08-Dec-17 A	100%	45	0.00	\$0.00	\$0.00	\$0.00									
	CAMM9010	COMP: ComCam Dewar		30-May-19 A	100%	0	0.00	\$0.00	\$0.00	\$0.00									
	CAMM9010-	COMP: ComCam Dewar-Status	30-May-19 A	30-May-19 A	100%	13	0.00	\$0.00	\$0.00	\$0.00									
	CAMM9020	COMP: RTM1 acceptance package available in eTraveler		12-Jan-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00									
	CAMM9020-	COMP: RTM1 acceptance package available in eTraveler-Status	12-Jan-18 A	12-Jan-18 A	100%	874	0.00	\$0.00	\$0.00	\$0.00									
	CAMM9030	COMP: RTM2 acceptance package available in eTraveler		08-Mar-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00									
	CAMM9030-	COMP: RTM2 acceptance package available in eTraveler-Status	08-Mar-18 A	08-Mar-18 A	100%	37	0.00	\$0.00	\$0.00	\$0.00									
	CAMM9040	COMP: RTM3 acceptance package available in eTraveler		18-Apr-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00									
	CAMM9040-	COMP: RTM3 acceptance package available in eTraveler-Status	18-Apr-18 A	18-Apr-18 A	100%	29	0.00	\$0.00	\$0.00	\$0.00									
	CAMM9050	COMP: RTM4 acceptance package available in eTraveler		07-May-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00									
	CAMM9050-	COMP: RTM4 acceptance package available in eTraveler-Status	07-May-18 A	07-May-18 A	100%	13	0.00	\$0.00	\$0.00	\$0.00									
	CAMM9060	COMP: RTM5 acceptance package available in eTraveler		21-Jun-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00									
	CAMM9060-	COMP: RTM5 acceptance package available in eTraveler-Status	21-Jun-18 A	21-Jun-18 A	100%	33	0.00	\$0.00	\$0.00	\$0.00									
	CAMM9070	COMP: RTM6 acceptance package available in eTraveler		10-Jul-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00									
	CAMM9070-	COMP: RTM6 acceptance package available in eTraveler-Status	10-Jul-18 A	10-Jul-18 A	100%	12	0.00	\$0.00	\$0.00	\$0.00									
	CAMM9080	COMP: RTM7 acceptance package available in eTraveler		06-Aug-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00									
	CAMM9080-	COMP: RTM7 acceptance package available in eTraveler-Status	06-Aug-18 A	06-Aug-18 A	100%	19	0.00	\$0.00	\$0.00	\$0.00									
	CAMM9090	COMP: RTM8 acceptance package available in eTraveler		07-Sep-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00									
	CAMM9090-	COMP: RTM8 acceptance package available in eTraveler-Status	07-Sep-18 A	07-Sep-18 A	100%	19	0.00	\$0.00	\$0.00	\$0.00									
	CAMM9100	COMP: RTM9 acceptance package available in eTraveler		15-Oct-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00									
	CAMM9100-	COMP: RTM9 acceptance package available in eTraveler-Status	15-Oct-18 A	15-Oct-18 A	100%	10	0.00	\$0.00	\$0.00	\$0.00									
	CAMM9110	COMP: RTM10 acceptance package available in eTraveler		31-Oct-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00									
	CAMM9110-	COMP: RTM10 acceptance package available in eTraveler-Status	31-Oct-18 A	31-Oct-18 A	100%	44	0.00	\$0.00	\$0.00	\$0.00									
	CAMM9120	COMP: RTM11 acceptance package available in eTraveler		06-May-19 A	100%	0	0.00	\$0.00	\$0.00	\$0.00									
	CAMM9120-	COMP: RTM11 acceptance package available in eTraveler-Status	06-May-19 A	06-May-19 A	100%	0	0.00	\$0.00	\$0.00	\$0.00									
	CAMM9130	COMP: RTM12 acceptance package available in eTraveler		13-Sep-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	252								
	CAMM9130-	COMP: RTM12 acceptance package available in eTraveler-Status	03-Jun-19	05-Sep-19	0%	67	0.00	\$0.00	\$0.00	\$0.00	257								
	CAMM9140	COMP: RTM13 acceptance package available in eTraveler		26-Sep-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	252								
	CAMM9140-	COMP: RTM13 acceptance package available in eTraveler-Status	13-Sep-19	26-Sep-19	0%	10	0.00	\$0.00	\$0.00	\$0.00	252								
	CAMM9150	COMP: RTM14 acceptance package available in eTraveler		11-Oct-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	242								
	CAMM9150-	COMP: RTM14 acceptance package available in eTraveler-Status	27-Sep-19	27-Sep-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	252								
	CAMM9160	COMP: RTM15 acceptance package available in eTraveler		18-Oct-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	237								
	CAMM9160-	COMP: RTM15 acceptance package available in eTraveler-Status	11-Oct-19	11-Oct-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	242								
	CAMM9170	COMP: RTM16 acceptance package available in eTraveler		18-Oct-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	237								
	CAMM9170-	COMP: RTM16 acceptance package available in eTraveler-Status	18-Oct-19	18-Oct-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	237								
	CAMM9180	COMP: RTM17 acceptance package available in eTraveler		16-Apr-19 A	100%	0	0.00	\$0.00	\$0.00	\$0.00									
	CAMM9180-	COMP: RTM17 acceptance package available in eTraveler-Status	16-Apr-19 A	16-Apr-19 A	100%	13	0.00	\$0.00	\$0.00	\$0.00									
	CAMM9190	COMP: RTM18 acceptance package available in eTraveler		17-Oct-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	237								
	CAMM9190-	COMP: RTM18 acceptance package available in eTraveler-Status	03-Jun-19	17-Oct-19	0%	97	0.00	\$0.00	\$0.00	\$0.00	237								
	CAMM9200	COMP: RTM19 acceptance package available in eTraveler		18-Oct-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	237								
	CAMM9200-	COMP: RTM19 acceptance package available in eTraveler-Status	18-Oct-19	18-Oct-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	237								
	CAMM9210	COMP: RTM20 acceptance package available in eTraveler		05-Apr-19 A	100%	0	0.00	\$0.00	\$0.00	\$0.00									
	CAMM9210-	COMP: RTM20 acceptance package available in eTraveler-Status	05-Apr-19 A	05-Apr-19 A	100%	12	0.00	\$0.00	\$0.00	\$0.00									
	CAMM9220	COMP: RTM21 acceptance package available in eTraveler		19-Sep-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	954								
	CAMM9220-	COMP: RTM21 acceptance package available in eTraveler-Status	03-Jun-19	19-Sep-19	0%	77	0.00	\$0.00	\$0.00	\$0.00	954								
	CAMM9230	COMP: RTM22 acceptance package available in eTraveler		19-Sep-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	954								
	CAMM9230-	COMP: RTM22 acceptance package available in eTraveler-Status	03-Jun-19	19-Sep-19	0%	77	0.00	\$0.00	\$0.00	\$0.00	954								
	CAMM9240	COMP: CRTM1 acceptance package available in eTraveler		29-Apr-19 A	100%	0	0.00	\$0.00	\$0.00	\$0.00									
	CAMM9240-	COMP: CRTM1 acceptance package available in eTraveler-Status	29-Apr-19 A	29-Apr-19 A	100%	27	0.00	\$0.00	\$0.00	\$0.00									
	CAMM9250	COMP: CRTM2 acceptance package available in eTraveler		13-Jun-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	162								
	CAMM9250-	COMP: CRTM2 acceptance package available in eTraveler-Status	03-Jun-19	13-Jun-19	0%	9	0.00	\$0.00	\$0.00	\$0.00	162								
	CAMM9260	COMP: CRTM3 acceptance package available in eTraveler		20-Jun-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	162								
	CAMM9260-	COMP: CRTM3 acceptance package available in eTraveler-Status	14-Jun-19	20-Jun-19	0%	5	0.00	\$0.00	\$0.00	\$0.00	162								



LSST May 2019 Month End Forecast																					
Activity ID	Activity Name	Start	Finish	Physical % Complete	Original Duration	Budgeted Labor Units	Budgeted Labor Cost	Budgeted Material Cost	Budgeted Total Cost no	Total Float		FY2015 2014-10-01	FY2016 2015-10-01	FY2017 2016-10-01	FY2018 2017-10-01	FY2019 2018-10-01	FY2020 2019-10-01	FY2021 2020-10-01	FY2022 2021-10-01		
C	CAMM9270	COMP: CRTM4 acceptance package available in eT		21-Jun-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	162					◆	◆	COMP: CRTM4 acceptance package available in eTraveler			
	CAMM9270-	COMP: CRTM4 acceptance package available in eT	21-Jun-19	21-Jun-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	162					◆	◆	COMP: CRTM4 acceptance package available in eTraveler-Status			
	CAMM9280	COMP: CRTM5 acceptance package available in eT		30-Sep-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	162					◆	◆	COMP: CRTM5 acceptance package available in eTraveler			
	CAMM9280-	COMP: CRTM5 acceptance package available in eT	21-Jun-19	30-Sep-19	0%	70	0.00	\$0.00	\$0.00	\$0.00	162					◆	◆	COMP: CRTM5 acceptance package available in eTraveler-Status			
	CAMM9290	COMP: L1-L2 Test Readiness Review		10-Oct-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	202					◆	◆	COMP: L1-L2 Test Readiness Review			
	CAMM9290-	COMP: L1-L2 Test Readiness Review- Status	10-Oct-19	10-Oct-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	202					◆	◆	COMP: L1-L2 Test Readiness Review-Status			
	CAMM9300	COMP: L1-L2 Start of verification		10-Oct-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	202					◆	◆	COMP: L1-L2 Start of verification			
	CAMM9300-	COMP: L1-L2 Start of verification-Status	10-Oct-19	10-Oct-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	202					◆	◆	COMP: L1-L2 Start of verification-Status			
	CAMM9310	COMP: L3 Start of verification		10-Oct-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	202					◆	◆	COMP: L3 Start of verification			
	CAMM9310-	COMP: L3 Start of verification-Status	10-Oct-19	10-Oct-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	202					◆	◆	COMP: L3 Start of verification-Status			
	CAMM9320	COMP: r-band filter coating data available		10-Oct-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	187					◆	◆	COMP: r-band filter coating data available			
	CAMM9320-	COMP: r-band filter coating data available-Status	10-Oct-19	10-Oct-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	187					◆	◆	COMP: r-band filter coating data available-Status			
	CAMM9330	COMP: r-band filter post-coat unmounted optical per		10-Oct-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	187					◆	◆	COMP: r-band filter post:coat unmounted optical performance data available			
	CAMM9330-	COMP: r-band filter post-coat unmounted optical per	10-Oct-19	10-Oct-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	187					◆	◆	COMP: r-band filter post:coat unmounted optical performance data available-Stat			
	CAMM9340	COMP: Camera Body and Purge Start of verification		10-Oct-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	202					◆	◆	COMP: Camera Body and Purge Start of verification			
	CAMM9350	COMP: Camera Body and Purge acceptance packa		10-Oct-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	940					◆	◆	COMP: Camera Body and Purge acceptance package available in eTraveler			
	CAMM9350-	COMP: Camera Body and Purge acceptance packa	10-Oct-19	10-Oct-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	940					◆	◆	COMP: Camera Body and Purge acceptance package available in eTraveler-Status			
	CAMM9360	COMP: Shutter Start of verification		28-Aug-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	39					◆	◆	COMP: Shutter Start of verification			
	CAMM9360-	COMP: Shutter Start of verification-Status	03-Jun-19	28-Aug-19	0%	62	0.00	\$0.00	\$0.00	\$0.00	39					◆	◆	COMP: Shutter Start of verification-Status			
	CAMM9370	COMP: Shutter acceptance package available in eTr		01-Oct-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	39					◆	◆	COMP: Shutter acceptance package available in eTraveler			
	CAMM9370-	COMP: Shutter acceptance package available in eTr	29-Aug-19	01-Oct-19	0%	23	0.00	\$0.00	\$0.00	\$0.00	39					◆	◆	COMP: Shutter acceptance package available in eTraveler-Status			
	CAMM9380	COMP: Auto-Changer Start of verification		12-Apr-19 A	100%	0	0.00	\$0.00	\$0.00	\$0.00					◆	◆	COMP: Auto-Changer Start of verification				
	CAMM9380-	COMP: Auto-Changer Start of verification-Status	12-Apr-19 A	12-Apr-19 A	100%	1108	0.00	\$0.00	\$0.00	\$0.00					◆	◆	COMP: Auto-Changer Start of verification-Status				
	CAMM9390	COMP: Auto-Changer acceptance package availabl		09-Oct-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	-19					◆	◆	COMP: Auto-Changer acceptance package available in eTraveler			
	CAMM9390-	COMP: Auto-Changer acceptance package availabl	03-Jun-19	09-Oct-19	0%	91	0.00	\$0.00	\$0.00	\$0.00	-19					◆	◆	COMP: Auto-Changer acceptance package available in eTraveler-Status			
	CAMM9400	COMP: Filter Loader Start of verification		12-Apr-19 A	100%	0	0.00	\$0.00	\$0.00	\$0.00					◆	◆	COMP: Filter Loader Start of verification				
	CAMM9400-	COMP: Filter Loader Start of verification-Status	12-Apr-19 A	12-Apr-19 A	100%	36	0.00	\$0.00	\$0.00	\$0.00					◆	◆	COMP: Filter Loader Start of verification-Status				
	CAMM9410	COMP: Filter Loader acceptance package available		09-Oct-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	29					◆	◆	COMP: Filter Loader acceptance package available in eTraveler			
	CAMM9410-	COMP: Filter Loader acceptance package available	23-Aug-19	09-Oct-19	0%	33	0.00	\$0.00	\$0.00	\$0.00	29					◆	◆	COMP: Filter Loader acceptance package available in eTraveler-Status			
	CAMM9420	COMP: Full Filter Exchange Start of verification		28-Jun-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	67					◆	◆	COMP: Full Filter Exchange Start of verification			
	CAMM9420-	COMP: Full Filter Exchange Start of verification-Stat	03-Jun-19	28-Jun-19	0%	20	0.00	\$0.00	\$0.00	\$0.00	67					◆	◆	COMP: Full Filter Exchange Start of verification-Status			
	CAMM9430	COMP: Full Filter Exchange acceptance package av		22-Aug-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	29					◆	◆	COMP: Full Filter Exchange acceptance package available in eTraveler			
	CAMM9430-	COMP: Full Filter Exchange acceptance package av	03-Jun-19	22-Aug-19	0%	58	0.00	\$0.00	\$0.00	\$0.00	29					◆	◆	COMP: Full Filter Exchange acceptance package available in eTraveler-Status			
	CAMM9440	COMP: 9 raft verification test starting		10-Oct-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	202					◆	◆	COMP: 9 raft verification test starting			
	CAMM9440-	COMP: 9 raft verification test starting-Status	10-Oct-19	10-Oct-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	202					◆	◆	COMP: 9 raft verification test starting-Status			
	CAMM9450	COMP: 9 raft verification data available		10-Oct-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	939					◆	◆	COMP: 9 raft verification data available			
	CAMM9450-	COMP: 9 raft verification data available-Status	10-Oct-19	10-Oct-19	0%	1	0.00	\$0.00	\$0.00	\$0.00	939					◆	◆	COMP: 9 raft verification data available-Status			
	CAMM9460	COMP: Cryostat with Refrigeration Start of verificati		30-Apr-19 A	100%	0	0.00	\$0.00	\$0.00	\$0.00					◆	◆	COMP: Cryostat with Refrigeration Start of verification (Individual circuit)				
	CAMM9460-	COMP: Cryostat with Refrigeration Start of verificati	30-Apr-19 A	30-Apr-19 A	100%	18	0.00	\$0.00	\$0.00	\$0.00					◆	◆	COMP: Cryostat with Refrigeration Start of verification (Individual circuit)-Status				
	CAMM9470	COMP: Cryostat with Refrigeration acceptance pack		30-Apr-19 A	100%	0	0.00	\$0.00	\$0.00	\$0.00					◆	◆	COMP: Cryostat with Refrigeration acceptance package available in eTraveler				
	CAMM9470-	COMP: Cryostat with Refrigeration acceptance pack	30-Apr-19 A	30-Apr-19 A	100%	28	0.00	\$0.00	\$0.00	\$0.00					◆	◆	COMP: Cryostat with Refrigeration acceptance package available in eTraveler-Status				
	CAMM9480	COMP: Camera Concept of Operation Document V		28-Sep-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00					◆	◆	COMP: Camera Concept of Operation Document V1 (refrigeration startup and maintenance)				
	CAMM9480-	COMP: Camera Concept of Operation Document V	20-Jul-18 A	20-Jul-18 A	100%	42	0.00	\$0.00	\$0.00	\$0.00					◆	◆	COMP: Camera Concept of Operation Document V1 (refrigeration startup and maintenance)-Status				
	CAMM9490	COMP: Camera Concept of Operation Document V		21-Jan-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	202					◆	◆	COMP: Camera Concept of Operation Document V2 (camera power only)			
	CAMM9490-	COMP: Camera Concept of Operation Document V	21-Jan-20	21-Jan-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	202					◆	◆	COMP: Camera Concept of Operation Document V2 (camera power only)-Status			
	CAMM9500	COMP: Camera Concept of Operation Document V		29-Sep-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	-3					◆	◆	COMP: Camera Concept of Operation Document V3 (camera power only)			
	CAMM9500-	COMP: Camera Concept of Operation Document V	03-Jun-19	29-Sep-20	0%	337	0.00	\$0.00	\$0.00	\$0.00	-3					◆	◆	COMP: Camera Concept of Operation Document V3 (camera power only)-Status			
	CAMM9520	COMP: Rotator available to Camera		03-Jun-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	287					◆	◆	COMP: Rotator available to Camera			
	CAMM9530	COMP: OCS Software for controlling rotator availab		03-Jun-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	287					◆	◆	COMP: OCS Software for controlling rotator available to Camera			
LSST ME 19-05.04C Telescope and Site Construc		01-Aug-14 A	31-Mar-22		1943	432346.14	\$36,911,692.43	\$172,227,801.87	\$209,139,494.31	386											
LSST ME 19-05.04C.00 T&S Level 2 Milestones		01-Aug-14 A	28-Jan-21		1644	0.00	\$0.00	\$0.00	\$0.00	-56											
T	T&SC-0100-	NSF Construction Authorization		01-Aug-14 A	100%	0	0.00	\$0.00	\$0.00	\$0.00		◆							NSF Construction Authorization		
	T&SC-0100-	Summit Site Construction Phase B Start	08-Sep-14 A		100%	0	0.00	\$0.00	\$0.00	\$0.00		◆	◆						Summit Site Construction Phase B Start		
	T&SC-0100-	Dome Contract Start	04-May-15 A		100%	0	0.00	\$0.00	\$0.00	\$0.00			◆						Dome Contract Start		
	T&SC-0100-	Telescope Mount Phase B Start																			

LSST May 2019 Month End Forecast

Activity ID	Activity Name	Start	Finish	Physical % Complete	Original Duration	Budgeted Labor Units	Budgeted Labor Cost	Budgeted Material Cost	Budgeted Total Cost no.	Total Float	FY2015 2014-10-01	FY2016 2015-10-01	FY2017 2016-10-01	FY2018 2017-10-01	FY2019 2018-10-01	FY2020 2019-10-01	FY2021 2020-10-01	FY2022 2021-10-01	
	T&SC-0400- Dome Substantially Complete		04-Oct-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	-61									
	T&SC-0400- Dome Complete		13-Apr-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	36									
	T&SC-0400- Coating System Vendor Testing Start	11-Jun-18 A		100%	0	0.00	\$0.00	\$0.00	\$0.00										
	T&SC-0400- Coating System Ready to Ship		01-Aug-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00										
	T&SC-0400- Rotator/Hexapod Vendor Testing Start	28-Jun-17 A		100%	0	0.00	\$0.00	\$0.00	\$0.00										
	T&SC-0400- Rotator/Hexapod Ready To Ship		01-Jan-19 A	100%	0	0.00	\$0.00	\$0.00	\$0.00										
	T&SC-0400- Mirror Integration and Coating Start	03-Jun-19		0%	0	0.00	\$0.00	\$0.00	\$0.00	169									
	T&SC-0400- Mirror Integration and Coating Complete		08-Oct-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	-16									
	T&SC-0400- Base Center Finish & Inspection Start	05-Nov-18 A		100%	0	0.00	\$0.00	\$0.00	\$0.00										
	T&SC-0400- Base Center Ready for Occupancy		29-Mar-19 A	100%	0	0.00	\$0.00	\$0.00	\$0.00										
	T&SC-0400- Clean Room ready for Initial Cleaning		31-Jan-19 A	100%	0	0.00	\$0.00	\$0.00	\$0.00										
	T&SC-0400- Summit Facility Clean Room Ready		02-Apr-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	71									
	T&SC-0600- M1M3 Integration at UoA Start		15-Nov-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00										
	T&SC-0600- M1M3 Ready to Ship		01-Apr-19 A	100%	0	0.00	\$0.00	\$0.00	\$0.00										
	T&SC-0600- M1M3 on Site		18-Jul-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	128									
	T&SC-0600- M1M3-Cell Integrated- Facility Ready for Camera Dr		16-Nov-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	-13									
	T&SC-1100- M2 Integrated Optical Testing at Harris		01-Oct-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00										
	T&SC-1100- M2 Assembly Ready to Ship		31-Oct-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00										
	T&SC-1100- M2 on Site	23-Dec-18 A		100%	0	0.00	\$0.00	\$0.00	\$0.00										
	T&SC-1100- M2 Coated On Summit	29-Jul-19		0%	0	0.00	\$0.00	\$0.00	\$0.00	289									
	T&SC-1100- M2 Installed on Telescope	05-Oct-20		0%	0	0.00	\$0.00	\$0.00	\$0.00	-12									
	T&SC-1100- 3-Mirror Optical System Ready for Testing	17-Nov-20		0%	0	0.00	\$0.00	\$0.00	\$0.00	-43									
	T&SC-1100- Initial Base Facility Requirement Review		16-Oct-14 A	100%	0	0.00	\$0.00	\$0.00	\$0.00										
	T&SC-1100- Final Base Facility Equipment ICD Reviewed		15-May-15 A	100%	0	0.00	\$0.00	\$0.00	\$0.00										
	T&SC-1150- Calibration Equipment Procurement Start		01-Mar-17 A	100%	0	0.00	\$0.00	\$0.00	\$0.00										
	T&SC-1150- Atmospheric Telescope On Site		30-Apr-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00										
	T&SC-1150- Atmospheric Telescope Completion		11-Mar-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	17									
	T&SC-5900- ComCam Dewar Available		31-May-19 A	100%	0	0.00	\$0.00	\$0.00	\$0.00										
	T&SC-5900- ComCam Tucson Integration Complete	15-Nov-19		0%	0	0.00	\$0.00	\$0.00	\$0.00	13									
	T&SC-5900- ComCam at Summit		25-Jun-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	-19									
	T&SC-5900- ComCam Ready for Installation on Telescope		26-Oct-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	8									
	T&SC-5900- ComCam Installed on Telescope		28-Jan-21	0%	0	0.00	\$0.00	\$0.00	\$0.00	-56									
	T&SC-5900- Telescope and Site Substantial Completion		28-Jan-21	0%	0	0.00	\$0.00	\$0.00	\$0.00	-56									
	T&SC-7900- Summit Facilities ICD Phase 3 (LSE-65)		31-Oct-14 A	100%	0	0.00	\$0.00	\$0.00	\$0.00										
	T&SC-7900- LSST Observatory Control System ICD Phase 3 (LS		06-Oct-14 A	100%	0	0.00	\$0.00	\$0.00	\$0.00										
	T&SC-7900- Mechanical & Thermal ICD Phase 3 Rotator (LSE-8		02-May-16 A	100%	0	0.00	\$0.00	\$0.00	\$0.00										
	T&SC-7900- DM to OCS ICD Phase 3 (LSE-72)		31-Oct-14 A	100%	0	0.00	\$0.00	\$0.00	\$0.00										
	T&SC-7900- Summit Facility-DM ICD Phase 3 (LSE-76)		03-Oct-17 A	100%	0	0.00	\$0.00	\$0.00	\$0.00										
	T&SC-7900- Base Facility-DM ICD Phase 3 (LSE-77)		21-Aug-17 A	100%	0	0.00	\$0.00	\$0.00	\$0.00										
	T&SC-7900- Summit Facility - OCS ICD Phase 3 (LSE-132)		01-Jul-15 A	100%	0	0.00	\$0.00	\$0.00	\$0.00										
	T&SC-7900- ComCam Tucson Integration & Test Start		06-Jan-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	-19									
	TSSPP-102 OCS / TCS Release 1		06-Oct-14 A	100%	0	0.00	\$0.00	\$0.00	\$0.00										
	TSSPP-103 OCS / TCS Release 2		10-Jul-15 A	100%	0	0.00	\$0.00	\$0.00	\$0.00										
	TSSPP-19 Basic interoperability and communication		30-Sep-15 A	100%	0	0.00	\$0.00	\$0.00	\$0.00										
	TSSPP-20 Camera OCS communication		22-Sep-15 A	100%	0	0.00	\$0.00	\$0.00	\$0.00										
	TSSPP-21 EFD Milestone regarding query use cases		01-Apr-17 A	100%	0	0.00	\$0.00	\$0.00	\$0.00										
	TSSPP-22 EFD Milestone regarding populating EFD with Came		01-Apr-17 A	100%	0	0.00	\$0.00	\$0.00	\$0.00										
	TSSPP-23 OCS Middleware V4 Release		30-Apr-19 A	100%	0	0.00	\$0.00	\$0.00	\$0.00										
	TSSPP-24 OCS Final Integration Test		01-Apr-17 A	100%	0	0.00	\$0.00	\$0.00	\$0.00										
	TSSPP-57 OCS Scheduler Available		15-Feb-16 A	100%	0	0.00	\$0.00	\$0.00	\$0.00										
	TSSPP-58 OCS App Available		01-Apr-17 A	100%	0	0.00	\$0.00	\$0.00	\$0.00										
	LSST ME 19-05.04C.01 Telescope System Management		01-Sep-14 A	31-Mar-22		1943	76069.45	\$7,370,121.76	\$8,945,373.53	\$16,315,495.28	129								
	LSST ME 19-05.04C.01.01 TS Team Office		01-Sep-14 A	31-Mar-22		1943	48274.32	\$5,101,088.32	\$2,336,382.05	\$7,437,470.37	129								
	T&SC-84i	Team Office FY1 - LOE Labor	01-Sep-14 A	30-Sep-14 A	100%	42	503.33	\$40,952.70	\$0.00	\$40,952.70									
	T&SC-84i	Team Office FY2 - LOE Labor	01-Oct-14 A	30-Sep-15 A	100%	252	8700.00	\$639,351.00	\$0.00	\$639,351.00									
	T&SC-84i	Team Office FY3 - LOE Labor	01-Oct-15 A	30-Sep-16 A	100%	254	5496.82	\$453,244.15	\$0.00	\$453,244.15									
	T&SC-84i	Team Office FY4 - LOE Labor	03-Oct-16 A	29-Sep-17 A	100%	254	4095.00	\$389,579.40	\$0.00	\$389,579.40									
	T&SC-84i	Team Office FY5 - LOE Labor	02-Oct-17 A	28-Sep-18 A	100%	253	5130.00	\$787,741.20	\$0.00	\$787,741.20									
	T&SC-84i	Team Office FY6 - LOE Labor	01-Oct-18 A	30-Sep-19	67%	254	7737.00	\$956,007.32	\$0.00	\$956,007.32	129								
	T&SC-84i	Team Office FY7 - LOE Labor	01-Oct-19	30-Sep-20	0%	254	6710.95	\$825,531.41	\$0.00	\$825,531.41	129								
T&SC-84i	Team Office FY8 - LOE Labor	01-Oct-20	30-Sep-21	0%	254	3560.00	\$479,370.80	\$0.00	\$479,370.80	129									
T&SC-84i	Team Office FY9 - LOE Labor	01-Oct-21	31-Mar-22	0%	126	851.14	\$134,105.34	\$0.00	\$134,105.34	129									
T&SC-84i	Team Office FY1 - LOE TMS	01-Sep-14 A	26-Nov-14 A	100%	42	0.00	\$0.00	\$41,281.55	\$41,281.55										
T&SC-84i	Team Office FY2 - LOE TMS	01-Dec-14 A	30-Sep-15 A	100%	252	0.00	\$0.00	\$207,350.13	\$207,350.13										
T&SC-84i	Team Office FY3 - LOE TMS	01-Oct-15 A	30-Sep-16 A	100%	254	0.00	\$0.00	\$244,678.36	\$244,678.36										
T&SC-84i	Team Office FY3 - LOE NonLabor	01-Oct-15 A	30-Sep-16 A	100%	254	0.00	\$0.00	\$28,698.36	\$28,698.36										
T&SC-84i	Team Office FY4 - LOE TMS	03-Oct-16 A	29-Sep-17 A	100%	254	0.00	\$0.00	\$325,597.85	\$325,597.85										
T&SC-84i	Team Office FY4 - LOE NonLabor	03-Oct-16 A	29-Sep-17 A	100%	254	0.00	\$0.00	\$29,702.87	\$29,702.87										
T&SC-84i	Team Office FY5 - LOE TMS	02-Oct-17 A	28-Sep-18 A	100%	253	0.00	\$0.00	\$346,803.15	\$346,803.15										
T&SC-84i	Team Office FY5 - LOE NonLabor	02-Oct-17 A	28-Sep-18 A	100%	253	0.00	\$0.00	\$30,742.41	\$30,742.41										
T&SC-84i	Team Office FY6 - LOE TMS	01-Oct-18 A	30-Sep-19	254	254	0.00	\$0.00	\$366,938.14	\$366,938.14	255									
T&SC-84i	Team Office FY6 - LOE NonLabor	01-Oct-18 A	30-Sep-19	67%	254	0.00	\$0.00	\$31,818.49	\$31,818.49	255									

LSST May 2019 Month End Forecast																			
Activity ID	Activity Name	Start	Finish	Physical % Complete	Original Duration	Budgeted Labor Units	Budgeted Labor Cost	Budgeted Material Cost	Budgeted Total Cost no	Total Float	FY2015 2014-10-01	FY2016 2015-10-01	FY2017 2016-10-01	FY2018 2017-10-01	FY2019 2018-10-01	FY2020 2019-10-01	FY2021 2020-10-01	FY2022 2021-10-01	
<div></div>	T&SC-84i Team Office FY7 - LOE TMS	01-Oct-19	30-Sep-20	0%	254	0.00	\$0.00	\$321,993.54	\$321,993.54	255							Team Office FY7 - LOE TMS		
	T&SC-84i Team Office FY7 - LOE NonLabor	01-Oct-19	30-Sep-20	0%	254	0.00	\$0.00	\$13,172.88	\$13,172.88	255							Team Office FY7 - LOE NonLabor		
	T&SC-84i Team Office FY8 - LOE TMS	01-Oct-20	30-Sep-21	0%	254	0.00	\$0.00	\$322,281.27	\$322,281.27	255								Team Office FY8 - LOE TMS	
	T&SC-84i Team Office FY8 - LOE NonLabor	01-Oct-20	30-Sep-21	0%	254	0.00	\$0.00	\$15,323.05	\$15,323.05	255								Team Office FY8 - LOE NonLabor	
	T&SC-84i Team Office FY3 - Logistics Manager	01-Oct-15 A	30-Sep-16 A	100%	254	450.00	\$30,195.00	\$0.00	\$30,195.00				Team Office FY3 - Logistics Manager						
	T&SC-84i Team Office FY4 - Logistics Manager	03-Oct-16 A	29-Sep-17 A	100%	254	1800.00	\$125,010.00	\$0.00	\$125,010.00				Team Office FY4 - Logistics Manager						
	T&SC-84i Team Office FY4 - Logistics Manager	02-Oct-17 A	30-Aug-19	86%	465	3240.08	\$240,000.00	\$0.00	\$240,000.00	149						Team Office FY4 - Logistics Manager			
	T&SC-84i Supervision of the M1M3 mirror cart assembly	01-Jul-19	15-Jul-19	0%	10	0.00	\$0.00	\$10,000.00	\$10,000.00	309						Supervision of the M1M3 mirror cart assembly			
	T&SC-84i Team Office FY8 - LOE Labor ETC	01-Oct-20	30-Sep-21	0%	254	0.00	\$0.00	\$0.00	\$0.00	129								Team Office FY8 - LOE Labor	
	LSST ME 19-05.04C.01.02 Summit Office		01-Sep-14 A	31-Mar-22		1880	27755.14	\$2,264,823.84	\$6,207,074.70	\$8,471,898.54	128								
	T&SC-34i Summit Integration Crew for Mount - NonLabor	07-Oct-19	21-Feb-20	0%	90	0.00	\$0.00	\$377,303.42	\$377,303.42	42							Summit Integration Crew for Mount - NonLabor		
	T&SC-34i Summit Integration Crew for Mount - NonLabor	07-Oct-19	21-Feb-20	0%	90	0.00	\$0.00	\$195,583.29	\$195,583.29	42							Summit Integration Crew for Mount - NonLabor		
	T&SC-84i Summit Support FY 1 - LOE Labor	01-Sep-14 A	30-Sep-14 A	100%	40	150.00	\$14,101.50	\$0.00	\$14,101.50		Summit Support FY 1 - LOE Labor								
	T&SC-84i Summit Support FY 2 - LOE Labor	01-Oct-14 A	30-Sep-15 A	100%	244	1800.00	\$177,912.00	\$0.00	\$177,912.00			Summit Support FY 2 - LOE Labor							
	T&SC-84i Summit Support FY 3 - LOE Labor	01-Oct-15 A	30-Sep-16 A	100%	248	1800.00	\$184,140.00	\$0.00	\$184,140.00				Summit Support FY 3 - LOE Labor						
	T&SC-84i Summit Support FY 4 - LOE Labor	03-Oct-16 A	29-Sep-17 A	100%	245	1800.00	\$190,584.00	\$0.00	\$190,584.00					Summit Support FY 4 - LOE Labor					
	T&SC-84i Summit Support FY 5 - LOE Labor	02-Oct-17 A	28-Sep-18 A	100%	244	5850.00	\$370,728.00	\$0.00	\$370,728.00					Summit Support FY 5 - LOE Labor					
	T&SC-84i Summit Support FY 6 - LOE Labor	01-Oct-18 A	30-Sep-19	67%	245	4512.46	\$351,846.38	\$0.00	\$351,846.38	128						Summit Support FY 6 - LOE Labor			
	T&SC-84i Summit Support FY 7 - LOE Labor	01-Oct-19	30-Sep-20	0%	246	5930.93	\$460,954.61	\$0.00	\$460,954.61	128							Summit Support FY 7 - LOE Labor		
	T&SC-84i Summit Support FY 8 - LOE Labor	01-Oct-20	30-Sep-21	0%	248	4170.07	\$359,368.99	\$0.00	\$359,368.99	128								Summit Support FY 8 - LOE Labor	
	T&SC-84i Summit Support FY 8 - LOE Labor	01-Oct-21	31-Mar-22	0%	120	1741.68	\$155,188.36	\$0.00	\$155,188.36	128								Summit Support FY 8 - LOE Labor	
	T&SC-84i Summit Support FY 1 - LOE NonLabor	03-Nov-14 A	01-May-15 A	100%	40	0.00	\$0.00	\$29,839.10	\$29,839.10		Summit Support FY 1 - LOE NonLabor							Summit Support FY 1 - LOE NonLabor	
	T&SC-84i Summit Support FY 2 - LOE NonLabor	04-May-15 A	30-Sep-15 A	100%	244	0.00	\$0.00	\$176,282.82	\$176,282.82			Summit Support FY 2 - LOE NonLabor							
	T&SC-84i Summit Support FY 3 - LOE NonLabor	01-Oct-15 A	31-Mar-16 A	100%	120	0.00	\$0.00	\$186,099.84	\$186,099.84				Summit Support FY 3 - LOE NonLabor						
	T&SC-84i Procure MS Templo diesel tank	02-May-16 A	31-Jan-17 A	100%	22	0.00	\$0.00	\$70,000.00	\$70,000.00				Procure MS Templo diesel tank						
	T&SC-84i Summit Support FY 4 - LOE NonLabor	03-Oct-16 A	29-Sep-17 A	100%	245	0.00	\$0.00	\$585,406.83	\$585,406.83					Summit Support FY 4 - LOE NonLabor					
	T&SC-84i Summit Support FY 5 - LOE NonLabor	02-Oct-17 A	30-Mar-18 A	100%	99	0.00	\$0.00	\$278,445.19	\$278,445.19					Summit Support FY 5 - LOE NonLabor					
	T&SC-84i Summit Support FY 5 - Casino Buildout	01-Mar-18 A	31-May-18 A	100%	62	0.00	\$0.00	\$81,648.00	\$81,648.00					Summit Support FY 5 - Casino Buildout					
	T&SC-84i Summit Support FY 5 - Casino Meals	04-Jun-18 A	28-Sep-18 A	100%	82	0.00	\$0.00	\$100,000.00	\$100,000.00					Summit Support FY 5 - Casino Meals					
	T&SC-84i Summit Support Planning Package	01-Oct-21	01-Oct-21	0%	1	0.00	\$0.00	\$2,818,076.79	\$2,818,076.79	247							Summit Support Planning Package		
	T&SC-84i Summit Support FY 6 - Facilities and Supplies	01-Oct-18 A	30-Sep-19	67%	245	0.00	\$0.00	\$493,809.10	\$493,809.10	741						Summit Support FY 6 - Facilities and Supplies			
	T&SC-84i Summit Support FY 6 - Professional Services	01-Oct-18 A	30-Sep-19	67%	245	0.00	\$0.00	\$449,636.38	\$449,636.38	741						Summit Support FY 6 - Professional Services			
	T&SC-84i Summit Support FY 5 - LOE NonLabor	02-Oct-17 A	28-Feb-18 A	100%	99	0.00	\$0.00	\$180,313.81	\$180,313.81				Summit Support FY 5 - LOE NonLabor						
	T&SC-84i Summit Support FY19 - Casino Meals	01-Apr-19 A	27-Sep-19	15%	245	0.00	\$0.00	\$90,000.00	\$90,000.00	270						Summit Support FY19 - Casino Meals			
	T&SC-84i Summit Support FY19 - Von ArdenMeals	01-Apr-19 A	31-May-19 A	100%	204	0.00	\$0.00	\$94,630.14	\$94,630.14							Summit Support FY19 - Von ArdenMeals			
	LSST ME 19-05.04C.01.03 Safety and Environmental Assurance		01-Sep-14 A	30-Sep-21		1817	40.00	\$4,209.60	\$401,916.78	\$406,126.38	255								
	SUMMIT- Procurement and Installation of Pier Safety Railing	15-Feb-19 A	28-Jun-19	20%	26	0.00	\$0.00	\$30,000.00	\$30,000.00	7						Procurement and Installation of Pier Safety Railing			
	T&SC-88i Safety and Environ Assurance FY 1 - LOE NonLabor	01-Sep-14 A	01-Jul-15 A	100%	40	0.00	\$0.00	\$41,505.89	\$41,505.89		Safety and Environ Assurance FY 1 - LOE NonLabor								
	T&SC-88i Safety and Environ Assurance FY 2 - LOE NonLabor	01-Jul-15 A	30-Sep-15 A	100%	244	0.00	\$0.00	\$66,842.71	\$66,842.71			Safety and Environ Assurance FY 2 - LOE NonLabor							
	T&SC-88i Safety and Environ Assurance FY 3 - LOE NonLabor	01-Oct-15 A	30-Sep-16 A	100%	248	0.00	\$0.00	\$69,219.79	\$69,219.79				Safety and Environ Assurance FY 3 - LOE NonLabor						
	T&SC-88i Safety and Environ Assurance FY 4 - LOE NonLabor	01-Oct-16 A	31-Oct-16 A	100%	19	0.00	\$0.00	\$16,956.66	\$16,956.66				Safety and Environ Assurance FY 4 - LOE NonLabor						
	T&SC-88i Safety and Environ Assurance FY 4 - LOE NonLabor	02-Nov-16 A	29-Sep-17 A	100%	226	0.00	\$0.00	\$34,023.53	\$34,023.53					Safety and Environ Assurance FY 4 - LOE NonLabor					
	T&SC-88i Safety and Environ Assurance FY 5 - LOE NonLabor	02-Oct-17 A	28-Sep-18 A	100%	244	0.00	\$0.00	\$33,190.82	\$33,190.82					Safety and Environ Assurance FY 5 - LOE NonLabor					
	T&SC-88i Safety and Environ Assurance FY 6 - LOE NonLabor	01-Oct-18 A	30-Sep-19	67%	245	0.00	\$0.00	\$34,141.21	\$34,141.21	248						Safety and Environ Assurance FY 6 - LOE NonLabor			
	T&SC-88i Safety and Environ Assurance FY 7 - LOE NonLabor	01-Oct-19	30-Sep-20	0%	246	0.00	\$0.00	\$35,120.84	\$35,120.84	248							Safety and Environ Assurance		



LSST May 2019 Month End Forecast																			
Activity ID	Activity Name	Start	Finish	Physical % Complete	Original Duration	Budgeted Labor Units	Budgeted Labor Cost	Budgeted Material Cost	Budgeted Total Cost no	Total Float		FY2015 2014-10-01	FY2016 2015-10-01	FY2017 2016-10-01	FY2018 2017-10-01	FY2019 2018-10-01	FY2020 2019-10-01	FY2021 2020-10-01	FY2022 2021-10-01
T&SC-37	Final Contract Review and Approval	01-Aug-14 A	28-Aug-14 A	100%	19	0.00	\$0.00	\$0.00	\$0.00		Final Contract Review and Approval								
	Finalize Lodging Cost Structure and Plans	01-Aug-14 A	28-Oct-14 A	100%	59	0.00	\$0.00	\$0.00	\$0.00		Finalize Lodging Cost Structure and Plans								
	Summit Construction Contract Start		05-Dec-14 A	100%	0	0.00	\$0.00	\$0.00	\$0.00		Summit Construction Contract Start								
	A&E Services During Construction - Summit - LOE NonLabor	01-Sep-14 A	30-Apr-17 A	100%	931	0.00	\$0.00	\$459,022.20	\$459,022.20		A&E Services During Construction - Summit - LOE NonLabor								
	A&E Services During Construction - Summit - LOE NonLabor	01-Jun-17 A	30-Jun-18 A	100%	257	0.00	\$0.00	\$210,056.00	\$210,056.00		A&E Services During Construction - Summit - LOE NonLabor								
	Finalize Facility / Dome Interface	29-Aug-14 A	10-Dec-14 A	100%	100	0.00	\$0.00	\$0.00	\$0.00		Finalize Facility / Dome Interface								
	Submit Approval Drawings, open item list, and preliminary schedule	29-Jul-15 A	29-Jan-16 A	100%	9	0.00	\$0.00	\$0.00	\$0.00		Submit Approval Drawings, open item list, and preliminary schedule								
	Summit Lodging Procurement and Authorization	01-Dec-16 A	30-Nov-17 A	100%	30	0.00	\$0.00	\$0.00	\$0.00		Summit Lodging Procurement and Authorization								
	Summit Facility Contract Close Out		15-Feb-19 A	100%	0	0.00	\$0.00	\$0.00	\$0.00		Summit Facility Contract Close Out								
	Building Electrical Plan - SOW/ACL Developed and Provided to Procurement	30-Sep-16 A	30-Nov-16 A	100%	20	20.00	\$864.00	\$0.00	\$864.00		Building Electrical Plan - SOW/ACL Developed and Provided to Procurement								
	Building Electrical Plan - Procurement Prepares and Issues Bid Package	01-Dec-16 A	31-Mar-17 A	100%	20	0.00	\$0.00	\$0.00	\$0.00		Building Electrical Plan - Procurement Prepares and Issues Bid Package								
	Building Electrical Plan - Supplier Response	15-May-17 A	30-Jun-17 A	100%	20	0.00	\$0.00	\$0.00	\$0.00		Building Electrical Plan - Supplier Response								
	Building Electrical Plan - Supplier Selection and Contract Award	30-Jun-15 A	31-Jul-17 A	100%	10	0.00	\$0.00	\$0.00	\$0.00		Building Electrical Plan - Supplier Selection and Contract Award								
	Building Electrical Plan - Supplier Leadtime & Delivery	10-Aug-17 A	15-Feb-18 A	100%	98	0.00	\$0.00	\$0.00	\$0.00		Building Electrical Plan - Supplier Leadtime & Delivery								
	Building Electrical Plan - Delivery Acceptance	15-Jan-18 A	15-Mar-18 A	100%	5	0.00	\$0.00	\$86,707.60	\$86,707.60		Building Electrical Plan - Delivery Acceptance								
	Installation of LED Light Fixtures throughout Facility – ELYPSA Contracted Labor	15-Jan-18 A	15-Feb-18 A	100%	40	0.00	\$0.00	\$112,000.00	\$112,000.00		Installation of LED Light Fixtures throughout Facility – ELYPSA Contracted Labor								
	Wiring for Pflow Platform Lift – AURA Procurement of Materials	15-Mar-18 A	11-Jul-19	99%	28	0.00	\$0.00	\$20,000.00	\$20,000.00	325	Wiring for Pflow Platform Lift – AURA Procurement of Materials								
	Wiring for Pflow Platform Lift – ELYPSA Contracted Labor	15-Mar-18 A	11-Jul-19	75%	28	0.00	\$0.00	\$38,000.00	\$38,000.00	325	Wiring for Pflow Platform Lift – ELYPSA Contracted Labor								
	Auxiliary Telescope Facility Interior Electrical – AURA Procurement of Materials	15-Dec-17 A	12-Feb-18 A	100%	28	0.00	\$0.00	\$3,052.00	\$3,052.00		Auxiliary Telescope Facility Interior Electrical – AURA Procurement of Materials								
	Auxiliary Telescope Facility Interior Electrical – ELYPSA Contracted Labor	15-Dec-17 A	12-Feb-18 A	100%	23	0.00	\$0.00	\$3,052.00	\$3,052.00		Auxiliary Telescope Facility Interior Electrical – ELYPSA Contracted Labor								
LSST ME 19-05.04C.03.02 Summit Site Preparation																			
Award Contract	05-Dec-14 A		100%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00		Award Contract								
Weather Permitting Site Start Date	05-Dec-14 A		100%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00		Weather Permitting Site Start Date								
Phase 1: Mobilization and long lead procurement	01-Sep-14 A	31-Dec-14 A	100%	126	0.00	\$0.00	\$16,960.68	\$16,960.68		Phase 1: Mobilization and long lead procurement									
Excavation and Leveling	01-Dec-14 A	01-Jul-15 A	100%	93	0.00	\$0.00	\$0.00	\$0.00	\$0.00		Excavation and Leveling								
Road Work	01-Oct-14 A	15-May-15 A	100%	33	0.00	\$0.00	\$0.00	\$0.00	\$0.00		Road Work								
Utility Lines to Site	01-Dec-14 A	23-Jan-15 A	100%	33	0.00	\$0.00	\$0.00	\$0.00	\$0.00		Utility Lines to Site								
Temporary Facilities	05-Jan-15 A	01-Jul-15 A	100%	19	0.00	\$0.00	\$0.00	\$0.00	\$0.00		Temporary Facilities								
Temporary Site Improvements	18-May-15 A	01-Jul-15 A	100%	20	0.00	\$0.00	\$0.00	\$0.00	\$0.00		Temporary Site Improvements								
Site Ready for General Construction		01-Jul-15 A	100%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00		Site Ready for General Construction								
Anticipo, advance payment of 10% of contract value - Complete		05-Jan-15 A	100%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00		Anticipo, advance payment of 10% of contract value - Complete								
Anticipo, advance payment of 10% of contract value - Supplier Leadtime & Delivery	05-Jan-15 A	16-Jan-15 A	100%	21	0.00	\$0.00	\$0.00	\$0.00	\$0.00		Anticipo, advance payment of 10% of contract value - Supplier Leadtime & Delivery								
Anticipo, advance payment of 10% of contract value - Delivery Acceptance	15-Jan-15 A	16-Jan-15 A	100%	5	0.00	\$0.00	\$2,595,524.82	\$2,595,524.82		Anticipo, advance payment of 10% of contract value - Delivery Acceptance									
Mobilization and initial installation - Complete		02-Mar-15 A	100%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00		Mobilization and initial installation - Complete								
Mobilization and initial installation - Supplier Leadtime & Delivery	02-Mar-15 A	03-Mar-15 A	100%	21	0.00	\$0.00	\$0.00	\$0.00	\$0.00		Mobilization and initial installation - Supplier Leadtime & Delivery								
Mobilization and initial installation - Delivery Acceptance	30-Oct-14 A	04-Mar-15 A	100%	5	0.00	\$0.00	\$297,908.38	\$297,908.38		Mobilization and initial installation - Delivery Acceptance									
Mobilization and initial installation - Complete		02-Mar-15 A	100%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00		Mobilization and initial installation - Complete								
Mobilization and initial installation - Supplier Leadtime & Delivery	02-Mar-15 A	03-Mar-15 A	100%	20	0.00	\$0.00	\$0.00	\$0.00	\$0.00		Mobilization and initial installation - Supplier Leadtime & Delivery								
Mobilization and initial installation - Delivery Acceptance	04-Dec-14 A	04-Mar-15 A	100%	5	0.00	\$0.00	\$298,642.14	\$298,642.14		Mobilization and initial installation - Delivery Acceptance									
LSST ME 19-05.04C.03.03 Summit Support Facility																			
Summit Support Building Exterior Construction	02-Sep-15 A	31-Oct-16 A	100%	302	0.00	\$0.00	\$3,029.99	\$3,029.99		Summit Support Building Exterior Construction									
Lower enclosure ready for embedment of dome anchor bolts		14-Oct-16 A	100%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00		Lower enclosure ready for embedment of dome anchor bolts								
Platform Lift on Site		15-Nov-16 A	100%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00		Platform Lift on Site								
Support Facility Ready for Coating Chamber		28-Feb-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00		Support Facility Ready for Coating Chamber								
Facility Ready to Occupy		28-Feb-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00		Facility Ready to Occupy								
Inspection & Punch List	15-Feb-18 A	30-Apr-19 A	100%	40	0.00	\$0.00	\$0.00	\$0.00	\$0.00		Inspection & Punch List								
Summit Support Facility Ready		28-Feb-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00		Summit Support Facility Ready								
Summit Support Facility Float	01-Jul-17 A	28-Feb-18 A	100%	95	0.00	\$0.00	\$0.00	\$0.00	\$0.00		Summit Support Facility Float								
Change Order 6 - Continuous pour of telescope pier foundation	01-Nov-17 A	31-Dec-17 A	100%	32	0.00	\$0.00	\$72,793.00	\$72,793.00		Change Order 6 - Continuous pour of telescope pier foundation									
Summit Support Facility Complete		30-Apr-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00		Summit Support Facility Complete								
Excavation Change Order - Summit Facility fill and grade level slab support #2 *	01-Aug-15 A	31-Aug-15 A	100%	42	0.00	\$0.00	\$815,000.00	\$815,000.00		Excavation Change Order - Summit Facility fill and grade level slab support #2 *									
Excavation Change Order - Summit Facility fill and grade level slab support #3	01-Dec-15 A	29-Feb-16 A	100%	42	0.00	\$0.00	\$1,200,000.00	\$1,200,000.00		Excavation Change Order - Summit Facility fill and grade level slab support #3									
Excavation Change Order - Summit Facility fill and grade level slab support General Costs	07-Jan-15 A	15-Jul-17 A	100%	2	0.00	\$0.00	\$300,000.00	\$300,000.00		Excavation Change Order - Summit Facility fill and grade level slab support General Costs									
Receive LSST Approval and Formal Release to procure and build	11-Aug-15 A	17-Aug-15 A	100%	5	0.00	\$0.00	\$0.00	\$0.00	\$0.00		Receive LSST Approval and Formal Release to procure and build								
Scheduling and major procurement	18-Aug-15 A	31-Aug-15 A	100%	5	0.00	\$0.00	\$0.00	\$0.00	\$0.00		Scheduling and major procurement								
Final design and shop drawings commencement	01-Sep-15 A	07-Sep-15 A	100%	5	0.00	\$0.00	\$0.00	\$0.00	\$0.00		Final design and shop drawings commencement								
Design and shop drawings completed	12-Oct-15 A	15-Dec-15 A	100%	61	0.00	\$0.00	\$326,488.75	\$326,488.75		Design and shop drawings completed									
Review shop release package, plan and prep for shop fabrication, and assembly	16-Dec-15 A	18-Dec-15 A	100%	5	0.00	\$0.00	\$0.00	\$0.00	\$0.00		Review shop release package, plan and prep for shop fabrication, and assembly								
Shop fabrication and assembly commencement	11-Jan-16 A	18-Jan-16 A	100%	4	0.00	\$0.00	\$0.00	\$0.00	\$0.00		Shop fabrication and assembly commencement								
Shop fabrication and assembly complete	19-Jan-																		

LSST May 2019 Month End Forecast																			
Activity ID	Activity Name	Start	Finish	Physical % Complete	Original Duration	Budgeted Labor Units	Budgeted Labor Cost	Budgeted Material Cost	Budgeted Total Cost no	Total Float	FY2015 2014-10-01	FY2016 2015-10-01	FY2017 2016-10-01	FY2018 2017-10-01	FY2019 2018-10-01	FY2020 2019-10-01	FY2021 2020-10-01	FY2022 2021-10-01	
T&SC-39i	2.1.2.7 ROOFING	15-Dec-16 A	15-Jan-18 A	100%	195	0.00	\$0.00	\$61,879.62	\$61,879.62					2.1.2.7 ROOFING					
	T&SC-39i 2.1.2.8 WATERPROOFING	01-Dec-15 A	15-Jan-18 A	100%	195	0.00	\$0.00	\$68,173.52	\$68,173.52					2.1.2.8 WATERPROOFING					
	T&SC-39i 2.1.2.9 INSULATION	01-Jan-17 A	15-Jan-18 A	100%	195	0.00	\$0.00	\$25,033.76	\$25,033.76					2.1.2.9 INSULATION					
	T&SC-39i 2.2.1 WALL SIDING AND FINISHES	15-Dec-16 A	15-Dec-17 A	100%	95	0.00	\$0.00	\$112,001.24	\$112,001.24					2.2.1 WALL SIDING AND FINISHES					
	T&SC-39i 2.2.2 FLOOR FINISHES	15-Mar-17 A	28-Feb-18 A	100%	195	0.00	\$0.00	\$72,501.18	\$72,501.18					2.2.2 FLOOR FINISHES					
	T&SC-39i 2.2.3 CEILING	15-Apr-17 A	15-Dec-17 A	100%	195	0.00	\$0.00	\$57,829.22	\$57,829.22					2.2.3 CEILING					
	T&SC-39i 2.2.4 - 2.2.6 CLOSURES AND DRIPSTRIPS	15-Jun-17 A	15-Jan-18 A	100%	195	0.00	\$0.00	\$17,089.92	\$17,089.92					2.2.4 - 2.2.6 CLOSURES AND DRIPSTRIPS					
	T&SC-39i 2.2.7 PAINT AND VARNISHES	15-Dec-16 A	28-Feb-18 A	100%	195	0.00	\$0.00	\$265,356.28	\$265,356.28					2.2.7 PAINT AND VARNISHES					
	T&SC-39i 2.2.8 - 2.2.10 DOORS AND WINDOWS	15-Mar-17 A	28-Feb-18 A	100%	95	0.00	\$0.00	\$240,684.63	\$240,684.63					2.2.8 - 2.2.10 DOORS AND WINDOWS					
	T&SC-39i 2.2.11 STAIRS (Concrete and Metal)	02-May-16 A	15-Jan-18 A	100%	45	0.00	\$0.00	\$112,828.54	\$112,828.54					2.2.11 STAIRS (Concrete and Metal)					
	T&SC-39i 2.2.12 HARDWARE AND LOCKSETS	15-Sep-17 A	15-Jan-18 A	100%	195	0.00	\$0.00	\$9,901.08	\$9,901.08					2.2.12 HARDWARE AND LOCKSETS					
	T&SC-39i 2.2.13 FURNITURE	15-Sep-17 A	15-Nov-17 A	100%	195	0.00	\$0.00	\$10,956.20	\$10,956.20					2.2.13 FURNITURE					
	T&SC-39i 2.2.14 - 2.2.16 FIXTURES, PLUMBING SETS AND	15-Feb-17 A	15-Jan-18 A	100%	195	0.00	\$0.00	\$206,445.93	\$206,445.93					2.2.14 - 2.2.16 FIXTURES, PLUMBING SETS AND ACCESSORIES					
	T&SC-39i 2.3.1.1 EXTERIOR POTABLE WATER INSTALLATI	01-Apr-16 A	30-Nov-16 A	100%	65	0.00	\$0.00	\$98,163.21	\$98,163.21					2.3.1.1 EXTERIOR POTABLE WATER INSTALLATION					
	T&SC-39i 2.3.1.2 INTERIOR POTABLE WATER SYSTEM	15-Jun-17 A	28-Feb-18 A	100%	65	0.00	\$0.00	\$47,583.96	\$47,583.96					2.3.1.2 INTERIOR POTABLE WATER SYSTEM					
	T&SC-39i 2.3.1.3 EXTERIOR WASTEWATER SYSTEM	15-May-17 A	15-Dec-17 A	100%	65	0.00	\$0.00	\$33,442.07	\$33,442.07					2.3.1.3 EXTERIOR WASTEWATER SYSTEM					
	T&SC-39i 2.3.1.4 INTERIOR WASTEWATER SYSTEM	15-Jul-17 A	28-Feb-18 A	100%	65	0.00	\$0.00	\$8,749.48	\$8,749.48					2.3.1.4 INTERIOR WASTEWATER SYSTEM					
	T&SC-39i 2.3.2.1 ELECTRICAL EQUIPMENT	01-Oct-15 A	28-Feb-18 A	100%	28	0.00	\$0.00	\$1,420,244.55	\$1,420,244.55					2.3.2.1 ELECTRICAL EQUIPMENT					
	T&SC-39i 2.3.2.2 MEDIUM TENSION (MT) CONNECTION P	01-Jun-16 A	28-Feb-18 A	100%	398	0.00	\$0.00	\$27,607.83	\$27,607.83					2.3.2.2 MEDIUM TENSION (MT) CONNECTION POINT					
	T&SC-39i 2.3.2.3 INTERIOR CONDUIT	01-Nov-16 A	15-Jan-18 A	100%	71	0.00	\$0.00	\$593,084.41	\$593,084.41					2.3.2.3 INTERIOR CONDUIT					
	T&SC-39i 2.3.2.4 EXTERIOR CONDUIT, RACEWAYS & BOX	01-Apr-16 A	15-Dec-17 A	100%	20	0.00	\$0.00	\$306,852.63	\$306,852.63					2.3.2.4 EXTERIOR CONDUIT, RACEWAYS & BOXES					
	T&SC-39i 2.3.2.5 GROUND MESH & LIGHTNING RODS	01-Dec-15 A	28-Feb-18 A	100%	152	0.00	\$0.00	\$292,684.97	\$292,684.97					2.3.2.5 GROUND MESH & LIGHTNING RODS					
	T&SC-39i 2.3.2.7 SWITCHES, OUTLETS, PUSHBUTTONS	15-May-17 A	15-Jan-18 A	100%	398	0.00	\$0.00	\$20,355.27	\$20,355.27					2.3.2.7 SWITCHES, OUTLETS, PUSHBUTTONS					
	T&SC-39i 2.3.2.8 LIGHTING EQUIPMENT	15-Dec-16 A	15-Jul-17 A	100%	398	0.00	\$0.00	\$386,838.48	\$386,838.48					2.3.2.8 LIGHTING EQUIPMENT					
	T&SC-39i 2.3.2.10 CIVIL WORKS FOR ELECTRIC	01-Mar-16 A	15-Apr-18 A	100%	398	0.00	\$0.00	\$207,855.75	\$207,855.75					2.3.2.10 CIVIL WORKS FOR ELECTRIC					
	T&SC-39i 2.3.3.1 HVAC EQUIPMENT	15-Dec-16 A	15-Feb-19 A	100%	38	0.00	\$0.00	\$1,042,220.29	\$1,042,220.29					2.3.3.1 HVAC EQUIPMENT					
	T&SC-39i 2.3.3.2 HVAC EQUIPMENT ACCESSORIES	15-Apr-17 A	28-Feb-18 A	100%	14	0.00	\$0.00	\$9,573.86	\$9,573.86					2.3.3.2 HVAC EQUIPMENT ACCESSORIES					
	T&SC-39i 2.3.3.3 HVAC PIPING	15-Feb-17 A	15-Jan-18 A	100%	56	0.00	\$0.00	\$449,060.37	\$449,060.37					2.3.3.3 HVAC PIPING					
	T&SC-39i 2.3.3.4 HVAC DUCTWORK	15-Feb-17 A	28-Feb-18 A	100%	63	0.00	\$0.00	\$271,943.63	\$271,943.63					2.3.3.4 HVAC DUCTWORK					
	T&SC-39i 2.3.3.5 HVAC ELECTRICAL	15-Mar-17 A	15-Dec-17 A	100%	181	0.00	\$0.00	\$983.10	\$983.10					2.3.3.5 HVAC ELECTRICAL					
	T&SC-39i 2.3.3.6 HVAC OTHER ITEMS	15-Jun-17 A	28-Feb-18 A	100%	116	0.00	\$0.00	\$75,706.20	\$75,706.20					2.3.3.6 HVAC OTHER ITEMS					
	T&SC-39i 2.3.4 MECHANICAL	01-May-16 A	15-Dec-17 A	100%	219	0.00	\$0.00	\$474,182.94	\$474,182.94					2.3.4 MECHANICAL					
	T&SC-39i 2.3.5 PIPING	01-Jan-17 A	15-Jan-18 A	100%	63	0.00	\$0.00	\$202,791.94	\$202,791.94					2.3.5 PIPING					
	T&SC-39i 2.3.6 FIRE DETECTION AND EXTINCTION	15-Dec-16 A	31-May-18 A	100%	17	0.00	\$0.00	\$114,385.02	\$114,385.02					2.3.6 FIRE DETECTION AND EXTINCTION					
	T&SC-39i 3.1 HEAVY WORK LOWER ENCLOSURE MAIN TI	01-Oct-15 A	15-Mar-17 A	100%	109	0.00	\$0.00	\$1,135,230.98	\$1,135,230.98					3.1 HEAVY WORK LOWER ENCLOSURE MAIN TELESCOPE					
	T&SC-39i 3.2 HEAVY WORK PIER MAIN TELESCOPE	01-Oct-15 A	30-Apr-17 A	100%	109	0.00	\$0.00	\$940,422.59	\$940,422.59					3.2 HEAVY WORK PIER MAIN TELESCOPE					
	T&SC-39i 4.1 HEAVY WORK LOWER ENCLOSURE CALIBR	01-Oct-15 A	15-Dec-17 A	100%	14	0.00	\$0.00	\$75,119.88	\$75,119.88					4.1 HEAVY WORK LOWER ENCLOSURE CALIBRATION TELES.					
	T&SC-39i TERMINATIONS LOWER ENCLOSURE TELESCC	15-Mar-17 A	15-Dec-17 A	100%	11	0.00	\$0.00	\$11,296.74	\$11,296.74					TERMINATIONS LOWER ENCLOSURE TELESCOPE CALIBRATION					
	T&SC-39i 4.2 PIER CALIBRATION TELESCOPE	01-Oct-15 A	15-Jun-17 A	100%	14	0.00	\$0.00	\$15,212.53	\$15,212.53					4.2 PIER CALIBRATION TELESCOPE					
	T&SC-39i 5.1 MASSIVE EARTH MOVING AND SLOPE FORT	01-Apr-15 A	15-Dec-17 A	100%	118	0.00	\$0.00	\$771,588.85	\$771,588.85					5.1 MASSIVE EARTH MOVING AND SLOPE FORTIFICATION					
	T&SC-39i 5.2 OTHER ITEMS - SERVICE BUILDING HEAVY I	01-Sep-16 A	15-Jan-18 A	100%	45	0.00	\$0.00	\$35,484.64	\$35,484.64					5.2 OTHER ITEMS - SERVICE BUILDING HEAVY WORK					
	T&SC-39i 5.3 OTHER HEAVY WORK - LSST TELESCOPE	01-Jan-17 A	15-Apr-17 A	100%	109	0.00	\$0.00	\$86,458.98	\$86,458.98					5.3 OTHER HEAVY WORK - LSST TELESCOPE					
	T&SC-39i 5.4 OTHER THICK WORK - CALIBRATION TELES	02-May-16 A	31-May-16 A	100%	14	0.00	\$0.00	\$12,678.47	\$12,678.47					5.4 OTHER THICK WORK - CALIBRATION TELESCOPE					
	T&SC-39i 5.5 OTHER FINISHES SERVICE BUILDING	01-Jan-17 A	15-Jan-18 A	100%	195	0.00	\$0.00	\$292,153.27	\$292,153.27					5.5 OTHER FINISHES SERVICE BUILDING					
	T&SC-39i 5.6 CENTRALIZED CONTROL	15-Dec-16 A	15-Feb-19 A	100%	116	0.00	\$0.00	\$165,289.02	\$165,289.02					5.6 CENTRALIZED CONTROL					
	T&SC-39i 5.7 MISCELLANEOUS WORK	01-Apr-16 A	15-Aug-17 A	100%	45	0.00	\$0.00	\$70,533.05	\$70,533.0										

## LSST May 2019 Month End Forecast

Activity ID	Activity Name	Start	Finish	Physical % Complete	Original Duration	Budgeted Labor Units	Budgeted Labor Cost	Budgeted Material Cost	Budgeted Total Cost no	Total Float	FY2015 2014-10-01	FY2016 2015-10-01	FY2017 2016-10-01	FY2018 2017-10-01	FY2019 2018-10-01	FY2020 2019-10-01	FY2021 2020-10-01	FY2022 2021-10-01
T&SC-46	Summit Lodging and Dining Construction	30-Nov-18 A	02-Dec-19	85%	124	0.00	\$0.00	\$427,220.66	\$427,220.66	228								
	Lodging Ready to Occupy		02-Dec-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	228								
	Summit Lodging and Dining Construction Managem	15-Nov-18 A	29-Aug-19	85%	124	401.04	\$20,000.00	\$0.00	\$20,000.00	289								
LSST ME 19-05.04C.04 Dome					01-Aug-14 A	13-Apr-20		1442	6018.42	\$589,977.18	\$17,143,518.11	\$17,733,495.29	887					
LSST ME 19-05.04C.04.01 Dome System Management					01-Aug-14 A	13-Apr-20		1442	6018.42	\$589,977.18	\$355,118.12	\$945,095.30	36					
T&SC-53	Dome System Management - FY 1 - LOE Labor	01-Aug-14 A	30-Sep-14 A	100%	42	150.00	\$13,489.50	\$0.00	\$13,489.50									
T&SC-53	Dome System Management - FY 2 - LOE Labor	01-Oct-14 A	30-Sep-15 A	100%	252	2700.00	\$256,284.00	\$0.00	\$256,284.00									
T&SC-53	Dome System Management - FY 3 - LOE Labor	01-Oct-15 A	29-Jul-16 A	100%	210	1586.42	\$155,850.00	\$0.00	\$155,850.00									
T&SC-53	Dome System Management - FY 4 - LOE Labor	03-Jul-17 A	29-Sep-17 A	100%	63	600.00	\$61,008.00	\$0.00	\$61,008.00									
T&SC-53	Dome System Management - FY 5 - LOE Labor	02-Oct-17 A	28-Sep-18 A	100%	253	982.00	\$103,345.68	\$0.00	\$103,345.68									
T&SC-53	Dome System Management - LOE NonLabor	01-Aug-14 A	29-Sep-17 A	100%	814	0.00	\$0.00	\$45,693.82	\$45,693.82									
T&SC-53	Dome System Management - LOE NonLabor - Italy	01-Jun-15 A	30-Sep-15 A	100%	87	0.00	\$0.00	\$10,934.60	\$10,934.60									
T&SC-53	Dome System Management - LOE NonLabor - Italy	01-Oct-15 A	30-Sep-16 A	100%	254	0.00	\$0.00	\$144,802.91	\$144,802.91									
T&SC-53	Dome System Management - LOE NonLabor - Italy	01-Oct-16 A	24-Jul-17 A	100%	191	0.00	\$0.00	\$69,322.29	\$69,322.29									
T&SC-53	Dome System Management - Summit Prep	03-Oct-16 A	29-Sep-17 A	100%	254	0.00	\$0.00	\$84,364.50	\$84,364.50									
T&SC-53	Dome Contract Review and Approval	01-Aug-14 A	01-Apr-15 A	100%	81	0.00	\$0.00	\$0.00	\$0.00									
T&SC-53	Dome Bids Due		06-Oct-14 A	100%	0	0.00	\$0.00	\$0.00	\$0.00									
T&SC-53	Dome Bid Committee Review Effort	15-Dec-14 A	18-Dec-14 A	100%	20	0.00	\$0.00	\$0.00	\$0.00									
T&SC-53	Dome Bid Committee Preliminary Recommendation	22-Dec-14 A	05-Jan-15 A	100%	15	0.00	\$0.00	\$0.00	\$0.00									
T&SC-53	Dome Bid Award Recommendation to AMCL	12-Jan-15 A	30-Jan-15 A	100%	5	0.00	\$0.00	\$0.00	\$0.00									
T&SC-53	Dome Bid Award Recommendation to NSF	02-Feb-15 A	01-Apr-15 A	100%	102	0.00	\$0.00	\$0.00	\$0.00									
T&SC-53	Dome Contract Fabrication Award	01-Apr-15 A		100%	0	0.00	\$0.00	\$0.00	\$0.00									
T&SC-53	Dome Contract Close Out		07-Apr-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	40								
T&SC-53	Dome Subsystem Complete		13-Apr-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	36								
LSST ME 19-05.04C.04.02 Dome Fabrication Contract					04-May-15 A	13-Apr-20		1254	0.00	\$0.00	\$16,183,509.99	\$16,183,509.99	887					
LSST ME 19-05.04C.04.02.01 Dome Fabrication Contract V					04-May-15 A	06-Apr-20		1249	0.00	\$0.00	\$5,601,975.51	\$5,601,975.51	36					
T&SC-	M0 - Kick off meeting	04-May-15 A		100%	0	0.00	\$0.00	\$0.00	\$0.00									
T&SC-	M1 - Interface Review	20-Oct-15 A		100%	0	0.00	\$0.00	\$0.00	\$0.00									
T&SC-	M2 - Preliminary design review	20-Oct-15 A		100%	0	0.00	\$0.00	\$0.00	\$0.00									
T&SC-	M3 - Long Lead Procurement	03-Nov-15 A		100%	0	0.00	\$0.00	\$0.00	\$0.00									
T&SC-	M4 - Final design review	06-Jun-16 A		100%	0	0.00	\$0.00	\$0.00	\$0.00									
T&SC-	M5 - Material Delivery Batch 1	03-Apr-17 A		100%	0	0.00	\$0.00	\$0.00	\$0.00									
T&SC-	M6 - Material Delivery Batch 2	27-Feb-17 A		100%	0	0.00	\$0.00	\$0.00	\$0.00									
T&SC-	M7 - Material Delivery Batch 3	08-Jul-17 A		100%	0	0.00	\$0.00	\$0.00	\$0.00									
T&SC-	M8 - Material Delivery Batch 4		22-Dec-17 A	100%	0	0.00	\$0.00	\$0.00	\$0.00									
T&SC-	M9 - Material Delivery Batch 5		23-Apr-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00									
T&SC-	M10 - Material Delivery Batch 6		20-Jun-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00									
T&SC-	M11 - Material Delivery Batch 7		03-Dec-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00									
T&SC-	M12 - Material Delivery Batch 8		07-Jun-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	243								
T&SC-	M13 - Final Shipment Review		03-Dec-18 A	0%	0	0.00	\$0.00	\$0.00	\$0.00									
T&SC-	M14 - On Site Assembly and Intallation (OAI) Plan R		30-Nov-17 A	100%	0	0.00	\$0.00	\$0.00	\$0.00									
T&SC-	M15 - On Site Acceptance Test (OAT) Plan Review		28-Sep-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00									
T&SC-	M16 - On Site Acceptance Test (OAT) Final Review		06-Apr-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	36								
T&SC-	M0 - Kick off meeting	04-May-15 A		100%	0	0.00	\$0.00	\$0.00	\$0.00									
T&SC-	M0 - Payment Lead Time	27-May-15 A	16-Jun-15 A	100%	44	0.00	\$0.00	\$0.00	\$0.00									
T&SC-	M0 - Payment	16-Jun-15 A	16-Jun-15 A	100%	5	0.00	\$0.00	\$2,190,000.00	\$2,190,000.00									
T&SC-	Global 3D model & 2D drawings	04-May-15 A	25-Sep-15 A	100%	110	0.00	\$0.00	\$0.00	\$0.00									
T&SC-	Global Fea model and analysis	25-May-15 A	11-Sep-15 A	100%	80	0.00	\$0.00	\$0.00	\$0.00									
T&SC-	Main structure design	04-May-15 A	02-Oct-15 A	100%	110	0.00	\$0.00	\$0.00	\$0.00									
T&SC-	Main mechanisms design	11-May-15 A	11-Sep-15 A	100%	90	0.00	\$0.00	\$0.00	\$0.00									
T&SC-	Cooling plant general layout	26-May-15 A	22-Sep-15 A	100%	86	0.00	\$0.00	\$0.00	\$0.00									
T&SC-	Electrical installation general layout	26-May-15 A	24-Sep-15 A	100%	88	0.00	\$0.00	\$0.00	\$0.00									
T&SC-	Control system general architecture	23-Jun-15 A	24-Sep-15 A	100%	68	0.00	\$0.00	\$0.00	\$0.00									
T&SC-	RAMS preliminary analysis	01-Jul-15 A	11-Sep-15 A	100%	60	0.00	\$0.00	\$0.00	\$0.00									
T&SC-	Documents preparation	27-Jul-15 A	02-Oct-15 A	100%	50	0.00	\$0.00	\$0.00	\$0.00									
T&SC-	Delivery documents for PDR	05-Oct-15 A		100%	0	0.00	\$0.00	\$0.00	\$0.00									
T&SC-	M1 - Interface Review	20-Oct-15 A		100%	0	0.00	\$0.00	\$0.00	\$0.00									
T&SC-	M2 - Preliminary design review	20-Oct-15 A		100%	0	0.00	\$0.00	\$0.00	\$0.00									
T&SC-	M2 - Payment Lead Time	20-Oct-15 A	20-Nov-15 A	100%	43	0.00	\$0.00	\$0.00	\$0.00									
T&SC-	M2 - Payment	20-Oct-15 A	30-Nov-15 A	100%	5	0.00	\$0.00	\$1,642,500.00	\$1,642,500.00									
T&SC-	Execute Legal assistnace to secure the Dome contra	01-Feb-16 A	05-Feb-16 A	100%	5	0.00	\$0.00	\$46,754.00	\$46,754.00									
T&SC-	Long lead procurement payment on Embedded Plat	01-Feb-16 A	05-Feb-16 A	100%	5	0.00	\$0.00	\$80,221.51	\$80,221.51									
T&SC-	M3 - Long Lead Procurement	03-Nov-15 A		100%	0	0.00	\$0.00	\$0.00	\$0.00									
T&SC-	Global 3D model & 2D drawings	04-May-15 A	25-Sep-15 A	100%	115	0.00	\$0.00	\$0.00	\$0.00									
T&SC-	Global Fea model updating and analysis	28-Oct-15 A	09-May-16 A	100%	90	0.00	\$0.00	\$0.00	\$0.00									
T&SC-	Main structure design updating	21-Oct-15 A	16-May-16 A	100%	105	0.00	\$0.00	\$0.00	\$0.00									
T&SC-	Mechanisms design updating	18-Nov-15 A	16-May-16 A	100%	105	0.00	\$0.00	\$0.00	\$0.00									
T&SC-	Cooling plant updating	10-Dec-15 A	19-May-16 A	100%	70	0.00	\$0.00	\$0.00	\$0.00									
T&SC-	Electrical installation updating	12-Feb-16 A	19-May-16 A	100%	70	0.00	\$0.00	\$0.00	\$0.00									
T&SC-	Control system updating	10-Dec-15 A	19-May-16 A	100%	70	0.00	\$0.00	\$0.00	\$0.00									
T&SC-	RAMS analysis updating	12-Feb-16 A	23-May-16 A	100%	70	0.00	\$0.00	\$0.00	\$0.00									
T&SC-	Documents preparations	25-Mar-16 A	23-May-16 A	100%	45	0.00	\$0.00	\$0.00	\$0.00									



LSST May 2019 Month End Forecast											FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022
Activity ID	Activity Name	Start	Finish	Physical % Complete	Original Duration	Budgeted Labor Units	Budgeted Labor Cost	Budgeted Material Cost	Budgeted Total Cost no	Total Float	2014-10-01	2015-10-01	2016-10-01	2017-10-01	2018-10-01	2019-10-01	2020-10-01	2021-10-01
T&SC-	Delivery of documents for FRD	23-May-16 A		100%	0	0.00	\$0.00	\$0.00	\$0.00				Delivery of documents for FRD					
	M4 - Final design review	06-Jun-16 A		100%	0	0.00	\$0.00	\$0.00	\$0.00				M4 - Final design review					
	M4 - Payment Lead Time	08-Feb-17 A	08-Feb-17 A	100%	45	0.00	\$0.00	\$0.00	\$0.00				M4 - Payment Lead Time					
	M4 - Payment	30-Jun-16 A	31-Jan-17 A	100%	5	0.00	\$0.00	\$1,642,500.00	\$1,642,500.00				M4 - Payment					
	LSST ME 19-05.04C.04.02.02 Fabrication Phase	05-Oct-15 A	31-Dec-19		963	0.00	\$0.00	\$3,561,954.50	\$3,561,954.50	958								
T&SC-	Embedded plate	05-Oct-15 A	15-Jan-16 A	100%	25	0.00	\$0.00	\$0.00	\$0.00				Embedded plate					
T&SC-	Azimuth rail	23-May-16 A	22-Jan-17 A	100%	30	0.00	\$0.00	\$0.00	\$0.00				Azimuth rail					
T&SC-	M5 - Material Delivery Batch 1	03-Apr-17 A		100%	0	0.00	\$0.00	\$0.00	\$0.00				M5 - Material Delivery Batch 1					
T&SC-	M5 - Payment Lead Time	03-Apr-17 A	04-Apr-17 A	100%	45	0.00	\$0.00	\$0.00	\$0.00				M5 - Payment Lead Time					
T&SC-	M5 - Payment	18-Jan-16 A	07-Feb-17 A	100%	5	0.00	\$0.00	\$821,250.00	\$821,250.00				M5 - Payment					
T&SC-	Telescope Dome System inflatable seal system	01-Mar-16 A	31-Mar-16 A	100%	6	0.00	\$0.00	\$43,061.51	\$43,061.51				Telescope Dome System inflatable seal system					
T&SC-	Azimuth Box Beam	10-Oct-16 A	21-Feb-17 A	100%	60	0.00	\$0.00	\$0.00	\$0.00				Azimuth Box Beam					
T&SC-	Azimuth bogies	03-Oct-16 A	31-Jan-17 A	100%	60	0.00	\$0.00	\$0.00	\$0.00				Azimuth bogies					
T&SC-	M6 - Material Delivery Batch 2	27-Feb-17 A		100%	0	0.00	\$0.00	\$0.00	\$0.00				M6 - Material Delivery Batch 2					
T&SC-	M6 - Payment Lead Time	03-Oct-16 A	26-Apr-17 A	100%	44	0.00	\$0.00	\$0.00	\$0.00				M6 - Payment Lead Time					
T&SC-	M6 - Payment	03-Oct-16 A	26-Apr-17 A	100%	5	0.00	\$0.00	\$547,500.00	\$547,500.00				M6 - Payment					
T&SC-	Dome Capacitor Bank / Azimuth Drive Upgrade CRE	01-Nov-16 A	10-Jun-19	60%	6	0.00	\$0.00	\$60,000.00	\$60,000.00	247								
T&SC-	Telescope Dome System embedded plates for azimuth	01-Mar-16 A	31-Mar-16 A	100%	6	0.00	\$0.00	\$37,160.00	\$37,160.00				Telescope Dome System embedded plates for azimuth drive system					
T&SC-	Arch girders	01-May-17 A	21-Feb-18 A	100%	50	0.00	\$0.00	\$0.00	\$0.00				Arch girders					
T&SC-	Columns and Side Walls	01-May-17 A	22-Dec-17 A	100%	40	0.00	\$0.00	\$0.00	\$0.00				Columns and Side Walls					
T&SC-	Roof	01-May-17 A	05-Apr-18 A	100%	30	0.00	\$0.00	\$0.00	\$0.00				Roof					
T&SC-	Bi-partisan Aperture Shutter trolleys	01-May-17 A	19-Feb-18 A	100%	45	0.00	\$0.00	\$0.00	\$0.00				Bi-partisan Aperture Shutter trolleys					
T&SC-	M7 - Material Delivery Batch 3		08-Jul-17 A	100%	0	0.00	\$0.00	\$0.00	\$0.00				M7 - Material Delivery Batch 3					
T&SC-	M7 - Payment Lead Time	10-Jul-17 A	31-Oct-17 A	100%	44	0.00	\$0.00	\$0.00	\$0.00				M7 - Payment Lead Time					
T&SC-	M7 - Payment	30-Oct-17 A	31-Oct-17 A	100%	5	0.00	\$0.00	\$273,750.00	\$273,750.00				M7 - Payment					
T&SC-	M7 - Split Payment	30-Oct-17 A	31-Oct-17 A	100%	5	0.00	\$0.00	\$192,978.00	\$192,978.00				M7 - Split Payment					
T&SC-	Bi-partisan Aperture Shutter	01-Sep-17 A	23-Apr-18 A	100%	171	0.00	\$0.00	\$0.00	\$0.00				Bi-partisan Aperture Shutter					
T&SC-	Rear access door	18-Apr-18 A	02-Jul-19	30%	22	0.00	\$0.00	\$0.00	\$0.00	118								
T&SC-	M8 - Material Delivery Batch 4		22-Dec-17 A	100%	0	0.00	\$0.00	\$0.00	\$0.00				M8 - Material Delivery Batch 4					
T&SC-	M8 - Payment Lead Time	25-Dec-17 A	31-Jan-18 A	100%	44	0.00	\$0.00	\$0.00	\$0.00				M8 - Payment Lead Time					
T&SC-	M8 - Payment	26-Mar-18 A	26-Mar-18 A	100%	5	0.00	\$0.00	\$219,000.00	\$219,000.00				M8 - Payment					
T&SC-	Stairs, ladders, Walkways, platforms	08-Jan-18 A	03-Jun-19	30%	201	0.00	\$0.00	\$0.00	\$0.00	1104								
T&SC-	Louvers first part	25-Jan-18 A	03-Jun-19	45%	213	0.00	\$0.00	\$0.00	\$0.00	177								
T&SC-	M9 - Material Delivery Batch 5		23-Apr-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00				M9 - Material Delivery Batch 5					
T&SC-	M9 - Payment	08-Jun-18 A	08-Jun-18 A	100%	1	0.00	\$0.00	\$219,000.00	\$219,000.00				M9 - Payment					
T&SC-	Louvers second part	04-Sep-19	18-Nov-19	0%	54	0.00	\$0.00	\$0.00	\$0.00	129								
T&SC-	Azimuth motors, Shutter motors	15-Feb-19 A	10-Jun-19	25%	6	0.00	\$0.00	\$0.00	\$0.00	127								
T&SC-	Light/Windscreen	15-May-19 A	03-Jun-19	10%	265	0.00	\$0.00	\$0.00	\$0.00	-26								
T&SC-	Locking pins, Hard Stops, Limit Switches	15-May-19 A	28-Jun-19	10%	20	0.00	\$0.00	\$0.00	\$0.00	139								
T&SC-	M10 - Material Delivery Batch 6		20-Jun-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00				M10 - Material Delivery Batch 6					
T&SC-	M10 - Payment Lead Time	29-Jun-18 A	29-Jun-18 A	100%	44	0.00	\$0.00	\$0.00	\$0.00				M10 - Payment Lead Time					
T&SC-	M10 - Payment	01-Feb-19 A	01-Feb-19 A	100%	5	0.00	\$0.00	\$291,000.00	\$291,000.00				M10 - Payment					
T&SC-	OBC Crane & Handling equipment	15-Feb-19 A	12-Aug-19	40%	343	0.00	\$0.00	\$0.00	\$0.00	139								
T&SC-	Calibration Screen Support Structure	10-Jun-19	18-Sep-19	0%	71	0.00	\$0.00	\$0.00	\$0.00	177								
T&SC-	Az. Motors, Drive & Capacitor bank	01-Sep-17 A	03-Jun-19	60%	357	0.00	\$0.00	\$0.00	\$0.00	1104								
T&SC-	Seals and Air Tight	27-Nov-17 A	31-Dec-19	50%	284	0.00	\$0.00	\$0.00	\$0.00	102								
T&SC-	Electrical Installation first part	03-Jun-19	31-Oct-19	0%	107	0.00	\$0.00	\$0.00	\$0.00	33								
T&SC-	M11 - Material Delivery Batch 7		03-Dec-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00				M11 - Material Delivery Batch 7					
T&SC-	M11 - Payment Lead Time	03-Dec-18 A	03-Dec-18 A	100%	44	0.00	\$0.00	\$0.00	\$0.00				M11 - Payment Lead Time					
T&SC-	M11 - Payment	03-Dec-18 A	07-Dec-18 A	100%	5	0.00	\$0.00	\$273,750.00	\$273,750.00				M11 - Payment					
T&SC-	Electrical installation Second Part	01-Nov-19	31-Dec-19	0%	39	0.00	\$0.00	\$0.00	\$0.00	33								
T&SC-	Thermal Control System	15-Feb-19 A	23-Aug-19	25%	238	0.00	\$0.00	\$0.00	\$0.00	-60								
T&SC-	M12 - Material Delivery Batch 8		07-Jun-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	243								
T&SC-	M12 - Payment Lead Time	01-Apr-19 A	03-Jun-19	0%	1	0.00	\$0.00	\$0.00	\$0.00	247								
T&SC-	M12B - Payment	03-Dec-18 A	07-Jun-19	50%	5	0.00	\$0.00	\$191,625.00	\$191,625.00	243								
T&SC-	M12C - Payment	03-Dec-18 A	07-Jun-19	35%	5	0.00	\$0.00	\$191,625.00	\$191,625.00	243								
T&SC-	M13 - Final Shipment Review		03-Dec-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00				M13 - Final Shipment Review					
T&SC-	M13 - Payment Lead Time	03-Dec-18 A	03-Dec-18 A	100%	44	0.00	\$0.00	\$0.00	\$0.00				M13 - Payment Lead Time					
T&SC-	M13 - Payment	04-Dec-18 A	07-Dec-18 A	100%	5	0.00	\$0.00	\$164,250.00	\$164,250.00				M13 - Payment					
T&SC-	OBC Hook and Cable Procurement 50% Payment	04-Jun-18 A	08-Jun-18 A	100%	1	0.00	\$0.00	\$18,950.00	\$18,950.00				OBC Hook and Cable Procurement 50% Payment					
T&SC-	OBC Hook and Cable Final Development	03-Jun-19	29-Jul-19	0%	40	0.00	\$0.00	\$0.00	\$0.00	148								
T&SC-	OBC Hook and Cable Shipment Review 45% Payment	30-Jul-19	30-Jul-19	0%	1	0.00	\$0.00	\$17,055.00	\$17,055.00	148								
T&SC-	Azimuth Box Beam Pre-assembly and Packing	01-Feb-17 A	17-Feb-17 A	100%	125	0.00	\$0.00	\$0.00	\$0.00				Azimuth Box Beam Pre-assembly and Packing					
LSST ME 19-05.04C.04.02.05 Installation of Dome onto Site	18-Oct-16 A	13-Apr-20			952	0.00	\$0.00	\$7,019,579.98	\$7,019,579.98	146								
	Site mobilization	27-Mar-17 A	20-May-17 A	100%	15	0.00	\$0.00	\$0.00	\$0.00				Site mobilization					
	Concrete curing & shape stabilization	11-Nov-16 A	16-Jan-17 A	100%	64	0.00	\$0.00	\$0.00	\$0.00				Concrete curing & shape stabilization					
	Embedded plate alignment and grouting	06-May-17 A	14-Nov-17 A	100%	43	0.00	\$0.00	\$0.00	\$0.00				Embedded plate alignment and grouting					
	Concrete pier ready for Enclosure installation	18-Nov-16 A		100%	0	0.00	\$0.00	\$0.00	\$0.00				Concrete pier ready for Enclosure installation					
T&SC-	Embedded installation and radial alignment	18-Oct-16 A	18-Nov-16 A	100%	20	0.00	\$0.00	\$0.00	\$0.00				Embedded installation and radial alignment					
T&SC-	M14 - On Site Assembly and Intallation (OAI) Plan Review		30-Nov-17 A	100%	0	0.00	\$0.00	\$0.00	\$0.00				M14 - On Site Assembly and Intallation (OAI) Plan Review					
T&SC-	Azimuth Rail	23-Oct-17 A	24-Mar-18 A	100%	56	0.00	\$0.00	\$0.00	\$0.00				Azimuth Rail					
T&SC-	M14 - Payment Lead Time	28-Nov-17 A	29-Nov-17 A	100%	44	0.00	\$0.00	\$0.00	\$0.00				M14 - Payment Lead Time					

## LSST May 2019 Month End Forecast

Activity ID	Activity Name	Start	Finish	Physical % Complete	Original Duration	Budgeted Labor Units	Budgeted Labor Cost	Budgeted Material Cost	Budgeted Total Cost no	Total Float	FY2015 2014-10-01	FY2016 2015-10-01	FY2017 2016-10-01	FY2018 2017-10-01	FY2019 2018-10-01	FY2020 2019-10-01	FY2021 2020-10-01	FY2022 2021-10-01	
	T&SC- Az. Box Beam & Bogies installation	24-Nov-17 A	18-Jan-18 A	100%	14	0.00	\$0.00	\$0.00	\$0.00										
	T&SC- Side Walls - Steps 01 and 02	13-Feb-18 A	28-Mar-18 A	100%	15	0.00	\$0.00	\$0.00	\$0.00										
	T&SC- Side Walls - Step 03	01-May-18 A	18-May-18 A	100%	10	0.00	\$0.00	\$0.00	\$0.00										
	T&SC- Winter shut down (TBC)	09-Aug-17 A	09-Feb-18 A	100%	128	0.00	\$0.00	\$0.00	\$0.00										
	T&SC- M14 - Payment	29-Nov-17 A	30-Nov-17 A	100%	5	0.00	\$0.00	\$1,095,000.00	\$1,095,000.00										
	T&SC- Side Walls - Steps 01	13-Feb-18 A	02-Mar-18 A	100%	9	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
	T&SC- Side Walls - Steps 02	05-Mar-18 A	28-Mar-18 A	100%	10	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
	T&SC- Modify Dome System Light Baffle Louver Designs Payment #1 40%	05-Mar-18 A	05-Mar-18 A	100%	5	0.00	\$0.00	\$286,800.00	\$286,800.00										
	T&SC- Dome Air Distribution System Ducting and Fans Payment #1 40%	05-Mar-18 A	05-Mar-18 A	100%	5	0.00	\$0.00	\$10,000.00	\$10,000.00										
	T&SC- Side Walls - 03 and 04	23-Apr-18 A	18-May-18 A	100%	10	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
	T&SC- Purlings side walls step 01	15-Feb-19 A	20-Jun-19	50%	14	0.00	\$0.00	\$0.00	\$0.00	\$0.00	-15								
	T&SC- Side Walls - Steps 05 to 12	24-Aug-18 A	28-Feb-19 A	100%	18	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
	T&SC- Arch Girder completion	05-Nov-18 A	29-Nov-18 A	100%	5	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
	T&SC- Roof completion	15-Feb-19 A	03-Jun-19	25%	8	0.00	\$0.00	\$0.00	\$0.00	\$0.00	-21								
	T&SC- Bi-partisan Aperture Shutter Lower Part	03-Jun-19	14-Jun-19	0%	10	0.00	\$0.00	\$0.00	\$0.00	\$0.00	-21								
	T&SC- Bi-partisan Aperture Shutter Upper Part	17-Jun-19	28-Jun-19	0%	10	0.00	\$0.00	\$0.00	\$0.00	\$0.00	-21								
	T&SC- Rear Access Door	01-Jul-19	01-Jul-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00	-21								
	T&SC- OBC Hook and Cable Installation 5% Payment	27-Sep-18 A	28-Sep-18 A	100%	5	0.00	\$0.00	\$1,895.00	\$1,895.00										
	T&SC- Louvers First Part	01-Jul-19	03-Sep-19	0%	45	0.00	\$0.00	\$0.00	\$0.00	\$0.00	129								
	T&SC- Light Baffle Louver Designs Material Ready for Shipment	25-Jun-18 A	29-Jun-18 A	100%	1	0.00	\$0.00	\$286,800.00	\$286,800.00										
	T&SC- Light Baffle Louver Designs Shipment Review Payment #3 15%	03-Dec-18 A	07-Dec-18 A	100%	5	0.00	\$0.00	\$107,550.00	\$107,550.00										
	T&SC- Dome Air Distribution System Ducting and Fans Ready for Shipment Payment #2 40%	03-Dec-18 A	07-Dec-18 A	100%	5	0.00	\$0.00	\$10,000.00	\$10,000.00										
	T&SC- Dome Air Distribution System Ducting and Fans Shipment Review Payment #3 15%	03-Dec-18 A	07-Dec-18 A	100%	5	0.00	\$0.00	\$3,750.00	\$3,750.00										
	T&SC- M15 - Payment	28-Sep-18 A	28-Sep-18 A	100%	5	0.00	\$0.00	\$492,750.00	\$492,750.00										
	T&SC- M16 - On Site Acceptance Test (OAT) Final Review		06-Apr-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00	36								
	T&SC- Light Baffle Louver Designs On Site Acceptance Test Payment #4 5%	31-Mar-20	06-Apr-20	0%	5	0.00	\$0.00	\$35,850.00	\$35,850.00		41								
	T&SC- Dome Air Distribution System Ducting and Fans On Site Acceptance Test	31-Mar-20	06-Apr-20	0%	5	0.00	\$0.00	\$1,250.00	\$1,250.00		41								
	T&SC- Dome Installation Complete		06-Apr-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00	41								
	T&SC- M16 - Payment	07-Apr-20	13-Apr-20	0%	5	0.00	\$0.00	\$561,522.00	\$561,522.00		36								
	T&SC- Contracting of construction cranes (100-ton and 60-ton)	01-Feb-19 A	30-Apr-19 A	100%	63	0.00	\$0.00	\$210,000.01	\$210,000.01										
	T&SC- Contracting of construction cranes (100-ton and 60-ton)	01-May-19 A	31-Jul-19	25%	63	0.00	\$0.00	\$180,000.00	\$180,000.00		321								
	T&SC- Contracting of construction labor (steel erectors/welders, operators, foreman, technical coordinators)	01-Feb-19 A	30-Apr-19 A	100%	63	0.00	\$0.00	\$200,000.00	\$200,000.00										
	T&SC- Award Crane construction Contract	01-Feb-19 A	01-Feb-19 A	100%	5	0.00	\$0.00	\$250,000.00	\$250,000.00										
	T&SC- Award of Phase Motion Control Contract	01-Feb-19 A	28-Feb-19 A	100%	19	0.00	\$0.00	\$153,198.50	\$153,198.50										
	T&SC- DDD (detail design delivery) Ready for manufacturing	01-Feb-19 A	01-Jul-19	33%	21	0.00	\$0.00	\$214,477.90	\$214,477.90		157								
	T&SC- Control Cabinet hardware ready	02-Jul-19	01-Aug-19	0%	22	0.00	\$0.00	\$30,639.70	\$30,639.70		157								
	T&SC- Hardware ready, Genoa plant except cap bank	01-May-19 A	01-May-19 A	100%	23	0.00	\$0.00	\$61,279.40	\$61,279.40										
	T&SC- Capacitor cabinet ready	01-May-19 A	01-May-19 A	100%	20	0.00	\$0.00	\$91,919.10	\$91,919.10										
	T&SC- Onsite commissioning	03-Jun-19	30-Aug-19	0%	64	0.00	\$0.00	\$61,279.40	\$61,279.40		189								
	T&SC- Weather Delays Budget	01-Feb-19 A	01-Feb-19 A	100%	1	0.00	\$0.00	\$806,476.00	\$806,476.00										
	T&SC- Fabrication of Dome Roof Purlin in Chile	15-Feb-19 A	15-Mar-19 A	100%	63	0.00	\$0.00	\$100,000.00	\$100,000.00										
	T&SC- Dome Structure - Chilean Seismic Standards Impact	01-May-19 A	31-May-19 A	100%	1	0.00	\$0.00	\$765,610.00	\$765,610.00										
	T&SC- Dome Facility ICD and Louver Impact	01-May-19 A	31-May-19 A	100%	20	0.00	\$0.00	\$725,389.97	\$725,389.97										
	T&SC- Dome Stairs and Walkways CR	01-May-19 A	31-May-19 A	100%	20	0.00	\$0.00	\$276,143.00	\$276,143.00										
	LSST ME 19-05.04C.04.02.05.1 ON SITE ASSEMBLY INTERIOR	01-Feb-19 A	02-Mar-20		264	0.00	\$0.00	\$0.00	\$0.00	\$0.00	37								
	LSST ME 19-05.04C.04.02.05.1.1 Dome structure	01-Feb-19 A	02-Mar-20		264	0.00	\$0.00	\$0.00	\$0.00	\$0.00	37								
	Main Dome Platform	15-Mar-19 A	14-Jun-19	50%	10	0.00	\$0.00	\$0.00	\$0.00	\$0.00	124								
	Dome Structure enclosed	26-Aug-19		0%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00	-60								
	Start Replan	01-Feb-19 A		100%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
	Heavy Steel Assembly complete	17-Jun-19		0%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00	-34								
LSST ME 19-05.04C.04.02.05.1.1.1 Steel Structure Interior	08-Feb-19 A	15-Jul-19		112	0.00	\$0.00	\$0.00	\$0.00	\$0.00	124									
Bi-partisan Aperture Shutter Left side	15-Apr-19 A	14-Jun-19	10%	10	0.00	\$0.00	\$0.00	\$0.00	\$0.00	144									
Bi-partisan Aperture Shutter Right side	15-Apr-19 A	14-Jun-19	10%	10	0.00	\$0.00	\$0.00	\$0.00	\$0.00	-34									
LSST ME 19-05.04C.04.02.05.1.1.1.1 Side Walls and Purlins	08-Feb-19 A	07-Jun-19		25	0.00	\$0.00	\$0.00	\$0.00	\$0.00	-39									
ApS Lower guide	15-Feb-19 A	07-Jun-19	50%	5	0.00	\$0.00	\$0.00	\$0.00	\$0.00	-39									
Roof completion	08-Feb-19 A	20-Mar-19 A	100%	20	0.00	\$0.00	\$0.00	\$0.00	\$0.00										
ApS lower guide final alignment	15-Feb-19 A	07-Jun-19	50%	5	0.00	\$0.00	\$0.00	\$0.00	\$0.00	-39									
LSST ME 19-05.04C.04.02.05.1.1.1.2 Purlins	15-May-19 A	15-Jul-19		67	0.00	\$0.00	\$0.00	\$0.00	\$0.00	-34									
Roof - Left side	15-May-19 A	07-Jun-19	25%	5	0.00	\$0.00	\$0.00	\$0.00	\$0.00	-9									
Roof - Right side	09-Jul-19	15-Jul-19	25%	5	0.00	\$0.00	\$0.00	\$0.00	\$0.00	-39									
Side Walls - Left side	10-Jun-19	21-Jun-19	0%	10	0.00	\$0.00	\$0.00	\$0.00	\$0.00	-39									
Side Walls - Right side	24-Jun-19	08-Jul-19	0%	10	0.00	\$0.00	\$0.00	\$0.00	\$0.00	-39									
LSST ME 19-05.04C.04.02.05.1.1.2 Access	15-Mar-19 A	01-Jul-19		76	0.00	\$0.00	\$0.00	\$0.00	\$0.00	163									
Azimuth Floor	15-Apr-19 A	14-Jun-19	50%	10	0.00	\$0.00	\$0.00	\$0.00	\$0.00	174									
Stairs, ladders, Walkways, platforms	15-Mar-19 A	01-Jul-19	5%	21	0.00	\$0.00	\$0.00	\$0.00	\$0.00	161									
LSST ME 19-05.04C.04.02.05.1.1.3 External scaffolding	15-Mar-19 A	12-Jun-19		80	0.00	\$0.00	\$0.00	\$0.00	\$0.00	-32									
Left side (below azimuth ring girder)	15-Mar-19 A	06-Jun-19	10%	4	0.00	\$0.00	\$0.00	\$0.00	\$0.00	-32									
Left side (above azimuth ring girder)	15-Mar-19 A	06-Jun-19	10%	4	0.00	\$0.00	\$0.00	\$0.00	\$0.00	-28									
Right side (above azimuth ring girder)	15-Mar-19 A	06-Jun-19	10%	4	0.00	\$0.00	\$0.00	\$0.00	\$0.00	-28									
Right side (below azimuth ring girder)	07-Jun-19	12-Jun-19	0%	4	0.00	\$0.00	\$0.00	\$0.00	\$0.00	-32									
LSST ME 19-05.04C.04.02.05.1.1.4 Cladding	15-May-19 A	04-Feb-20		211	0.00	\$0.00	\$0.00	\$0.00	\$0.00	47									
LSST ME 19-05.04C.04.02.05.1.1.4.1 Dome sandblasting	15-May-19 A	04-Oct-19		134	0.00	\$0.00	\$0.00	\$0.00	\$0.00	-60									

LSST May 2019 Month End Forecast																				
Activity ID	Activity Name	Start	Finish	Physical % Complete	Original Duration	Budgeted Labor Units	Budgeted Labor Cost	Budgeted Material Cost	Budgeted Total Cost no	Total Float		FY2015 2014-10-01	FY2016 2015-10-01	FY2017 2016-10-01	FY2018 2017-10-01	FY2019 2018-10-01	FY2020 2019-10-01	FY2021 2020-10-01	FY2022 2021-10-01	
	Side Walls - Left side	15-May-19 A	14-Jun-19	10%	10	0.00	\$0.00	\$0.00	\$0.00	-34						<div><div></div></div>	Side Walls - Left side			
	Side Walls - Right side	15-May-19 A	14-Jun-19	10%	10	0.00	\$0.00	\$0.00	\$0.00	-11						<div><div></div></div>	Side Walls - Right side			
	Roof - Left side	17-Jun-19	26-Jun-19	10%	8	0.00	\$0.00	\$0.00	\$0.00	-19						<div><div></div></div>	Roof - Left side			
	Aperture shutter	17-Jun-19	08-Jul-19	0%	15	0.00	\$0.00	\$0.00	\$0.00	-26						<div><div></div></div>	Aperture shutter			
	Roof - Right side	16-Jul-19	25-Jul-19	0%	8	0.00	\$0.00	\$0.00	\$0.00	-39						<div><div></div></div>	Roof - Right side			
	LSST ME 19-05.04C.04.02.05.1.1.4.1.1 Scaffold	26-Aug-19	04-Oct-19		28	0.00	\$0.00	\$0.00	\$0.00	-60						<div><div></div></div>				
	Scaffolding partial dismantling	26-Aug-19	04-Oct-19	0%	28	0.00	\$0.00	\$0.00	\$0.00	-60						<div><div></div></div>	Scaffolding partial dismantling			
	Left side	26-Aug-19	28-Aug-19	0%	3	0.00	\$0.00	\$0.00	\$0.00	-60						<div><div></div></div>	Left side			
	Righ side	26-Aug-19	28-Aug-19	0%	3	0.00	\$0.00	\$0.00	\$0.00	-60						<div><div></div></div>	Righ side			
	Aperture shutter	29-Aug-19	04-Oct-19	0%	25	0.00	\$0.00	\$0.00	\$0.00	-60						<div><div></div></div>	Aperture shutter			
	LSST ME 19-05.04C.04.02.05.1.1.4.2 Dome corru	07-Oct-19	04-Feb-20		77	0.00	\$0.00	\$0.00	\$0.00	47						<div><div></div></div>				
	Side Walls and Roof	07-Oct-19	17-Dec-19	0%	48	0.00	\$0.00	\$0.00	\$0.00	47						<div><div></div></div>	Side Walls and Roof			
	Scaffolding partial dismantling	18-Dec-19	27-Dec-19	0%	5	0.00	\$0.00	\$0.00	\$0.00	47						<div><div></div></div>	Scaffolding partial dismantling			
	Dome rotation	30-Dec-19	30-Dec-19	0%	1	0.00	\$0.00	\$0.00	\$0.00	47						<div><div></div></div>	Dome rotation			
	Aperture shutter	02-Jan-20	04-Feb-20	0%	23	0.00	\$0.00	\$0.00	\$0.00	47						<div><div></div></div>	Aperture shutter			
	LSST ME 19-05.04C.04.02.05.1.1.5 Mechanisms	15-May-19 A	31-Jan-20		186	0.00	\$0.00	\$0.00	\$0.00	49						<div><div></div></div>				
	Azimuth rotation motors	02-Jan-20	08-Jan-20	0%	5	0.00	\$0.00	\$0.00	\$0.00	33						<div><div></div></div>	Azimuth rotation motors			
	Aperture Shutter Motors	07-Oct-19	11-Oct-19	0%	5	0.00	\$0.00	\$0.00	\$0.00	43						<div><div></div></div>	Aperture Shutter Motors			
	ApS Mechanisms completion	14-Oct-19	25-Oct-19	0%	10	0.00	\$0.00	\$0.00	\$0.00	43						<div><div></div></div>	ApS Mechanisms completion			
	Handling equipment	28-Oct-19	05-Nov-19	0%	5	0.00	\$0.00	\$0.00	\$0.00	47						<div><div></div></div>	Handling equipment			
	Rear Access Door	05-Nov-19	19-Nov-19	0%	10	0.00	\$0.00	\$0.00	\$0.00	80						<div><div></div></div>	Rear Access Door			
	Light/Windscreen	20-Nov-19	02-Jan-20	0%	25	0.00	\$0.00	\$0.00	\$0.00	52						<div><div></div></div>	Light/Windscreen			
	Locking pins	06-Nov-19	12-Nov-19	0%	5	0.00	\$0.00	\$0.00	\$0.00	47						<div><div></div></div>	Locking pins			
	Hard Stops, Limit Switches,	13-Nov-19	19-Nov-19	0%	5	0.00	\$0.00	\$0.00	\$0.00	47						<div><div></div></div>	Hard Stops, Limit Switches,			
	Encoder System	09-Jan-20	15-Jan-20	0%	5	0.00	\$0.00	\$0.00	\$0.00	43						<div><div></div></div>	Encoder System			
	LSST ME 19-05.04C.04.02.05.1.1.5.1 Louvers	15-May-19 A	29-Jul-19		64	0.00	\$0.00	\$0.00	\$0.00	129						<div><div></div></div>				
	First part	15-May-19 A	28-Jun-19	5%	20	0.00	\$0.00	\$0.00	\$0.00	129						<div><div></div></div>	First part			
	Second part	01-Jul-19	29-Jul-19	0%	20	0.00	\$0.00	\$0.00	\$0.00	129						<div><div></div></div>	Second part			
	Third part	01-Jul-19	29-Jul-19	0%	20	0.00	\$0.00	\$0.00	\$0.00	129						<div><div></div></div>	Third part			
	LSST ME 19-05.04C.04.02.05.1.1.5.2 Light Baffles	20-Nov-19	31-Jan-20		45	0.00	\$0.00	\$0.00	\$0.00	49						<div><div></div></div>				
	First batch	20-Nov-19	12-Dec-19	0%	15	0.00	\$0.00	\$0.00	\$0.00	49						<div><div></div></div>	First batch			
	Second batch	13-Dec-19	09-Jan-20	0%	15	0.00	\$0.00	\$0.00	\$0.00	49						<div><div></div></div>	Second batch			
	Third batch	10-Jan-20	31-Jan-20	0%	15	0.00	\$0.00	\$0.00	\$0.00	49						<div><div></div></div>	Third batch			
	LSST ME 19-05.04C.04.02.05.1.1.6 Auxiliary Equip n	29-Aug-19	27-Jan-20		96	0.00	\$0.00	\$0.00	\$0.00	53						<div><div></div></div>				
	LSST ME 19-05.04C.04.02.05.1.1.6.1 Dome Seals	13-Dec-19	27-Jan-20		26	0.00	\$0.00	\$0.00	\$0.00	53						<div><div></div></div>				
	Azimuth rotation inflatable seal	13-Dec-19	19-Dec-19	0%	5	0.00	\$0.00	\$0.00	\$0.00	64						<div><div></div></div>	Azimuth rotation inflatable seal			
	ApS seals	20-Dec-19	02-Jan-20	0%	5	0.00	\$0.00	\$0.00	\$0.00	64						<div><div></div></div>	ApS seals			
	Compressed air Plant	21-Jan-20	27-Jan-20	0%	5	0.00	\$0.00	\$0.00	\$0.00	53						<div><div></div></div>	Compressed air Plant			
	LSST ME 19-05.04C.04.02.05.1.1.6.2 Thermal Co	29-Aug-19	17-Jan-20		91	0.00	\$0.00	\$0.00	\$0.00	53						<div><div></div></div>				
	Air Ducts	29-Aug-19	05-Sep-19	0%	6	0.00	\$0.00	\$0.00	\$0.00	106						<div><div></div></div>	Air Ducts			
	Thermal Control System pipes and clamps lining	29-Aug-19	11-Sep-19	0%	10	0.00	\$0.00	\$0.00	\$0.00	102						<div><div></div></div>	Thermal Control System pipes and clamps lining			
	Cabinets Valve group installation	22-Nov-19	27-Nov-19	0%	4	0.00	\$0.00	\$0.00	\$0.00	76						<div><div></div></div>	Cabinets Valve group installation			
	Motor Box valve group installation	09-Jan-20	14-Jan-20	0%	4	0.00	\$0.00	\$0.00	\$0.00	53						<div><div></div></div>	Motor Box valve group installation			
	Flushing, pressure test and purging	15-Jan-20	17-Jan-20	0%	3	0.00	\$0.00	\$0.00	\$0.00	53						<div><div></div></div>	Flushing, pressure test and purging			
	Thermal Control System piping insulation	12-Sep-19	27-Sep-19	0%	10	0.00	\$0.00	\$0.00	\$0.00	102						<div><div></div></div>	Thermal Control System piping insulation			
	LSST ME 19-05.04C.04.02.05.1.1.7 Electrical Installi	28-Oct-19	15-Jan-20		49	0.00	\$0.00	\$0.00	\$0.00	43						<div><div></div></div>				
	Sensors, fixtures, push button, bulk material, etc	26-Nov-19	15-Jan-20	0%	30	0.00	\$0.00	\$0.00	\$0.00	43						<div><div></div></div>	Sensors, fixtures, push button, bulk material, etc			
	Cabinets	12-Dec-19	15-Jan-20	0%	20	0.00	\$0.00	\$0.00	\$0.00	43						<div><div></div></div>	Cabinets			
	Power Slip rings	19-Dec-19	30-Dec-19	0%	5	0.00	\$0.00	\$0.00	\$0.00	43						<div><div></div></div>	Power Slip rings			
	Safety Systems	02-Jan-20	08-Jan-20	0%	5	0.00	\$0.00	\$0.00	\$0.00	43						<div><div></div></div>	Safety Systems			
	Drive Capacitor Bank	09-Jan-20	15-Jan-20	0%	5	0.00	\$0.00	\$0.00	\$0.00	43						<div><div></div></div>	Drive Capacitor Bank			
	LSST ME 19-05.04C.04.02.05.1.1.7.1 Cable trays	28-Oct-19	18-Dec-19		34	0.00	\$0.00	\$0.00	\$0.00	43						<div><div></div></div>				
	First part	28-Oct-19	21-Nov-19	0%	17	0.00	\$0.00	\$0.00	\$0.00	43						<div><div></div></div>	First part			
	Second part	22-Nov-19	18-Dec-19	0%	17	0.00	\$0.00	\$0.00	\$0.00	43						<div><div></div></div>	Second part			
	LSST ME 19-05.04C.04.02.05.1.1.8 OB Crane	30-Sep-19	08-Jan-20		64	0.00	\$0.00	\$0.00	\$0.00	54						<div><div></div></div>				
	Preassembly on ground	3																		



LSST May 2019 Month End Forecast																				
Activity ID	Activity Name	Start	Finish	Physical % Complete	Original Duration	Budgeted Labor Units	Budgeted Labor Cost	Budgeted Material Cost	Budgeted Total Cost no	Total Float		FY2015 2014-10-01	FY2016 2015-10-01	FY2017 2016-10-01	FY2018 2017-10-01	FY2019 2018-10-01	FY2020 2019-10-01	FY2021 2020-10-01	FY2022 2021-10-01	
ME 19-05.04C.04.03	Aperture Shutter	04-Mar-20	04-Mar-20	0%	1	0.00	\$0.00	\$0.00	\$0.00	37									Aperture Shutter	
	RAD and OBC	05-Mar-20	05-Mar-20	0%	1	0.00	\$0.00	\$0.00	\$0.00	37									RAD and OBC	
	Louvered light baffle vents	06-Mar-20	10-Mar-20	0%	3	0.00	\$0.00	\$0.00	\$0.00	37									Louvered light baffle vents	
	Exterior surface, Access, Ducting fans	11-Mar-20	12-Mar-20	0%	2	0.00	\$0.00	\$0.00	\$0.00	37									Exterior surface, Access, Ducting fans	
	Electrical requirements	13-Mar-20	16-Mar-20	0%	2	0.00	\$0.00	\$0.00	\$0.00	37									Electrical requirements	
	Dome Control System	17-Mar-20	18-Mar-20	0%	2	0.00	\$0.00	\$0.00	\$0.00	37									Dome Control System	
	Light Wind screen	19-Mar-20	20-Mar-20	0%	2	0.00	\$0.00	\$0.00	\$0.00	37									Light Wind screen	
	Dome performance requirements / Design requirem	23-Mar-20	24-Mar-20	0%	2	0.00	\$0.00	\$0.00	\$0.00	37									Dome performance requirements / Design requirements	
	Margin for recovery actions	25-Mar-20	06-Apr-20	0%	9	0.00	\$0.00	\$0.00	\$0.00	37									Margin for recovery actions	
	LSST ME 19-05.04C.04.03 Calibration Screen Fabrication		04-Aug-17 A	03-Mar-20		631	0.00	\$0.00	\$604,890.00	\$604,890.00	131									
	T&SC-54	Calibration Screen - M1 - Contract Award	04-Aug-17 A	04-Aug-17 A	100%	1	0.00	\$0.00	\$101,810.00	\$101,810.00										Calibration Screen - M1 - Contract Award
	T&SC-54	Calibration Screen - Design Review Effort	05-Aug-17 A	19-Jul-18 A	100%	119	0.00	\$0.00	\$0.00	\$0.00										Calibration Screen - Design Review Effort
	T&SC-54	Calibration Screen - M2 - Design Review	06-Jun-18 A	19-Jul-18 A	100%	64	0.00	\$0.00	\$127,584.00	\$127,584.00										Calibration Screen - M2 - Design Review
	T&SC-54	Calibration Screen - Main Orders Submittal Effort	01-Sep-18 A	03-Jun-19	80%	143	0.00	\$0.00	\$0.00	\$0.00	157									Calibration Screen - Main Orders Submittal Effort
	T&SC-54	Calibration Screen - M3 - Main Order Submittal Addit	03-Jun-19	10-Sep-19	0%	70	0.00	\$0.00	\$0.00	\$0.00	246									Calibration Screen - M3 - Main Order Submittal Additional Effort
	T&SC-54	Calibration Screen - M3 - Main Orders Submittal	22-Apr-19 A	22-Apr-19 A	100%	1	0.00	\$0.00	\$109,728.00	\$109,728.00										Calibration Screen - M3 - Main Orders Submittal
	T&SC-54	Calibration Screen - Ready to Ship Effort	03-Jun-19	03-Jun-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	316									Calibration Screen - Ready to Ship Effort
	T&SC-54	Calibration Screen - Ready to Ship Additional Effort	17-Oct-18 A	13-Jun-19	80%	168	0.00	\$0.00	\$0.00	\$0.00	151									Calibration Screen - Ready to Ship Additional Effort
	T&SC-54	Calibration Screen - M4 - Ready to Ship	22-Jan-20	22-Jan-20	0%	1	0.00	\$0.00	\$112,704.00	\$112,704.00	157									Calibration Screen - M4 - Ready to Ship
	T&SC-54	Calibratoin Screen - Shipping	14-Jun-19	16-Aug-19	0%	45	0.00	\$0.00	\$0.00	\$0.00	151									Calibratoin Screen - Shipping
	T&SC-54	Calibration Screen - M5 - End of Installation Paymen	23-Jan-20	23-Jan-20	0%	1	0.00	\$0.00	\$56,352.00	\$56,352.00	157									Calibration Screen - M5 - End of Installation Payment
	T&SC-54	Calibration Screen - M6 - Acceptance Test Payment	03-Mar-20	03-Mar-20	0%	1	0.00	\$0.00	\$69,852.00	\$69,852.00	131									Calibration Screen - M6 - Acceptance Test Payment
	T&SC-54	Calibration Screen - M4 - Ready to Ship	21-Jan-20	21-Jan-20	0%	1	0.00	\$0.00	\$26,860.00	\$26,860.00	157									Calibration Screen - M4 - Ready to Ship
	T&SC-54	Calibration Screen - M3 - Main Order Submittal Addit	03-Jun-19	17-Jan-20	0%	158	0.00	\$0.00	\$0.00	\$0.00	157									Calibration Screen - M3 - Main Order Submittal Additional Effort LCR-158
	LSST ME 19-05.04C.05 Telescope Mount		01-Aug-14 A	10-Dec-20		1612	12582.00	\$1,045,262.41	\$38,037,898.69	\$39,083,161.10	460									
	LSST ME 19-05.04C.05.01 Mount System Management		01-Aug-14 A	02-Nov-20		1586	12582.00	\$1,045,262.41	\$177,180.07	\$1,222,442.49	-61									
	T&SC-55i	Telescope System Management - FY 1 - LOE Labor	01-Aug-14 A	30-Sep-14 A	100%	42	300.00	\$22,702.50	\$0.00	\$22,702.50										Telescope System Management - FY 1 - LOE Labor
	T&SC-55i	Telescope System Management - FY 2 - LOE Labor	01-Oct-14 A	30-Sep-15 A	100%	252	3600.00	\$287,550.00	\$0.00	\$287,550.00										Telescope System Management - FY 2 - LOE Labor
	T&SC-55i	Telescope System Management - FY 3 - LOE Labor	01-Oct-15 A	30-Sep-16 A	100%	254	3200.00	\$258,316.00	\$0.00	\$258,316.00										Telescope System Management - FY 3 - LOE Labor
	T&SC-55i	Telescope System Management - FY 4 - LOE Labor	01-Oct-16 A	31-Oct-16 A	100%	21	298.61	\$25,332.87	\$0.00	\$25,332.87										Telescope System Management - FY 4 - LOE Labor
	T&SC-55i	Telescope System Management - FY 4 - LOE Labor	01-Nov-16 A	29-Sep-17 A	100%	233	3145.39	\$266,839.04	\$0.00	\$266,839.04										Telescope System Management - FY 4 - LOE Labor
	T&SC-55i	Telescope System Management - FY 5 - LOE Labor	02-Oct-17 A	31-May-18 A	100%	170	1338.00	\$116,858.80	\$0.00	\$116,858.80										Telescope System Management - FY 5 - LOE Labor
	T&SC-55i	Telescope System Management - LOE NonLabor	01-Oct-14 A	30-Sep-16 A	100%	972	0.00	\$0.00	\$117,180.07	\$117,180.07										Telescope System Management - LOE NonLabor
	T&SC-55i	Telescope System Management - LOE NonLabor	03-Oct-16 A	29-Sep-17 A	100%	254	0.00	\$0.00	\$60,000.00	\$60,000.00										Telescope System Management - LOE NonLabor
	T&SC-55i	FinalizeTelescope Contract	01-Aug-14 A	06-Aug-14 A	100%	39	0.00	\$0.00	\$0.00	\$0.00										FinalizeTelescope Contract
	T&SC-55i	Award Telescope Phase B Fabrication Contract	01-Sep-14 A		100%	0	0.00	\$0.00	\$0.00	\$0.00										Award Telescope Phase B Fabrication Contract
	T&SC-55i	Mount Eng/ Mgmt Review #1		12-Mar-15 A	100%	0	0.00	\$0.00	\$0.00	\$0.00										Mount Eng/ Mgmt Review #1
T&SC-55i	Mount Eng/ Mgmt Review #2		02-Oct-15 A	100%	0	0.00	\$0.00	\$0.00	\$0.00										Mount Eng/ Mgmt Review #2	
T&SC-55i	Mount Eng/ Mgmt Review #3		25-Jan-16 A	100%	0	0.00	\$0.00	\$0.00	\$0.00										Mount Eng/ Mgmt Review #3	
T&SC-55i	Contract Review		29-Jul-16 A	100%	0	0.00	\$0.00	\$0.00	\$0.00										Contract Review	
T&SC-55i	Contract Review		20-Dec-16 A	100%	0	0.00	\$0.00	\$0.00	\$0.00										Contract Review	
T&SC-55i	Contract Close Out / Asbuilt Documents	03-Jun-19	11-Nov-19	0%	114	0.00	\$0.00	\$0.00	\$0.00	186									Contract Close Out / Asbuilt Documents	
T&SC-55i	Telescope Mount Fab Contract Complete		02-Nov-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	-61									Telescope Mount Fab Contract Complete	
T&SC-55i	Telescope System Management - FY 18B - LOE Labor	01-Jul-18 A	28-Sep-18 A	100%	83	700.00	\$67,663.20	\$0.00	\$67,663.20										Telescope System Management - FY 18B - LOE Labor	
LSST ME 19-05.04C.05.02 Mount Fabrication Contract		01-Aug-14 A	10-Dec-20		1573	0.00	\$0.00	\$33,428,366.68	\$33,428,366.68	460										
T&SC-56i	Approved Final Design Review (FDR) - Complete		29-Jan-16 A	100%	0	0.00	\$0.00	\$0.00	\$0.00										Approved Final Design Review (FDR) - Complete	
T&SC-56i	Manufacturing Readiness Review (MRR) - Complete		29-Jan-16 A	100%	0	0.00	\$0.00	\$0.00	\$0.00										Manufacturing Readiness Review (MRR) - Complete	
T&SC-56i	Factory Integration & Test Plan Review (FITPR) - Co		28-Oct-16 A	100%	0	0.00	\$0.00	\$0.00	\$0.00										Factory Integration & Test Plan Review (FITPR) - Complete	
T&SC-56i	Reception at Site of the M1M3 support cell, rails and		03-Jun-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	333									Reception at Site of the M1M3 support cell, rails and cart (LSST) - Complete	
T&SC-56i	Onsite Assembly, Installation and Test Plan Review (		31-Jul-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	-15									Onsite Assembly, Installation and Test Plan Review (AOITPR) - Complete	
T&SC-56i	Pre-Shipment Review (PSR) - Complete		13-Feb-19 A	100%	0	0.00	\$0.00	\$0.00	\$0.00										Pre-Shipment Review (PSR) - Complete	
LSST ME 19-05.04C.05.02.01 Mount Fabrication Contract V		01-Aug-14 A	02-Oct-15 A		162	0.00	\$0.00	\$7,393,364.00	\$7,393,364.00											
T&SC-	Final Design Review Phase 2 Kickoff	01-Aug-14 A		100%	0	0.00	\$0.00	\$0.00	\$0.00										Final Design Review Phase 2 Kickoff	

## LSST May 2019 Month End Forecast

Activity Name		Start	Finish	Physical % Complete	Original Duration	Budgeted Labor Units	Budgeted Labor Cost	Budgeted Material Cost	Budgeted Total Cost no	Total Float	FY2015 2014-10-01	FY2016 2015-10-01	FY2017 2016-10-01	FY2018 2017-10-01	FY2019 2018-10-01	FY2020 2019-10-01	FY2021 2020-10-01	FY2022 2021-10-01
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LSST May 2019 Month End Forecast																		
Activity ID	Activity Name	Start	Finish	Physical % Complete	Original Duration	Budgeted Labor Units	Budgeted Labor Cost	Budgeted Material Cost	Budgeted Total Cost no	Total Float	FY2015 2014-10-01	FY2016 2015-10-01	FY2017 2016-10-01	FY2018 2017-10-01	FY2019 2018-10-01	FY2020 2019-10-01	FY2021 2020-10-01	FY2022 2021-10-01
7_SIA	Pier platforms and stairs ready for TMA installation (f		13-Feb-19 A	100%	0	0.00	\$0.00	\$0.00	\$0.00						◆ Pier platforms and stairs ready for TMA installation (By LSST)			
7_SIA	Pier ready for TMA installation, including safety meas		28-Jun-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	7					◆ Pier ready for TMA installation, including safety measures			
7_SIA	Dimensional Control of the machinery room (By LSS		31-May-19 A	100%	0	0.00	\$0.00	\$0.00	\$0.00						◆ Dimensional Control of the machinery room (By LSST)			
7_SIA	Availability of the Machinery Room for OSS installat		13-May-19 A	100%	0	0.00	\$0.00	\$0.00	\$0.00						◆ Availability of the Machinery Room for OSS installation			
7_SIA	Oil supply and return lines through the Auxiliary Build		13-Aug-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	-19					◆ Oil supply and return lines through the Auxiliary Building installed (By LSST)			
7_SIA	Dome availability (slit doors, rotation system, upper c		13-Aug-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	-19					◆ Dome availability (slit doors, rotation system, upper crane, HVAC system,...)			
7_SIA	Dome floor, Telescope maintenance platform and M1		13-Aug-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	-19					◆ Dome floor, Telescope maintenance platform and M1M3 Mirror Cart Rails installed			
7_SIA	Site erection auxiliary cranes, man lifts, etc availabil		13-Aug-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	-19					◆ Site erection auxiliary cranes, man lifts, etc availability			
7_SIA	UTE Material and Tools at Site		14-Aug-19	5%	0	0.00	\$0.00	\$0.00	\$0.00	-19					◆ UTE Material and Tools at Site			
7_SIA	Power supply system availability		13-Aug-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	-19					◆ Power supply system availability			
7_SIA	Compressed air system availability		03-Sep-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	-32					◆ Compressed air system availability			
7_SIA	Installation of temporary facilities contractor	19-Jul-19	13-Aug-19	0%	18	0.00	\$0.00	\$0.00	\$0.00	-19					■ Installation of temporary facilities contractor			
7_SIA	Coating Chamber crane and area for azimuth ring s	03-Sep-19	03-Sep-19	0%	1	0.00	\$0.00	\$0.00	\$0.00	-32					■ Coating Chamber crane and area for azimuth ring segments temp.storage and M1M3			
7_SIA	Lift ready for use and M1M3 Mirror Cart Rails install		01-Oct-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	-52					◆ Lift ready for use and M1M3 Mirror Cart Rails installed			
7_SIA	Mirror cart rails at Telescope Maintenance Platforms		01-Oct-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	-52					◆ Mirror cart rails at Telescope Maintenance Platforms installed			
7_SIA	Storage of the TMA pieces at Site (First Vessel)	14-Aug-19	20-Aug-19	5%	5	0.00	\$0.00	\$0.00	\$0.00	-32					■ Storage of the TMA pieces at Site (First Vessel)			
7_SIA	Installation of the Toppie Block (support beam and co	07-Oct-19	11-Oct-19	0%	5	0.00	\$0.00	\$0.00	\$0.00	-61					■ Installation of the Toppie Block (support beam and complete assembly) in the Pier			
7_SIA	Final verification	14-Oct-19	14-Oct-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	-38					■ Final verification			
7_SIA	Assembly of the M1M3 Mirror Surrogate Mass Cart i	14-Oct-19	14-Oct-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	-61					■ Assembly of the M1M3 Mirror Surrogate Mass Cart at the Coating Chamber room			
7_SIA	Installation of the anchor bolts on the four sectors	14-Oct-19	16-Oct-19	0%	3	0.00	\$0.00	\$0.00	\$0.00	-61					■ Installation of the anchor bolts on the four sectors			
7_SIA	Transport to the Dome through the lift and instalati	17-Oct-19	18-Oct-19	0%	2	0.00	\$0.00	\$0.00	\$0.00	-61					■ Transport to the Dome through the lift and installation the four sectors over the R			
7_SIA	Levelling and alignmet	21-Oct-19	22-Oct-19	0%	2	0.00	\$0.00	\$0.00	\$0.00	-61					■ Levelling and alignmet			
7_SIA	Bolted junctions between the four sectors	23-Oct-19	24-Oct-19	0%	2	0.00	\$0.00	\$0.00	\$0.00	-61					■ Bolted junctions between the four sectors			
7_SIA	Dimensional control and readjustment	25-Oct-19	28-Oct-19	0%	2	0.00	\$0.00	\$0.00	\$0.00	-61					■ Dimensional control and readjustment			
7_SIA	First Grouting	29-Oct-19	01-Nov-19	0%	4	0.00	\$0.00	\$0.00	\$0.00	-60					■ First Grouting			
7_SIA	Dimensional control and fine tuning	04-Nov-19	04-Nov-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	-60					■ Dimensional control and fine tuning			
7_SIA	Final grouting	04-Nov-19	04-Nov-19	0%	1	0.00	\$0.00	\$0.00	\$0.00	-60					■ Final grouting			
7_SIA	Welded junctions between sectors (seal weld)	05-Nov-19	08-Nov-19	0%	4	0.00	\$0.00	\$0.00	\$0.00	-60					■ Welded junctions between sectors (seal weld)			
7_SIA	Application of the seal product in the four sectors	11-Nov-19	12-Nov-19	0%	2	0.00	\$0.00	\$0.00	\$0.00	-60					■ Application of the seal product in the four sectors			
7_SIA	Final verification	13-Nov-19	15-Nov-19	0%	3	0.00	\$0.00	\$0.00	\$0.00	-60					■ Final verification			
7_SIA	Installation of the oil return collector and connection	04-Nov-19	13-Nov-19	0%	8	0.00	\$0.00	\$0.00	\$0.00	-57					■ Installation of the oil return collector and connection with the oil return pipe			
7_SIA	Installation of the azimuth brake disk	14-Nov-19	15-Nov-19	0%	2	0.00	\$0.00	\$0.00	\$0.00	-57					■ Installation of the azimuth brake disk			
7_SIA	Support A installation over the azimuth ring and temp	21-Nov-19	25-Nov-19	0%	3	0.00	\$0.00	\$0.00	\$0.00	-60					■ Support A installation over the azimuth ring and temporary restrains			
7_SIA	Support B installation over the azimuth ring and temp	26-Nov-19	27-Nov-19	0%	2	0.00	\$0.00	\$0.00	\$0.00	-60					■ Support B installation over the azimuth ring and temporary restrains			
7_SIA	Central Keel Beam installation (with capacitor banks	02-Dec-19	02-Dec-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	-60					■ Central Keel Beam installation (with capacitor banks cabinets)			
7_SIA	Bolting Central Keel Beam with Support A and Suppo	06-Dec-19	06-Dec-19	0%	5	0.00	\$0.00	\$0.00	\$0.00	-60					■ Bolting Central Keel Beam with Support A and Support B			
7_SIA	Installation of the azimuth horizontal and vertical sei	09-Dec-19	13-Dec-19	0%	5	0.00	\$0.00	\$0.00	\$0.00	-60					■ Installation of the azimuth horizontal and vertical seismic stops			
7_SIA	Circular beams A & B over the azimuth ring and bol	16-Dec-19	19-Dec-19	0%	4	0.00	\$0.00	\$0.00	\$0.00	-60					■ Circular beams A & B over the azimuth ring and bolting to Supports A& B			
7_SIA	First verification of the Azimuth Structure main parts	20-Dec-19	06-Jan-20	0%	9	0.00	\$0.00	\$0.00	\$0.00	-60					■ First verification of the Azimuth Structure main parts			
7_SIA	Floor support structure & floor (including Az. Hatche	07-Jan-20	09-Jan-20	0%	3	0.00	\$0.00	\$0.00	\$0.00	-60					■ Floor support structure & floor (including Az. Hatches)			
7_SIA	Installation of the oil return tray	10-Jan-20	16-Jan-20	0%	5	0.00	\$0.00	\$0.00	\$0.00	-46					■ Installation of the oil return tray			
7_SIA	Installation of oil drain hoses between oil return tray	17-Jan-20	27-Jan-20	0%	6	0.00	\$0.00	\$0.00	\$0.00	-46					■ Installation of oil drain hoses between oil return tray / azimuth track and oil			
7_SIA	Installation of oil drain pipes between elevation axis a	17-Jan-20	27-Jan-20	0%	6	0.00	\$0.00	\$0.00	\$0.00	-41					■ Installation of oil drain pipes between elevation axis and oil return tray			
7_SIA	Mechanical Interface with azimuth cable wrap	17-Jan-20	27-Jan-20	0%	6	0.00	\$0.00	\$0.00	\$0.00	-46					■ Mechanical Interface with azimuth cable wrap			
7_SIA	Ladders, walkways, fixed platforms and floor hatche	28-Jan-20	03-Feb-20	0%	5	0.00	\$0.00	\$0.00	\$0.00	-46					■ Ladders, walkways, fixed platforms and floor hatches			
7_SIA	Installation of the deployable platforms (2)	04-Feb-20	04-Feb-20	0%	1	0.00	\$0.00	\$0.00	\$0.00	-46					■ Installation of the deployable platforms (2)			
7_SIA	Installation of the elevation locking pins	07-Jan-20	14-Jan-20	0%	6	0.00	\$0.00	\$0.00	\$0.00	-47					■ Installation of the elevation locking pins			
7_SIA	Installation of the M1M3 Mirror surrogate mass supp	15-Jan-20	17-Jan-20	0%	3	0.00	\$0.00	\$0.00	\$0.00	-47					■ Installation of the M1M3 Mirror surrogate mass supports (four) over the az			
7_SIA	Installation of supports for elevation structure install	21-Jan-20	21-Jan-20	0%	1	0.00	\$0.00	\$0.00	\$0.00	-47					■ Installation of supports for elevation structure installation			
7_SIA	Installation of hard stops for M1M3 Mirror surrogate	22-Jan-20	22-Jan-20	0%	1	0.00	\$0.00	\$0.00	\$0.00	-47					■ Installation of hard stops for M1M3 Mirror surrogate mass cart			
7_SIA	Installation of the TEKNIKER MCS cabinet	23-Jan-20	27-Jan-20	0%	3	0.00	\$0.00	\$0.00	\$0.00	-47					■ Installation of the TEKNIKER MCS cabinet			
7_SIA	Installation of the limit switches supports	28-Jan-20	04-Feb-20	0%	6	0.00	\$0.00	\$0.00	\$0.00	-47					■ Installation of the limit switches supports			
7_SIA	Cable trays and pipes over Azimuth Structure	16-Dec-19	04-Feb-20	0%	33	0.00	\$0.00	\$0.00	\$0.00	-50					■ Cable trays and pipes over Azimuth Structure			
7_SIA	Cabling & piping connections over Azimuth Structure	24-Dec-19	04-Feb-20	0%	27	0.00	\$0.00	\$0.00	\$0.00	-50					■ Cabling & piping connections over Azimuth Structure			
7_SIA	Dimensional control & inspection	07-Feb-20	07-Feb-20	0%	1	0.00	\$0.00	\$0.00	\$0.00	-49					■ Dimensional control & inspection			
7_SIA	Azimuth structure verified over the Pier	10-Feb-20	12-Feb-20	0%	3	0.00	\$0.00	\$0.00	\$0.00	-49					■ Azimuth structure verified over the Pier			
7_SIA	Assembly of the M1M3 Mirror surrogate mass outsid	12-Feb-20	02-Mar-20	0%	13	0.00	\$0.00	\$0.00	\$0.00	-61					■ Assembly of the M1M3 Mirror surrogate mass outside the Dome			
7_SIA	Elevation Bearings adjustment	03-Mar-20	03-Mar-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	-61					■ Elevation Bearings adjustment			
7_SIA	Installation of the M1M3 Mirror surrogate mass over	10-Mar-20	10-Mar-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	-61					■ Installation of the M1M3 Mirror surrogate mass over the four supports			
7_SIA	Installation of Trunnion A + Cradle + Brake disk over	10-Mar-20	10-Mar-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	-61					■ Installation of Trunnion A + Cradle + Brake disk over provisional support			
7_SIA	Installation of Trunnion B + Cradle + Brake disk over	11-Mar-20	11-Mar-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	-61					■ Installation of Trunnion B + Cradle + Brake disk over provisional support			
7_SIA	Trunnions (Elevation axis) first alignment	11-Mar-20	11-Mar-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	-61					■ Trunnions (Elevation axis) first alignment			
7_SIA	Installation of the Central Section Brace A + M1M3 P	11-Mar-20	11-Mar-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	-61					■ Installation of the Central Section Brace A + M1M3 Pylns + active base			
7_SIA	Installation of the Central Section Brace B + M1M3 P	11-Mar-20	11-Mar-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	-61					■ Installation of the Central Section Brace B + M1M3 Pylons			
7_SIA	Central section flanges bolted.	11-Mar-20	11-Mar-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	-61					■ Central section flanges bolted.			
7_SIA	Bolting the Cradles to the Central Section	11-Mar-20	11-Mar-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	-48					■ Bolting the Cradles to the Central Section			
7_SIA	Verification of the elevation locking pins and central	13-Mar-20	13-Mar-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	-48					■ Verification of the elevation locking pins and central section immovizatio			
7_SIA	Installation of the circular platform	13-Mar-20	13-Mar-20	0%	1	0.00	\$0.00	\$0.00	\$0.00	-48					■ Installation of the circular platform			
7_SIA	Elevation axis verification and reference with azimuth	13-Mar-20	18-Mar-20	0%	4	0.00	\$0.00	\$0.00	\$0.00	-48					■ Elevation axis verification and reference with azimuth axis			
7_SIA	Installation of the four Top end piers	19-Mar-20	20-Mar-20	0%	2	0.00	\$0.00	\$0.00	\$0.00	-48					■ Installation of the four Top end piers			
7_SIA	Installation of the Mid Level Light Baffle (four sectors	23-Mar-20	24-Mar-20	0%	2	0.00	\$0.00	\$0.00	\$0.00	-48					■ Installation of the Mid Level Light Baffle (four sectors)			
7_SIA	Prep.of the ass.of the Spider Spindle&Arms+Top End	12-Mar-20	25-Mar-20	0%	10	0.00	\$0.00	\$0.00	\$0.00	-61					■ Prep.of the ass.of the Spider Spindle&Arms+Top End Ring Baffle+Off			



## LSST May 2019 Month End Forecast

Activity ID	Activity Name	Start	Finish	Physical % Complete	Original Duration	Budgeted Labor Units	Budgeted Labor Cost	Budgeted Material Cost	Budgeted Total Cost no	Total Float	FY2015 2014-10-01	FY2016 2015-10-01	FY2017 2016-10-01	FY2018 2017-10-01	FY2019 2018-10-01	FY2020 2019-10-01	FY2021 2020-10-01	FY2022 2021-10-01
7_SIA	Install.of the ass. of the Spider Spindle & Arms+Top End Ring Baffles	25-Mar-20	31-Mar-20	0%	5	0.00	\$0.00	\$0.00	\$0.00	-48						■	■	■
	Bolting the M1M3 Mirror surrogate mass to the four M1M3 pylons	01-Apr-20	02-Apr-20	0%	2	0.00	\$0.00	\$0.00	\$0.00	-17						■	■	■
	Installation of provisional devices for elevation structure rotation	01-Apr-20	03-Apr-20	0%	3	0.00	\$0.00	\$0.00	\$0.00	-14						■	■	■
	Installation of the M1M3 Covers	06-Apr-20	07-Apr-20	0%	2	0.00	\$0.00	\$0.00	\$0.00	-14						■	■	■
	Dimensional control, balancing & inspection.	08-Apr-20	10-Apr-20	0%	3	0.00	\$0.00	\$0.00	\$0.00	-17						■	■	■
	Miscellaneous	27-Mar-20	03-Apr-20	0%	6	0.00	\$0.00	\$0.00	\$0.00	-61						■	■	■
	Installation of power distribution cabinets	27-Mar-20	27-Mar-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	-61						■	■	■
	Installation of the elevation over speed encoder	27-Mar-20	31-Mar-20	0%	3	0.00	\$0.00	\$0.00	\$0.00	149						■	■	■
	Installation of the auxiliary devices for elevation encoder tape assembly	27-Mar-20	09-Apr-20	0%	10	0.00	\$0.00	\$0.00	\$0.00	149						■	■	■
	Installation of limit switches supports	27-Mar-20	06-Apr-20	0%	7	0.00	\$0.00	\$0.00	\$0.00	149						■	■	■
	Installation of the barrels for elevation cable wrap	27-Mar-20	08-Apr-20	0%	9	0.00	\$0.00	\$0.00	\$0.00	149						■	■	■
	Cable trays and pipes over Elevation structure	27-Mar-20	08-Apr-20	0%	9	0.00	\$0.00	\$0.00	\$0.00	-61						■	■	■
	Cabling & piping connections over Elevation structure	27-Mar-20	08-Apr-20	0%	9	0.00	\$0.00	\$0.00	\$0.00	-61						■	■	■
	Dimensional control & inspection & Azimuth & elevation & optical axes	09-Apr-20	10-Apr-20	0%	2	0.00	\$0.00	\$0.00	\$0.00	-17						■	■	■
	Azimuth Main Drives magnets (rotor)	18-Nov-19	20-Nov-19	0%	3	0.00	\$0.00	\$0.00	\$0.00	-60						■	■	■
	Azimuth Main Drives stators	13-Apr-20	17-Apr-20	0%	5	0.00	\$0.00	\$0.00	\$0.00	-17						■	■	■
	Capacitor Bank Control cabinet installation and connection to Capacitor Bank	24-Dec-19	28-Jan-20	0%	22	0.00	\$0.00	\$0.00	\$0.00	-22						■	■	■
	Main Drive Control Cabinet	07-Jan-20	04-Feb-20	0%	20	0.00	\$0.00	\$0.00	\$0.00	-22						■	■	■
	Elevation Main Drives magnets (rotor)	01-Apr-20	28-Apr-20	0%	20	0.00	\$0.00	\$0.00	\$0.00	-61						■	■	■
	Elevation Main Drives stator	13-May-20	13-May-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	-61						■	■	■
	Cooling water connection	12-Jun-20	18-Jun-20	0%	5	0.00	\$0.00	\$0.00	\$0.00	-61						■	■	■
	Power supply connection	12-Jun-20	18-Jun-20	0%	5	0.00	\$0.00	\$0.00	\$0.00	-61						■	■	■
	Main drives and Capacitor Banks start-up (PHASE visit)	19-Jun-20	19-Jun-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	-61						■	■	■
	Azimuth shock absorber	10-Jan-20	13-Jan-20	0%	2	0.00	\$0.00	\$0.00	\$0.00	61						■	■	■
	Elevation shock absorber	01-Apr-20	03-Apr-20	0%	3	0.00	\$0.00	\$0.00	\$0.00	7						■	■	■
	Azimuth tape	19-Jun-20	19-Jun-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	-61						■	■	■
	Azimuth Scanning heads	19-Jun-20	19-Jun-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	-61						■	■	■
	Elevation tapes	19-Jun-20	23-Jun-20	0%	3	0.00	\$0.00	\$0.00	\$0.00	-61						■	■	■
	Elevation Scanning heads	24-Jun-20	24-Jun-20	0%	1	0.00	\$0.00	\$0.00	\$0.00	-61						■		















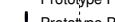
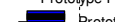








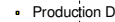


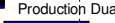












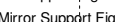

## LSST May 2019 Month End Forecast

Activity Name	Start	Finish	Physical % Complete	Original Duration	Budgeted Labor Units	Budgeted Labor Cost	Budgeted Material Cost	Budgeted Total Cost no	Total Float	FY2015 2014-10-01	FY2016 2015-10-01	FY2017 2016-10-01	FY2018 2017-10-01	FY2019 2018-10-01	FY2020 2019-10-01	FY2021 2020-10-01	FY2022 2021-10-01
T&SC-571 Final Documentation and Closeout	06-Jul-18 A	19-Mar-19 A	100%	10	0.00	\$0.00	\$0.00	\$0.00									
T&SC-571 M2 Hexapod ATP		01-May-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00									
T&SC-571 spare rotator delivered to SLAC	13-Feb-18 A	20-Feb-19 A	100%	40	0.00	\$0.00	\$0.00	\$0.00									
T&SC-571 Camera Hexapod/Rotator System Delivery		13-Feb-19 A	100%	0	0.00	\$0.00	\$0.00	\$0.00									
T&SC-571 Phase B Closeout	20-Jul-18 A	19-Mar-19 A	100%	12	0.00	\$0.00	\$392,537.00	\$392,537.00									
T&SC-571 Camera / M2 Hexapod Systems Complete		17-May-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00									
T&SC-571 Delivery of Hexapod Motion Control Source Code	30-Oct-17 A	30-Apr-18 A	100%	68	0.00	\$0.00	\$150,000.00	\$150,000.00									
T&SC-571 Delivery of Hexapod Motion Control Source Code extension	30-Oct-17 A	30-Apr-18 A	100%	85	0.00	\$0.00	\$0.00	\$0.00									
T&SC-571 Motion control implementation with hardware	13-Dec-17 A	09-May-18 A	100%	9	0.00	\$0.00	\$0.00	\$0.00									
T&SC-571 Keenserts for Rotator Camera I/F	17-Aug-17 A	07-Sep-17 A	100%	15	0.00	\$0.00	\$6,833.00	\$6,833.00									
T&SC-571 Thermal Stress Relief M2 Flange	17-Aug-17 A	07-Sep-17 A	100%	29	0.00	\$0.00	\$15,795.00	\$15,795.00									
T&SC-571 Copley Motor Drive Certification	26-Apr-18 A	09-May-18 A	100%	10	0.00	\$0.00	\$10,761.00	\$10,761.00									
T&SC-571 Middleware Troubleshooting	31-Oct-17 A	02-Apr-18 A	100%	10	0.00	\$0.00	\$28,622.00	\$28,622.00									
T&SC-571 Custom LSST on-telescope electronics package cabinets development	31-Oct-17 A	31-Oct-18 A	100%	10	0.00	\$0.00	\$119,797.00	\$119,797.00									
T&SC-571 Modify M2 Surrogate to accommodate mounting the M2 baffle to the front side of the surrogate	26-Apr-18 A	09-May-18 A	100%	10	0.00	\$0.00	\$15,270.00	\$15,270.00									
T&SC-571 Finalize Software and Camera Surrogate development	13-Dec-18 A	19-Mar-19 A	100%	12	0.00	\$0.00	\$100,591.97	\$100,591.97									
T&SC-581 M2 hexapod interface blocks - SOW / support documents Developed and Provided to Prime	30-Apr-19 A	28-Jun-19	50%	20	0.00	\$0.00	\$0.00	\$0.00	6								
T&SC-581 M2 hexapod interface blocks - Procurement Prepares and Issues Bid Package	01-Jul-19	29-Jul-19	0%	20	0.00	\$0.00	\$0.00	\$0.00	6								
T&SC-581 M2 hexapod interface blocks - Supplier Response	30-Jul-19	26-Aug-19	0%	20	0.00	\$0.00	\$0.00	\$0.00	6								
T&SC-581 M2 hexapod interface blocks - Supplier Selection and Contract Award	27-Aug-19	10-Sep-19	0%	10	0.00	\$0.00	\$0.00	\$0.00	6								
T&SC-581 M2 hexapod interface blocks - Supplier Leadtime and Delivery	11-Sep-19	01-Jul-20	0%	204	0.00	\$0.00	\$0.00	\$0.00	6								
T&SC-581 M2 hexapod installation fixtures - SOW / support documents Developed and Provided to Prime	03-Jun-19	28-Jun-19	0%	20	0.00	\$0.00	\$0.00	\$0.00	6								
T&SC-581 M2 hexapod installation fixtures - Procurement Prepares and Issues Bid Package	01-Jul-19	29-Jul-19	0%	20	0.00	\$0.00	\$0.00	\$0.00	6								
T&SC-581 M2 hexapod installation fixtures - Supplier Response	30-Jul-19	26-Aug-19	0%	20	0.00	\$0.00	\$0.00	\$0.00	6								
T&SC-581 M2 hexapod installation fixtures - Supplier Selection and Contract Award	27-Aug-19	10-Sep-19	0%	10	0.00	\$0.00	\$0.00	\$0.00	6								
T&SC-581 M2 hexapod installation fixtures - Supplier Leadtime and Delivery	11-Sep-19	01-Jul-20	0%	204	0.00	\$0.00	\$0.00	\$0.00	6								
LSST ME 19-05.04C.06 Mirror Systems	01-Aug-14 A	29-Apr-20		1454	53931.00	\$4,747,071.84	\$24,233,050.30	\$28,980,122.14	875								
LSST ME 19-05.04C.06.01 Mirror System Team Management	01-Aug-14 A	2															



LSST May 2019 Month End Forecast												FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022
Activity ID	Activity Name	Start	Finish	Physical % Complete	Original Duration	Budgeted Labor Units	Budgeted Labor Cost	Budgeted Material Cost	Budgeted Total Cost no	Total Float	2014-10-01	2015-10-01	2016-10-01	2017-10-01	2018-10-01	2019-10-01	2020-10-01	2021-10-01	2022-10-01
T&SC-04	Procure Valves	02-Feb-18 A	02-Feb-18 A	100%	1	0.00	\$0.00	\$0.00	\$0.00						Procure Valves				
	Procure brackets	14-Feb-18 A	15-Feb-18 A	100%	2	0.00	\$0.00	\$0.00	\$0.00						Procure brackets				
	brackets lead time	16-Feb-18 A	02-Mar-18 A	100%	10	0.00	\$0.00	\$0.00	\$0.00						brackets lead time				
	DP valves tests	05-Mar-18 A	09-Mar-18 A	100%	5	0.00	\$0.00	\$0.00	\$0.00						DP valves tests				
	DP valves installation on Cell	12-Mar-18 A	06-Apr-18 A	100%	20	0.00	\$0.00	\$0.00	\$0.00						DP valves installation on Cell				
	design ILC brackets	02-Feb-18 A	02-Feb-18 A	100%	1	0.00	\$0.00	\$0.00	\$0.00						design ILC brackets				
	drawings for ILC brackets	05-Feb-18 A	06-Feb-18 A	100%	2	0.00	\$0.00	\$0.00	\$0.00						drawings for ILC brackets				
	ILC brackets procurements prototype	07-Feb-18 A	08-Feb-18 A	100%	2	0.00	\$0.00	\$0.00	\$0.00						ILC brackets procurements prototype				
	ILC brackets lead time prototype	09-Feb-18 A	22-Feb-18 A	100%	10	0.00	\$0.00	\$0.00	\$0.00						ILC brackets lead time prototype				
	fit check and test prototype for ILC brackets	26-Feb-18 A	26-Feb-18 A	100%	1	0.00	\$0.00	\$0.00	\$0.00						fit check and test prototype for ILC brackets				
	procurements final bracket (SSJ)	27-Feb-18 A	05-Mar-18 A	100%	5	0.00	\$0.00	\$0.00	\$0.00						procurements final bracket (SSJ)				
	lead time final bracket	06-Mar-18 A	26-Mar-18 A	100%	15	0.00	\$0.00	\$0.00	\$0.00						lead time final bracket				
	acceptance of final bracket	27-Mar-18 A	28-Mar-18 A	100%	2	0.00	\$0.00	\$0.00	\$0.00						acceptance of final bracket				
	Document installation procedure	27-Feb-18 A	05-Mar-18 A	100%	5	0.00	\$0.00	\$0.00	\$0.00						Document installation procedure				
	install brackets on actuators	29-Mar-18 A	11-Apr-18 A	100%	10	0.00	\$0.00	\$0.00	\$0.00						install brackets on actuators				
	Cell tilt test stuctural analysis	11-Jun-18 A	15-Jun-18 A	100%	5	0.00	\$0.00	\$0.00	\$0.00						Cell tilt test stuctural analysis				
	EGW external piping drawings review	01-Sep-18 A	07-Sep-18 A	100%	5	0.00	\$0.00	\$0.00	\$0.00						EGW external piping drawings review				
	PM Cell System Lead Labor - FY 1	01-Aug-14 A	30-Sep-14 A	100%	42	675.00	\$60,702.75	\$0.00	\$60,702.75		PM Cell System Lead Labor - FY 1								
	PM Cell System Lead Labor - FY 2	01-Sep-15 A	30-Sep-15 A	100%	154	2032.00	\$192,877.44	\$0.00	\$192,877.44			PM Cell System Lead Labor - FY 2							
	PM Cell System Lead Caid Fab Effort Supervision ar	01-Oct-15 A	30-Sep-16 A	100%	254	1017.88	\$99,996.90	\$0.00	\$99,996.90				PM Cell System Lead Caid Fab Effort Supervision and Monitoring						
	PM Cell System Lead Technician Team Supervision and Oversight	01-Oct-15 A	30-Sep-16 A	100%	254	1070.00	\$105,116.80	\$0.00	\$105,116.80				PM Cell System Lead Technician Team Supervision and Oversight						
	PM Cell System Lead Labor - FY 4 - LOE Labor	03-Oct-16 A	29-Sep-17 A	100%	254	2260.00	\$229,796.80	\$0.00	\$229,796.80					PM Cell System Lead Labor - FY 4 - LOE Labor					
	PM Cell System Lead - LOE NonLabor	01-Jan-15 A	30-Jun-17 A	100%	734	0.00	\$0.00	\$52,504.65	\$52,504.65					PM Cell System Lead - LOE NonLabor					
	M1M3 Mirror Cell Procurement Preparation - Muller	01-Oct-14 A	15-Jun-15 A	100%	58	464.00	\$44,042.88	\$0.00	\$44,042.88		M1M3 Mirror Cell Procurement Preparation - Muller G								
	M1M3 Mirror Cell Procurement Preparation - Hileman	01-Oct-14 A	15-Jun-15 A	100%	58	464.00	\$44,042.88	\$0.00	\$44,042.88		M1M3 Mirror Cell Procurement Preparation - Hileman E								
	Prepare Documentation for bidding	16-Jun-15 A	17-Jul-15 A	100%	20	320.00	\$30,374.40	\$0.00	\$30,374.40			Prepare Documentation for bidding							
	M1M3 Cell Procurement (including shipping cover)	20-Jul-15 A	04-Sep-15 A	100%	20	320.00	\$30,374.40	\$0.00	\$30,374.40			M1M3 Cell Procurement (including shipping cover)							
	Award M1M3 Cell and SM1M3 Fabrication		06-Oct-15 A	100%	0	0.00	\$0.00	\$0.00	\$0.00			Award M1M3 Cell and SM1M3 Fabrication							
	PM Cell Fabrication Team Tech Support - FY 2 - LO	01-Sep-15 A	30-Sep-15 A	100%	154	1800.00	\$75,132.00	\$0.00	\$75,132.00			PM Cell Fabrication Team Tech Support - FY 2 - LOE Labor							
	PM Cell Fabrication Tech Support	03-May-18 A	26-Sep-18 A	100%	103	446.06	\$20,643.66	\$0.00	\$20,643.66						PM Cell Fabrication Tech Support				
	Contract Signed	06-Oct-15 A	06-Oct-15 A	100%	4	0.00	\$0.00	\$203,778.00	\$203,778.00		Contract Signed								
	Kick off Meeting	02-Nov-15 A	03-Nov-15 A	100%	20	0.00	\$0.00	\$0.00	\$0.00		Kick off Meeting								
	Design Review	04-Nov-15 A	02-Dec-15 A	100%	19	0.00	\$0.00	\$0.00	\$0.00		Design Review								
	Fab #1 Survey	03-Dec-15 A	29-Dec-15 A	100%	18	0.00	\$0.00	\$0.00	\$0.00		Fab #1 Survey								
	Fab #2 Survey	01-Feb-16 A	05-Feb-16 A	100%	26	0.00	\$0.00	\$202,768.00	\$202,768.00			Fab #2 Survey							
	Fab #3 Survey	05-Feb-16 A	12-Feb-16 A	100%	10	0.00	\$0.00	\$0.00	\$0.00			Fab #3 Survey							
	Fab #4 Survey	12-Feb-16 A	26-Feb-16 A	100%	19	0.00	\$0.00	\$0.00	\$0.00			Fab #4 Survey							
	Fab #5 Survey	22-Feb-16 A	11-Mar-16 A	100%	5	0.00	\$0.00	\$0.00	\$0.00			Fab #5 Survey							
	Fab #6 Survey	01-Apr-16 A	22-Apr-16 A	100%	20	0.00	\$0.00	\$304,152.00	\$304,152.00			Fab #6 Survey							
	Cover #1	01-Apr-16 A	29-Apr-16 A	100%	15	0.00	\$0.00	\$0.00	\$0.00			Cover #1							
	Post Stress Relief	05-Jul-16 A	18-Jul-16 A	100%	4	0.00	\$0.00	\$405,536.00	\$405,536.00			Post Stress Relief							
	Machining #1	01-Aug-16 A	12-Dec-16 A	100%	32	0.00	\$0.00	\$0.00	\$0.00			Machining #1							
	Machining #2	12-Dec-16 A	31-Jan-17 A	100%	4	0.00	\$0.00	\$304,141.86	\$304,141.86			Machining #2							
	Machining #3	06-Feb-17 A	16-Mar-17 A	100%	36	0.00	\$0.00	\$0.00	\$0.00			Machining #3							
	Pre-Test, Vacuum Review	11-Sep-17 A	15-Sep-17 A	100%	5	0.00	\$0.00	\$0.00	\$0.00				Pre-Test, Vacuum Review						
	Process Piping Material Procurement and Shop Details	27-Feb-17 A	03-Mar-17 A	100%	3	0.00	\$0.00	\$83,210.64	\$83,210.64				Process Piping Material Procurement and Shop Details						
	Interface Plates Material Procurement and Piece Part Machining	28-Sep-16 A	27-Oct-16 A	100%	3	0.00	\$0.00	\$77,507.37	\$77,507.37				Interface Plates Material Procurement and Piece Part Machining						
	M1M3 Mirror Cell Tilt Test Fixture and Control Cabin	03-Apr-18 A	29-Sep-18 A	100%	43	0.00	\$0.00	\$78,500.00	\$78,500.00						M1M3 Mirror Cell Tilt Test Fixture and Control Cabinets EWG Cooling Lines				
	Machining #4	20-Apr-17 A	04-Aug-17 A	100%	40	0.00	\$0.00	\$406,546.00	\$406,546.00						Machining #4				
	Post-Test, Vacuum Review	31-Oct-17 A	31-Oct-17 A	100%	10	0.00	\$0.00	\$0.00	\$0.00						Post-Test, Vacuum Review				
	Final Acceptance	22-Nov-17 A	26-Jan-18 A	100%	27	0.00	\$0.00	\$202,768.00	\$202,768.00						Final Acceptance				
	Final Acceptance Contract Extension	16-Feb-17 A	22-Nov-17 A	100%	157	0.00	\$0.00	\$0.00	\$0.00						Final Acceptance Contract Extension				
	Interface Plates Final Delivery	27-Oct-17 A	31-Oct-17 A	100%	4	0.00	\$0.00	\$742.83	\$742.83						Interface Plates Final Delivery				
	Process Piping Final Delivery	25-May-18 A	15-Oct-18 A	100%	5	0.00	\$0.00	\$101,440.00	\$101,440.00						Process Piping Final Delivery				
	M1M3 Cell piping Phase 3 materials purchased	13-Sep-17 A	29-Jan-18 A	100%	5	0.00	\$0.00	\$66,491.00	\$66,491.00						M1M3 Cell piping Phase 3 materials purchased				
	Designing, manufacturing and installing (4x) interface	03-Apr-18 A	29-Sep-18 A	100%	65	0.00	\$0.00	\$196,200.00	\$196,200.00						Designing, manufacturing and installing (4x) interface Plates				
	Machine shop additional support	01-Jun-17 A	29-Sep-17 A	100%	83	1208.00	\$54,009.68	\$0.00	\$54,009.68						Machine shop additional support				
	Machine shop support - FY18	01-Oct-17 A	27-Sep-18 A	100%	255	1350.00	\$62,478.00	\$0.00	\$62,478.00						Machine shop support - FY18				
	Machine shop support - FY19	01-Oct-18 A	31-Dec-18 A	100%	64	450.00	\$21,555.00	\$0.00	\$21,555.00						Machine shop support - FY19				
	Lab Prototype Development for Hardpoint Actuators	01-Oct-15 A	01-Dec-15 A	100%	41	40.00	\$1,728.00	\$0.00	\$1,728.00			Lab Prototype Development for Hardpoint Actuators							
	Lab Prototype Development for Figure Actuators	01-Feb-16 A	12-Feb-16 A	100%	41	40.00	\$1,728.00	\$0.00	\$1,728.00				Lab Prototype Development for Figure Actuators						
	Lab Prototype Development for Thermal Fan Unit	15-Feb-16 A	29-Feb-16 A	100%	43	40.00	\$1,728.00	\$0.00	\$1,728.00				Lab Prototype Development for Thermal Fan Unit						
	Final Prototype and Production Test Equipment	04-Sep-15 A	21-Dec-15 A	100%	109	0.00	\$0.00	\$183,864.95	\$183,864.95				Final Prototype and Production Test Equipment						
	M1M3 Hardpoint Fabrication	02-May-16 A	31-May-16 A	100%	3	0.00	\$0.00	\$37,479.85	\$37,479.85				M1M3 Hardpoint Fabrication						
	M1M3 Hardpoint Fabrication Materials	01-Jul-16 A	11-Sep-17 A	100%	1	0.00	\$0.00	\$309,611.98	\$309,611.98						M1M3 Hardpoint Fabrication Materials				
	M1M3 Hardpoint Fabrication	01-Sep-17 A	29-Sep-17 A	100%	5	0.00	\$0.00	\$143,004.81	\$143,004.81						M1M3 Hardpoint Fabrication				
	M1M3 Figure Actuator Fabrication	01-Mar-16 A	31-Aug-16 A	100%	63	0.00	\$0.00	\$417,181.77	\$417,181.77						M1M3 Figure Actuator Fabrication				
	M1M3 Figure Actuator Fabrication Materials	31-Aug-16 A	02-Jun-17 A	100%	1	0.00	\$0.00	\$1,181,241.85	\$1,181,241.85						M1M3 Figure Actuator Fabrication Materials				
	M1M3 Thermal fan Unit Fabrication	30-Jun-16 A	31-Oct-16 A	100%	63	0.00	\$0.00	\$106,481.63	\$106,481.63						M1M3 Thermal fan Unit Fabrication				
	M1M3 Thermal fan Unit Fabrication Materials	31-Oct-16 A	31-Jan-17 A	100%	1	0.00	\$0.00	\$136,786.99	\$136,786.99						M1M3 Thermal fan Unit Fabrication Materials				
	Ancillary Hardware and test Equipment	01-Sep-15 A	03-Sep-15 A	100%	22	0.00	\$0.00	\$15,840.15	\$15,840.15						Ancillary Hardware and test Equipment				
	Firmware Protocol Development	01-Sep-15 A	25-Sep-15 A	100%	5	0.00	\$0.00	\$41,400.00	\$41,400.00						Firmware Protocol Development				

LSST May 2019 Month End Forecast																		
Activity ID	Activity Name	Start	Finish	Physical % Complete	Original Duration	Budgeted Labor Units	Budgeted Labor Cost	Budgeted Material Cost	Budgeted Total Cost no	Total Float	FY2015 2014-10-01	FY2016 2015-10-01	FY2017 2016-10-01	FY2018 2017-10-01	FY2019 2018-10-01	FY2020 2019-10-01	FY2021 2020-10-01	FY2022 2021-10-01
T&SC-17i	Labview Development	04-Apr-16 A	27-Jul-16 A	100%	44	0.00	\$0.00	\$20,979.88	\$20,979.88			Labview Development						
	Firmware Secondary Mirror Control Spec Developm	01-Oct-15 A	30-Oct-15 A	100%	10	0.00	\$0.00	\$82,800.00	\$82,800.00			Firmware Secondary Mirror Control Spec Development						
	Firmware coding	01-Oct-15 A	18-Dec-15 A	100%	44	0.00	\$0.00	\$83,919.53	\$83,919.53			Firmware coding						
	Firmware coding Complete		18-Dec-15 A	100%	0	0.00	\$0.00	\$0.00	\$0.00			Firmware coding Complete						
	Hardware Ready for Integration		23-Oct-17 A	100%	0	0.00	\$0.00	\$0.00	\$0.00				Hardware Ready for Integration					
T&SC-17i	Begin ILC Development and Procurements	01-Dec-15 A		100%	0	0.00	\$0.00	\$0.00	\$0.00			Begin ILC Development and Procurements						
T&SC-17i	Procure Components for 5 SEMAs	25-Sep-15 A	30-Sep-15 A	100%	5	0.00	\$0.00	\$2,000.00	\$2,000.00			Procure Components for 5 SEMAs						
T&SC-17i	In House Design of Test Rig	03-Aug-15 A	11-Sep-15 A	100%	29	240.00	\$10,017.60	\$0.00	\$10,017.60			In House Design of Test Rig						
T&SC-17i	SEMA Mechanical Design	10-Aug-15 A	14-Sep-15 A	100%	5	34.50	\$1,440.03	\$0.00	\$1,440.03			SEMA Mechanical Design						
T&SC-17i	SEMA Fabrication	15-Aug-15 A	01-Sep-15 A	100%	10	69.00	\$2,880.06	\$0.00	\$2,880.06			SEMA Fabrication						
T&SC-17i	SEMA Test	28-Sep-15 A	30-Sep-15 A	100%	5	34.50	\$1,440.03	\$0.00	\$1,440.03			SEMA Test						
T&SC-17i	SEMA Ready for Software Integration		30-Sep-15 A	100%	0	0.00	\$0.00	\$0.00	\$0.00			SEMA Ready for Software Integration						
T&SC-17i	Procucure ILC Enclosures (First Article)	12-Oct-15 A	19-Oct-15 A	100%	10	0.00	\$0.00	\$120.00	\$120.00			Procucure ILC Enclosures (First Article)						
T&SC-17i	LSST CFE Short Stock Procurement	01-Sep-15 A	30-Sep-15 A	100%	70	0.00	\$0.00	\$15,000.00	\$15,000.00			LSST CFE Short Stock Procurement						
T&SC-17i	LSST CFE Long Lead Procurement Ship	01-Sep-15 A	30-Sep-15 A	100%	70	0.00	\$0.00	\$20,000.00	\$20,000.00			LSST CFE Long Lead Procurement Ship						
T&SC-17i	Production Main Board ILC Schematic Update	12-Oct-15 A	19-Oct-15 A	100%	10	0.00	\$0.00	\$3,020.00	\$3,020.00			Production Main Board ILC Schematic Update						
T&SC-17i	Production Main Board ILC Boad Layout	01-Dec-15 A	04-Dec-15 A	100%	10	0.00	\$0.00	\$7,000.00	\$7,000.00			Production Main Board ILC Boad Layout						
T&SC-17i	Main Board Assembly and Test (First Article)	07-Dec-15 A	11-Dec-15 A	100%	10	0.00	\$0.00	\$15,000.00	\$15,000.00			Main Board Assembly and Test (First Article)						
T&SC-17i	Mezanine Board ILC Schematic Update	14-Dec-15 A	17-Dec-15 A	100%	5	0.00	\$0.00	\$1,000.00	\$1,000.00			Mezanine Board ILC Schematic Update						
T&SC-17i	Mezanine Board ILC Boad Layout	17-Dec-15 A	18-Dec-15 A	100%	5	0.00	\$0.00	\$7,000.00	\$7,000.00			Mezanine Board ILC Boad Layout						
T&SC-17i	Mezanine Board Assembly and Test (First Article)	21-Dec-15 A	23-Dec-15 A	100%	5	0.00	\$0.00	\$15,000.00	\$15,000.00			Mezanine Board Assembly and Test (First Article)						
T&SC-17i	Mezanine and Main Board Integration and Testing	23-Dec-15 A	28-Dec-15 A	100%	5	34.50	\$1,490.40	\$0.00	\$1,490.40			Mezanine and Main Board Integration and Testing						
T&SC-17i	Mezanine and Main Board Integration and Testing C		29-Dec-15 A	100%	0	0.00	\$0.00	\$0.00	\$0.00			Mezanine and Main Board Integration and Testing Complete						
T&SC-17i	Deliver ILC to Excelis for Integration and Testing		30-Jun-16 A	100%	0	0.00	\$0.00	\$0.00	\$0.00			Deliver ILC to Excelis for Integration and Testing						
T&SC-17i	Mass Production (400 Units)	11-Apr-16 A	31-May-16 A	100%	22	0.00	\$0.00	\$180,000.00	\$180,000.00			Mass Production (400 Units)						
T&SC-17i	Assembly and Testing of Production ILCs	31-May-16 A	30-Jun-16 A	100%	22	80.00	\$3,456.00	\$0.00	\$3,456.00			Assembly and Testing of Production ILCs						
T&SC-17i	Deliver all Production ILCs to Excelis		30-Jun-16 A	100%	0	0.00	\$0.00	\$0.00	\$0.00			Deliver all Production ILCs to Excelis						
T&SC-17i	Actuator and Controller Coding	04-Apr-16 A	31-Mar-17 A	100%	44	0.00	\$0.00	\$1,071.22	\$1,071.22			Actuator and Controller Coding						
T&SC-17i	Actuator and Controller integrated testing	03-Apr-17 A	28-Apr-17 A	100%	44	0.00	\$0.00	\$1,071.22	\$1,071.22			Actuator and Controller integrated testing						
T&SC-17i	Design and Develop Current Amplifier	20-Jul-16 A	18-Nov-16 A	100%	40	0.00	\$0.00	\$21,424.40	\$21,424.40			Design and Develop Current Amplifier						
T&SC-17i	Fabricate First Article Current Amplifier	09-Sep-16 A	10-Jan-17 A	100%	10	0.00	\$0.00	\$428.49	\$428.49			Fabricate First Article Current Amplifier						
T&SC-17i	Fabricate Current Amplifier	03-Feb-17 A	24-Mar-17 A	100%	10	0.00	\$0.00	\$37,492.70	\$37,492.70			Fabricate Current Amplifier						
T&SC-17i	Labview Development for Actuator Testing	20-Jul-16 A	22-Aug-16 A	100%	22	0.00	\$0.00	\$8,569.76	\$8,569.76			Labview Development for Actuator Testing						
T&SC-17i	Develop additional command functions for asci test IL	03-Apr-17 A	01-May-17 A	100%	43	0.00	\$0.00	\$1,440.00	\$1,440.00			Develop additional command functions for asci test ILC						
T&SC-17i	Implement control algorithm for ILC Pneumatic actua	16-May-17 A	25-May-17 A	100%	43	0.00	\$0.00	\$10,800.00	\$10,800.00			Implement control algorithm for ILC Pneumatic actuator						
T&SC-17i	Develop ILC bootloader firmware for pneumatic actu	03-Apr-17 A	15-May-17 A	100%	43	0.00	\$0.00	\$14,400.00	\$14,400.00			Develop ILC bootloader firmware for pneumatic actuator						
T&SC-17i	Develop LabVIEW Test program for hardpoint lab te	01-Sep-17 A	22-Sep-17 A	100%	43	0.00	\$0.00	\$12,600.00	\$12,600.00			Develop LabVIEW Test program for hardpoint lab tests						
T&SC-17i	M1M3 Firmware additional scope	01-May-17 A	28-Feb-18 A	100%	189	0.00	\$0.00	\$140,760.00	\$140,760.00			M1M3 Firmware additional scope						
T&SC-17i	Develop and Implement firmware for Thermal (Fan-Coil)	27-Nov-17 A	28-Feb-18 A	100%	20	0.00	\$0.00	\$21,600.00	\$21,600.00			Develop and Implement firmware for Thermal (Fan-Coil) ILC						
T&SC-18i	Prototype Hard Point break away mechanism Desigr	01-Feb-16 A	15-Feb-16 A	100%	20	36.00	\$3,536.64	\$0.00	\$3,536.64			Prototype Hard Point break away mechanism Design & Analysis						
T&SC-18i	Prototype Hard Point break away mechanism Draft	16-Feb-16 A	19-Feb-16 A	100%	20	160.00	\$6,912.00	\$0.00	\$6,912.00			Prototype Hard Point break away mechanism Draft						
T&SC-18i	Prototype Hard Point break away mechanism Procu	22-Feb-16 A	01-Apr-16 A	100%	5	20.00	\$864.00	\$0.00	\$864.00			Prototype Hard Point break away mechanism Procurement						
T&SC-18i	Prototype Hard Point break away mechanism lead ti	04-Apr-16 A	15-Apr-16 A	100%	50	0.00	\$0.00	\$0.00	\$0.00			Prototype Hard Point break away mechanism lead time						
T&SC-18i	Prototype Hard Point break away mechanism Accept	18-Apr-16 A	21-Apr-16 A	100%	1	0.00	\$0.00	\$0.00	\$0.00			Prototype Hard Point break away mechanism Acceptance						
T&SC-18i	Prototype Hard Point break away mechanism Assem	01-Mar-16 A	29-Apr-16 A	100%	14	112.00	\$7,515.20	\$0.00	\$7,515.20			Prototype Hard Point break away mechanism Assembly & Testing						
T&SC-18i	Production Hard Point Design & Draft	04-Mar-16 A	31-May-17 A	100%	31	124.00	\$12,181.76	\$0.00	\$12,181.76			Production Hard Point Design & Draft						
T&SC-18i	Production Hard Point Assemble, evaluate & test axi	04-Apr-16 A	05-May-16 A	100%	15	30.00	\$2,947.20	\$0.00	\$2,947.20			Production Hard Point Assemble, evaluate & test axial breakaway design						
T&SC-18i	Production Hard Point component procurement & fa	04-Mar-16 A	31-May-17 A	100%	75	300.00	\$16,545.00	\$0.00	\$16,545.00			Production Hard Point component procurement & fabrication						
T&SC-18i	Production Hard Point COTS & custom component f	22-Feb-16 A	29-Apr-16 A	100%	106	300.00	\$12,960.00	\$0.00	\$12,960.00			Production Hard Point COTS & custom component procurement						
T&SC-18i	Production Hard Point Assembly & Testing	27-Oct-16 A	31-Jan-18 A	100%	92	895.37	\$89,635.35	\$0.00	\$89,635.35			Production Hard Point Assembly & Testing						
T&SC-18i	Production Hard Point Acceptance	01-Mar-18 A	30-Mar-18 A	100%	1	0.00	\$0.00	\$0.00	\$0.00			Production Hard Point Acceptance						
T&SC-18i	Laser Tracker Design & Analysis	15-Feb-16 A	03-Jun-16 A	100%	10	4.00	\$392.96	\$0.00	\$392.96			Laser Tracker Design & Analysis						
T&SC-18i	Laser Tracker Draft	01-Jun-16 A	06-Jun-16 A	100%	121	61.27	\$2,646.68	\$0.00	\$2,646.68			Laser Tracker Draft						
T&SC-18i	Laser tracker cell support Fab/Procurement	01-Mar-17 A	07-Mar-17 A	100%	5	20.00	\$864.00	\$0.00	\$864.00			Laser tracker cell support Fab/Procurement						
T&SC-18i	Laser tracker cell support acceptance	19-Apr-17 A	21-Apr-17 A	100%	10	80.00	\$3,456.00	\$0.00	\$3,456.00			Laser tracker cell support acceptance						
T&SC-18i	IMS Design & Analysis	29-Sep-16 A	14-Aug-17 A	100%	10	80.00	\$7,859.20	\$0.00	\$7,859.20			IMS Design & Analysis						
T&SC-18i	IMS Draft	07-Oct-16 A	20-Nov-17 A	100%	10	80.00	\$3,456.00	\$0.00	\$3,456.00			IMS Draft						
T&SC-18i	IMS purchase components	07-Oct-16 A	20-Dec-17 A	100%	5	20.00	\$864.00	\$0.00	\$864.00			IMS purchase components						
T&SC-18i	IMS lead time	07-Oct-16 A	25-Jan-18 A	100%	25	0.00	\$0.00	\$0.00	\$0.00			IMS lead time						
T&SC-18i	IMS receive components	07-Oct-16 A	25-Jan-18 A	100%	1	0.00	\$0.00	\$0.00	\$0.00			IMS receive components						
T&SC-18i	IMS Assemble Components	02-May-18 A	02-May-18 A	100%	4	32.00	\$1,430.72	\$0.00	\$1,430.72			IMS Assemble Components						
T&SC-18i	IMS Testing	01-Jun-18 A	14-Jun-18 A	100%	10	80.00	\$3,576.80	\$0.00	\$3,576.80			IMS Testing						
T&SC-18i	Prototype Single Axis Figure Actuators Design & Ana	01-Feb-16 A	18-Mar-16 A	100%	10	40.00	\$3,929.60	\$0.00	\$3,929.60			Prototype Single Axis Figure Actuators Design & Analysis						
T&SC-18i	Prototype Single Axis Figure Actuators Draft	18-Mar-16 A	22-Apr-16 A	100%	15	120.00	\$5,184.00	\$0.00	\$5,184.00			Prototype Single Axis Figure Actuators Draft						
T&SC-18i	Prototype Single Axis Figure Actuators Procurement	25-Apr-16 A	02-May-16 A	100%	5	20.00	\$864.00	\$0.00	\$864.00			Prototype Single Axis Figure Actuators Procurement						
T&SC-18i	Prototype Single Axis Figure Actuators lead time	02-May-16 A	29-Jul-16 A	100%	40	0.00	\$0.00	\$0.00	\$0.00			Prototype Single Axis Figure Actuators lead time						
T&SC-18i	Prototype Single Axis Figure Actuators Assembly	29-Jul-16 A	01-Sep-16 A	100%	10	80.00	\$5,368.00	\$0.00	\$5,368.00			Prototype Single Axis Figure Actuators Assembly						
T&SC-18i	Prototype Single Axis Figure Actuators Testing	01-Aug-16 A	14-Dec-16 A	100%	20	160.00	\$6,912.00	\$0.00	\$6,912.00			Prototype Single Axis Figure Actuators Testing						
T&SC-18i	Single Actuator Housing 48X Procurement	16-May-16 A	20-May-16 A	100%	5	20.00	\$864.00	\$0.00	\$864.00			Single Actuator Housing 48X Procurement						
T&SC-18i	Single Actuator Housing 48X lead time	23-May-16 A	28-Sep-16 A	100%	25	0.00	\$0.00	\$0.00	\$0.00			Single Actuator Housing 48X lead time						
T&SC-18i	Single Actuator Housing 48X Acceptance	28-Sep-16 A	29-Sep-16 A	100%	1	0.00	\$0.00	\$0.00	\$0.00			Single Actuator Housing 48X Acceptance						
T&SC-18i	Production Single Axis Figure Actuators Design & An	02-May-16 A	20-May-16 A	100%	10	80.00	\$7,859.20	\$0.00	\$7,859.20			Production Single Axis Figure Actuators Design & Analysis						

LSST May 2019 Month End Forecast																					
Activity ID	Activity Name	Start	Finish	Physical % Complete	Original Duration	Budgeted Labor Units	Budgeted Labor Cost	Budgeted Material Cost	Budgeted Total Cost no	Total Float	FY2015 2014-10-01	FY2016 2015-10-01	FY2017 2016-10-01	FY2018 2017-10-01	FY2019 2018-10-01	FY2020 2019-10-01	FY2021 2020-10-01	FY2022 2021-10-01			
T&SC-18i	Production Single Axis Figure Actuators Draft	02-May-16 A	30-Aug-16 A	100%	6	42.00	\$1,814.40	\$0.00	\$1,814.40				Production Single Axis Figure Actuators Draft								
	Production Single Axis Figure Actuators Procurement	02-May-16 A	28-Apr-17 A	100%	50	50.00	\$2,164.53	\$0.00	\$2,164.53				Production Single Axis Figure Actuators Procurement								
	Production Single Axis Figure Actuators Acceptance	02-May-16 A	28-Apr-17 A	100%	1	0.00	\$0.00	\$0.00	\$0.00				Production Single Axis Figure Actuators Acceptance								
	Production Single Axis Figure Actuators Assembly	15-Sep-16 A	28-Apr-17 A	100%	20	240.00	\$12,709.60	\$0.00	\$12,709.60				Production Single Axis Figure Actuators Assembly								
	Production Single Axis Figure Actuators Qual Testing	16-May-17 A	31-Aug-17 A	100%	60	1147.40	\$101,376.72	\$0.00	\$101,376.72				Production Single Axis Figure Actuators Qual Testing (48 singles @ 5hrs/test cycle)								
	Prototype Dual Axis Figure Actuators Design & Analysis	01-Feb-16 A	05-Feb-16 A	100%	2	16.00	\$1,571.84	\$0.00	\$1,571.84				Prototype Dual Axis Figure Actuators Design & Analysis								
	Prototype Dual Axis Figure Actuators Draft	08-Feb-16 A	12-Feb-16 A	100%	2	16.00	\$1,571.84	\$0.00	\$1,571.84				Prototype Dual Axis Figure Actuators Draft								
	Prototype Dual Axis Figure Actuators Fabrication	15-Feb-16 A	29-Feb-16 A	100%	2	16.00	\$1,073.60	\$0.00	\$1,073.60				Prototype Dual Axis Figure Actuators Fabrication								
	Prototype Dual Axis Figure Actuators Test	17-Jun-16 A	21-Dec-16 A	100%	2	16.00	\$1,571.84	\$0.00	\$1,571.84				Prototype Dual Axis Figure Actuators Test								
	Prototype Procurement Enfield flow control valve (x4)	01-Feb-16 A	22-Feb-16 A	100%	5	40.00	\$3,929.60	\$0.00	\$3,929.60				Prototype Procurement Enfield flow control valve (x4) Purchase								
	Prototype Procurement Enfield flow control valve (x4)	23-Feb-16 A	26-Feb-16 A	100%	10	0.00	\$0.00	\$0.00	\$0.00				Prototype Procurement Enfield flow control valve (x4) Lead Time								
	Prototype Procurement Enfield flow control valve (x4)	27-Feb-16 A	29-Feb-16 A	100%	1	0.00	\$0.00	\$0.00	\$0.00				Prototype Procurement Enfield flow control valve (x4) Acceptance								
	Prototype Procurement Dual Axis Figure Actuators A	11-Apr-16 A	16-Jun-16 A	100%	2	16.00	\$1,073.60	\$0.00	\$1,073.60				Prototype Procurement Dual Axis Figure Actuators Assembly								
	Prototype Procurement Dual Axis Figure Actuators T	13-Jun-16 A	16-Jun-16 A	100%	10	80.00	\$3,456.00	\$0.00	\$3,456.00				Prototype Procurement Dual Axis Figure Actuators Testing preparation								
	Prototype Procurement Dual Axis Figure Actuators T	16-Jun-16 A	01-Sep-16 A	100%	40	784.05	\$77,609.60	\$0.00	\$77,609.60				Prototype Procurement Dual Axis Figure Actuators Testing								
	Production Dual Axis Figure Actuators Design & Anal	04-Apr-16 A	31-May-16 A	100%	10	80.00	\$7,859.20	\$0.00	\$7,859.20				Production Dual Axis Figure Actuators Design & Analysis								
	Production Dual Axis Figure Actuators Draft Updates	04-Apr-16 A	14-Oct-16 A	100%	10	80.00	\$3,456.00	\$0.00	\$3,456.00				Production Dual Axis Figure Actuators Draft Updates								
	Production Dual Axis Figure Actuators 300 cylinders	15-Feb-16 A	29-Feb-16 A	100%	5	75.43	\$7,410.44	\$0.00	\$7,410.44				Production Dual Axis Figure Actuators 300 cylinders Procurement								
	Production Dual Axis Figure Actuators 300 cylinders	01-Mar-16 A	31-Aug-16 A	100%	95	0.00	\$0.00	\$0.00	\$0.00				Production Dual Axis Figure Actuators 300 cylinders lead time								
	Production Procurement 300 cylinders Acceptance	01-Jul-16 A	31-Aug-16 A	100%	1	0.00	\$0.00	\$0.00	\$0.00				Production Procurement 300 cylinders Acceptance								
	Production Dual Axis Figure Actuators 300 enfield flo	06-Jun-16 A	10-Jun-16 A	100%	5	40.00	\$3,929.60	\$0.00	\$3,929.60				Production Dual Axis Figure Actuators 300 enfield flow control valves Procurement								
	Production Dual Axis Figure Actuators 300 enfield flo	25-Aug-16 A	02-Dec-16 A	100%	35	0.00	\$0.00	\$0.00	\$0.00				Production Dual Axis Figure Actuators 300 enfield flow control valves lead time								
	Production Procurement 300 enfield flow control valv	03-Nov-16 A	02-Dec-16 A	100%	1	0.00	\$0.00	\$0.00	\$0.00				Production Procurement 300 enfield flow control valves Acceptance								
	Production Dual Axis Figure Actuators 600 servo pre	01-Jan-16 A	29-Jan-16 A	100%	5	40.00	\$3,929.60	\$0.00	\$3,929.60				Production Dual Axis Figure Actuators 600 servo pressure control valves Procurement								
	Production Dual Axis Figure Actuators 600 servo pre	06-Jun-16 A	04-Oct-16 A	100%	35	0.00	\$0.00	\$0.00	\$0.00				Production Dual Axis Figure Actuators 600 servo pressure control valves lead time								
	Production Procurement 600 servo preassure contrc	04-Oct-16 A	05-Oct-16 A	100%	1	0.00	\$0.00	\$0.00	\$0.00				Production Procurement 600 servo preassure control valves Acceptance								
	Production Dual Axis Figure Actuators AI housing Prc	11-Apr-16 A	29-Apr-16 A	100%	5	20.00	\$864.00	\$0.00	\$864.00				Production Dual Axis Figure Actuators AI housing Procurement								
	Production Dual Axis Figure Actuators AI housing lea	29-Apr-16 A	20-Oct-16 A	100%	35	0.00	\$0.00	\$0.00	\$0.00				Production Dual Axis Figure Actuators AI housing lead time								
	Production Procurement AI housing Acceptance	21-Oct-16 A	15-Nov-16 A	100%	1	0.00	\$0.00	\$0.00	\$0.00				Production Procurement AI housing Acceptance								
	Validate load cell accuracy	27-Aug-16 A	31-May-17 A	100%	5	80.00	\$7,859.20	\$0.00	\$7,859.20				Validate load cell accuracy								
	Production Dual Axis Figure Actuators sentran load c	01-Jun-16 A	09-Jun-16 A	100%	5	40.00	\$3,929.60	\$0.00	\$3,929.60				Production Dual Axis Figure Actuators sentran load cell (x300) Procurement								
	Production Dual Axis Figure Actuators sentran load c	25-Aug-16 A	12-Oct-16 A	100%	35	0.00	\$0.00	\$0.00	\$0.00				Production Dual Axis Figure Actuators sentran load cell (x300) lead time								
	Production Procurement sentran load cell (x300) Acc	13-Oct-16 A	14-Oct-16 A	100%	1	0.00	\$0.00	\$0.00	\$0.00				Production Procurement sentran load cell (x300) Acceptance								
	Production Dual Axis Figure Actuators Misc Procurer	25-Apr-16 A	17-Jan-17 A	100%	5	20.00	\$864.00	\$0.00	\$864.00				Production Dual Axis Figure Actuators Misc Procurement								
	Production Dual Axis Figure Actuators Misc lead time	19-Jul-16 A	30-Jan-17 A	100%	35	0.00	\$0.00	\$0.00	\$0.00				Production Dual Axis Figure Actuators Misc lead time								
	Production Procurement Misc Acceptance	16-May-16 A	30-Jun-16 A	100%	1	0.00	\$0.00	\$0.00	\$0.00				Production Procurement Misc Acceptance								
	Production Dual Axis Figure Actuators Assemble Cor	01-Sep-16 A	31-May-17 A	100%	50	160.00	\$10,892.04	\$0.00	\$10,892.04				Production Dual Axis Figure Actuators Assemble Components								
	Production Dual Axis Figure Actuators Component b	01-Sep-16 A	27-Oct-16 A	100%	30	50.00	\$2,235.50	\$0.00	\$2,235.50				Production Dual Axis Figure Actuators Component binning and Storage								
	Production Dual Axis Figure Actuators Qual Testing (	07-Aug-17 A	31-Oct-17 A	100%	77	1400.99	\$142,452.38	\$0.00	\$142,452.38				Production Dual Axis Figure Actuators Qual Testing (122 duals @ 5hrs/test cycle)								
	Mirror Support Figure Actuator Test Stand Design &	01-Feb-16 A	12-Feb-16 A	100%	4	16.00	\$1,571.84	\$0.00	\$1,571.84				Mirror Support Figure Actuator Test Stand Design & Analysis								
	Mirror Support Figure Actuator Test Stand Draft	01-Mar-16 A	01-Mar-16 A	100%	24																



LSST May 2019 Month End Forecast																		
Activity ID	Activity Name	Start	Finish	Physical % Complete	Original Duration	Budgeted Labor Units	Budgeted Labor Cost	Budgeted Material Cost	Budgeted Total Cost no	Total Float	FY2015 2014-10-01	FY2016 2015-10-01	FY2017 2016-10-01	FY2018 2017-10-01	FY2019 2018-10-01	FY2020 2019-10-01	FY2021 2020-10-01	FY2022 2021-10-01
T&SC-181	Fan Coil Units Procurement (110 Units)	01-Dec-16 A	31-Mar-17 A	100%	5	20.00	\$864.00	\$0.00	\$864.00				Fan Coil Units Procurement (110 Units)					
	Fan Coil Units Lead Time	14-Dec-16 A	15-Mar-17 A	100%	115	0.00	\$0.00	\$0.00	\$0.00				Fan Coil Units Lead Time					
	Fan Coil Units Acceptance	20-Jan-17 A	15-Mar-17 A	100%	1	0.00	\$0.00	\$0.00	\$0.00				Fan Coil Units Acceptance					
	Fan Coil Units Assembly	31-Mar-17 A	09-Aug-17 A	100%	60	480.00	\$21,460.80	\$0.00	\$21,460.80				Fan Coil Units Assembly					
	Fan Coil Units Test	01-Dec-17 A	31-Jan-18 A	100%	20	0.00	\$0.00	\$0.00	\$0.00				Fan Coil Units Test					
	EGW Recirculation System Design & Analysis	04-Apr-16 A	28-Nov-16 A	100%	36	288.00	\$28,293.12	\$0.00	\$28,293.12				EGW Recirculation System Design & Analysis					
	EGW Recirculation System Draft	04-Apr-16 A	26-Apr-17 A	100%	16	128.00	\$5,529.60	\$0.00	\$5,529.60				EGW Recirculation System Draft					
	Fabrication Started - EGW	27-Feb-17 A	11-May-17 A	100%	5	20.00	\$864.00	\$0.00	\$864.00				Fabrication Started - EGW					
	Hydro testing Complete	20-Apr-17 A	01-May-17 A	100%	5	0.00	\$0.00	\$0.00	\$0.00				Hydro testing Complete					
	EGW Recirculation System Lead Time	03-Jul-17 A	02-Aug-17 A	100%	25	0.00	\$0.00	\$0.00	\$0.00				EGW Recirculation System Lead Time					
	EGW Recirculation System Acceptance	03-Aug-17 A	04-Aug-17 A	100%	1	0.00	\$0.00	\$0.00	\$0.00				EGW Recirculation System Acceptance					
	EGW Recirculation System Assembly	07-Aug-17 A	10-Aug-17 A	100%	3	0.00	\$0.00	\$0.00	\$0.00				EGW Recirculation System Assembly					
	Test fit EGW system in M1M3 cell	14-Aug-17 A	17-Aug-17 A	100%	3	0.00	\$0.00	\$0.00	\$0.00				Test fit EGW system in M1M3 cell					
	Fab Complete	28-Sep-17 A	29-Sep-17 A	100%	4	0.00	\$0.00	\$0.00	\$0.00				Fab Complete					
	Mirror Core Nozzles System Design & Analysis	01-Feb-16 A	18-Aug-16 A	100%	39	15.60	\$1,532.54	\$0.00	\$1,532.54				Mirror Core Nozzles System Design & Analysis					
	Mirror Core Nozzles System Draft	06-Jun-16 A	25-Aug-16 A	100%	56	48.00	\$2,073.60	\$0.00	\$2,073.60				Mirror Core Nozzles System Draft					
	Mirror Core Nozzles System Procurement (1700 Units)	01-Sep-16 A	27-Sep-16 A	100%	98	190.00	\$8,208.00	\$0.00	\$8,208.00				Mirror Core Nozzles System Procurement (1700 Units)					
	Mirror Core Nozzles System Lead Time	03-Oct-16 A	19-Dec-16 A	100%	60	0.00	\$0.00	\$0.00	\$0.00				Mirror Core Nozzles System Lead Time					
	Mirror Core Nozzles Acceptance	03-Oct-16 A	20-Dec-16 A	100%	1	0.00	\$0.00	\$0.00	\$0.00				Mirror Core Nozzles Acceptance					
	Temp sensing and control Design & Analysis	25-Apr-16 A	28-Jun-17 A	100%	10	80.00	\$7,859.20	\$0.00	\$7,859.20				Temp sensing and control Design & Analysis					
	Temp sensing and control Draft	29-Jun-17 A	30-Jun-17 A	100%	2	16.00	\$691.20	\$0.00	\$691.20				Temp sensing and control Draft					
	Temp sensing and control Procurement	16-Jun-17 A	26-Jun-17 A	100%	5	20.00	\$864.00	\$0.00	\$864.00				Temp sensing and control Procurement					
	Temp sensing and control Lead Time	01-Jun-17 A	17-Aug-17 A	100%	5	0.00	\$0.00	\$0.00	\$0.00				Temp sensing and control Lead Time					
	Temp sensing and control Acceptance	01-Sep-17 A	10-Sep-17 A	100%	1	0.00	\$0.00	\$0.00	\$0.00				Temp sensing and control Acceptance					
	Temp sensing and control Assembly	03-Jan-18 A	23-Mar-18 A	100%	10	80.00	\$3,456.00	\$0.00	\$3,456.00				Temp sensing and control Assembly					
	Temp sensing and control Test	09-Jan-18 A	11-Jan-18 A	100%	3	0.00	\$0.00	\$0.00	\$0.00				Temp sensing and control Test					
	Branch lines to fan coil units Design & Analysis	25-Oct-16 A	02-Dec-16 A	100%	10	80.00	\$7,859.20	\$0.00	\$7,859.20				Branch lines to fan coil units Design & Analysis					
	Branch lines to fan coil units Draft	25-Oct-16 A	14-Dec-16 A	100%	2	16.00	\$691.20	\$0.00	\$691.20				Branch lines to fan coil units Draft					
	Branch lines to fan coil units Procurement	15-Nov-16 A	21-Nov-16 A	100%	5	20.00	\$864.00	\$0.00	\$864.00				Branch lines to fan coil units Procurement					
	Branch lines to fan coil units Lead Time	21-Nov-16 A	04-Jan-17 A	100%	10	0.00	\$0.00	\$0.00	\$0.00				Branch lines to fan coil units Lead Time					
	Branch lines to fan coil units Acceptance	05-Jan-17 A	06-Jan-17 A	100%	1	0.00	\$0.00	\$0.00	\$0.00				Branch lines to fan coil units Acceptance					
	Branch lines to fan coil units Assembly	02-Apr-18 A	02-Apr-18 A	100%	1	0.00	\$0.00	\$0.00	\$0.00				Branch lines to fan coil units Assembly					
	Branch lines to fan coil units Test	03-Apr-18 A	05-Apr-18 A	100%	3	0.00	\$0.00	\$0.00	\$0.00				Branch lines to fan coil units Test					
	Compressed Air Loop header Design & Analysis	04-Apr-16 A	31-May-16 A	100%	10	80.00	\$7,859.20	\$0.00	\$7,859.20				Compressed Air Loop header Design & Analysis					
	Compressed Air Loop header Draft	02-May-16 A	31-May-16 A	100%	10	80.00	\$3,456.00	\$0.00	\$3,456.00				Compressed Air Loop header Draft					
	Fabrication Started - Air	15-Jun-16 A	27-Apr-17 A	100%	5	40.00	\$1,752.16	\$0.00	\$1,752.16				Fabrication Started - Air					
	Outside piping Design Complete	01-May-17 A	11-May-17 A	100%	5	0.00	\$0.00	\$0.00	\$0.00				Outside piping Design Complete					
	Compressed Air Loop header Lead Time	01-Aug-17 A	14-Aug-17 A	100%	10	0.00	\$0.00	\$0.00	\$0.00				Compressed Air Loop header Lead Time					
	Compressed Air Loop header Acceptance	15-Aug-17 A	15-Aug-17 A	100%	1	0.00	\$0.00	\$0.00	\$0.00				Compressed Air Loop header Acceptance					
	Compressed Air Loop header Assembly	16-Aug-17 A	16-Aug-17 A	100%	1	0.00	\$0.00	\$0.00	\$0.00				Compressed Air Loop header Assembly					
	Compressed Air Loop header Test	25-Sep-17 A	27-Sep-17 A	100%	3	0.00	\$0.00	\$0.00	\$0.00				Compressed Air Loop header Test					
	Accumulator tanks Design & Analysis	04-Apr-16 A	29-Apr-16 A	100%	4	32.00	\$3,253.76	\$0.00	\$3,253.76				Accumulator tanks Design & Analysis					
	Accumulator tanks Draft	09-May-16 A	31-May-16 A	100%	4	32.00	\$1,430.72	\$0.00	\$1,430.72				Accumulator tanks Draft					
	Accumulator tanks Procurement	15-Jun-16 A	04-Aug-17 A	100%	30	50.00	\$2,235.50	\$0.00	\$2,235.50				Accumulator tanks Procurement					
	Accumulator tanks Lead Time	07-Aug-17 A	18-Aug-17 A	100%	10	0.00	\$0.00	\$0.00	\$0.00				Accumulator tanks Lead Time					
	Accumulator tanks Acceptance	21-Aug-17 A	24-Aug-17 A	100%	1	0.00	\$0.00	\$0.00	\$0.00				Accumulator tanks Acceptance					
	Accumulator tanks Assembly	28-Aug-17 A	30-Aug-17 A	100%	1	0.00	\$0.00	\$0.00	\$0.00				Accumulator tanks Assembly					
	Accumulator tanks Test	25-Sep-17 A	27-Sep-17 A	100%	3	0.00	\$0.00	\$0.00	\$0.00				Accumulator tanks Test					
	Branch lines to figure actuators & hardpoint Design & Analysis	02-Jan-17 A	12-May-17 A	100%	10	80.00	\$7,859.20	\$0.00	\$7,859.20				Branch lines to figure actuators & hardpoint Design & Analysis					
	Branch lines to figure actuators & hardpoint Draft	02-May-17 A	03-May-17 A	100%	1	8.00	\$345.60	\$0.00	\$345.60				Branch lines to figure actuators & hardpoint Draft					
	Branch lines to figure actuators & hardpoint Procurement	04-May-17 A	10-May-17 A	100%	5	40.00	\$1,764.24	\$0.00	\$1,764.24				Branch lines to figure actuators & hardpoint Procurement					
	Branch lines to figure actuators & hardpoint Lead Time	11-May-17 A	24-May-17 A	100%	10	0.00	\$0.00	\$0.00	\$0.00				Branch lines to figure actuators & hardpoint Lead Time					
	Branch lines to figure actuators & hardpoint Acceptance	25-May-17 A	26-May-17 A	100%	1	0.00	\$0.00	\$0.00	\$0.00				Branch lines to figure actuators & hardpoint Acceptance					
	Branch lines to figure actuators & hardpoint Assembly	03-May-18 A	14-May-18 A	100%	1	0.00	\$0.00	\$0.00	\$0.00				Branch lines to figure actuators & hardpoint Assembly					
	Branch lines to figure actuators & hardpoint Test	14-May-18 A	20-May-18 A	100%	3	0.00	\$0.00	\$0.00	\$0.00				Branch lines to figure actuators & hardpoint Test					
	Lightweight access door Design & Analysis	01-Aug-16 A	12-Apr-17 A	100%	5	40.00	\$3,929.60	\$0.00	\$3,929.60				Lightweight access door Design & Analysis					
	Lightweight access door Draft	04-Oct-16 A	12-Apr-17 A	100%	1	0.00	\$0.00	\$0.00	\$0.00				Lightweight access door Draft					
	Lightweight access door Procurement	09-Aug-16 A	19-Apr-17 A	100%	40	0.00	\$0.00	\$0.00	\$0.00				Lightweight access door Procurement					
	Lightweight access door Lead Time	09-May-17 A	19-Jun-17 A	100%	10	0.00	\$0.00	\$0.00	\$0.00				Lightweight access door Lead Time					
	Lightweight access door Acceptance	20-Jun-17 A	20-Jun-17 A	100%	1	0.00	\$0.00	\$0.00	\$0.00				Lightweight access door Acceptance					
	Lightweight access door Assembly	20-Nov-17 A	22-Nov-17 A	100%	1	0.00	\$0.00	\$0.00	\$0.00				Lightweight access door Assembly					
	Lightweight access door Test	27-Nov-17 A	30-Nov-17 A	100%	3	0.00	\$0.00	\$0.00	\$0.00				Lightweight access door Test					
	Dummy mirror Documentation (SOW & Specs)	22-Feb-16 A	25-Apr-16 A	100%	30	240.00	\$23,577.60	\$0.00	\$23,577.60				Dummy mirror Documentation (SOW & Specs)					
	Dummy mirror Design & Analysis	26-Apr-16 A	29-Apr-16 A	100%	30	240.00	\$23,577.60	\$0.00	\$23,577.60				Dummy mirror Design & Analysis					
	Mirror Cart Documentation (SOW & Specs)	01-Feb-16 A	29-Feb-16 A	100%	10	80.00	\$7,859.20	\$0.00	\$7,859.20				Mirror Cart Documentation (SOW & Specs)					
	Mirror Protective Maintenance Cover Documentation (SOW & Specs)	20-Mar-18 A	30-Apr-18 A	100%	10	80.00	\$7,859.20	\$0.00	\$7,859.20				Mirror Protective Maintenance Cover Documentation (SOW & Specs)					
	M1M3 maintenance cover - Procurement Prepares and Issues Bid Package	18-Nov-19	03-Dec-19	0%	10	0.00	\$0.00	\$0.00	\$0.00	134					M1M3 maintenance cover - Procurement Prepares and Issues Bid Package			
	M1M3 maintenance cover - Supplier Response	04-Dec-19	17-Dec-19	0%	10	0.00	\$0.00	\$0.00	\$0.00	134					M1M3 maintenance cover - Supplier Response			
	M1M3 maintenance cover - Supplier Selection and Contract Award	18-Dec-19	24-Dec-19	0%	5	0.00	\$0.00	\$0.00	\$0.00	134					M1M3 maintenance cover - Supplier Selection and Contract Award			
	M1M3 maintenance cover - Supplier Leadtime and Delivery	27-Dec-19	24-Mar-20	0%	60	0.00	\$0.00	\$0.00	\$0.00	134					M1M3 maintenance cover - Supplier Leadtime and Delivery			
	M1M3 maintenance cover - Delivery Acceptance	25-Mar-20	31-Mar-20	0%	5	0.00	\$0.00	\$95,790.73	\$95,790.73	134					M1M3 maintenance cover - Delivery Acceptance			
	M1M3 maintenance cover - Assembly	01-Apr-20	01-Apr-20	0%	1	0.00	\$0.00	\$0.00	\$0.00	134					M1M3 maintenance cover - Assembly			

## LSST May 2019 Month End Forecast

Activity ID	Activity Name	Start	Finish	Physical % Complete	Original Duration	Budgeted Labor Units	Budgeted Labor Cost	Budgeted Material Cost	Budgeted Total Cost no	Total Float	FY2015 2014-10-01	FY2016 2015-10-01	FY2017 2016-10-01	FY2018 2017-10-01	FY2019 2018-10-01	FY2020 2019-10-01	FY2021 2020-10-01	FY2022 2021-10-01	
M1M3 maintenance cover - Test	T&SC-181	Production Dual Axis Figure Actuators U Joint Procurement	25-Apr-16 A	13-May-16 A	100%	5	20.00	\$864.00	\$0.00	\$864.00	134								
	T&SC-181	Production Dual Axis Figure Actuators U Joint lead time	16-May-16 A	17-Aug-16 A	100%	35	0.00	\$0.00	\$0.00	\$0.00									
	T&SC-181	Production Procurement U Joint Acceptance	16-Aug-16 A	16-Aug-16 A	100%	1	0.00	\$0.00	\$0.00	\$0.00									
	T&SC-181	Production Dual Axis Figure Actuators Servo Pressure Control Valves Procurement	16-May-16 A	31-May-16 A	100%	5	20.00	\$864.00	\$0.00	\$864.00									
	T&SC-181	Production Dual Axis Figure Actuators Servo Pressure Control Valves lead time	01-Jun-16 A	06-Sep-16 A	100%	35	0.00	\$0.00	\$0.00	\$0.00									
	T&SC-181	Production Procurement Servo Pressure Control Valves Acceptance	06-Sep-16 A	07-Sep-16 A	100%	1	0.00	\$0.00	\$0.00	\$0.00									
	T&SC-181	Production Dual Axis Figure Actuators Cylinder Cone Adapter Procurement	01-Jun-16 A	06-Jun-16 A	100%	5	20.00	\$864.00	\$0.00	\$864.00									
	T&SC-181	Production Dual Axis Figure Actuators Cylinder Cone Adapter lead time	22-Jun-16 A	22-Aug-16 A	100%	35	0.00	\$0.00	\$0.00	\$0.00									
	T&SC-181	Production Procurement Cylinder Cone Adapter Acceptance	23-Aug-16 A	24-Aug-16 A	100%	1	0.00	\$0.00	\$0.00	\$0.00									
	T&SC-181	Production Dual Axis Figure Actuators Cup Assembly Procurement	04-Jun-16 A	08-Jun-16 A	100%	5	20.00	\$864.00	\$0.00	\$864.00									
	T&SC-181	Production Dual Axis Figure Actuators Cup Assembly lead time	24-May-16 A	06-Oct-16 A	100%	35	0.00	\$0.00	\$0.00	\$0.00									
	T&SC-181	Production Procurement Cup Assembly Acceptance	10-Oct-16 A	10-Oct-16 A	100%	1	0.00	\$0.00	\$0.00	\$0.00									
	T&SC-181	Production Dual Axis Figure Actuators Fork Assembly Procurement	25-Apr-16 A	13-May-16 A	100%	5	20.00	\$864.00	\$0.00	\$864.00									
	T&SC-181	Production Dual Axis Figure Actuators Fork Assembly lead time	13-May-16 A	27-Sep-16 A	100%	35	0.00	\$0.00	\$0.00	\$0.00									
	T&SC-181	Production Procurement Fork Assembly Acceptance	03-Oct-16 A	03-Oct-16 A	100%	1	0.00	\$0.00	\$0.00	\$0.00									
	T&SC-181	Production Dual Axis Figure Actuators Load Cell Assembly Procurement	01-Jun-16 A	03-Jun-16 A	100%	5	20.00	\$864.00	\$0.00	\$864.00									
	T&SC-181	Production Dual Axis Figure Actuators Load Cell Assembly lead time	19-May-16 A	12-Oct-16 A	100%	80	0.00	\$0.00	\$0.00	\$0.00									
	T&SC-181	Production Procurement Load Cell Assembly Acceptance	13-Oct-16 A	14-Oct-16 A	100%	1	0.00	\$0.00	\$0.00	\$0.00									
	T&SC-181	Hardpoint assembly / test fixture fabrication drawings finalize & release	04-Aug-16 A	20-Aug-16 A	100%	9	18.00	\$1,768.32	\$0.00	\$1,768.32									
	T&SC-181	Hardpoint assembly / test fixture fabrication & COTS procurement	14-Jul-16 A	01-Mar-17 A	100%	50	175.00	\$7,560.00	\$0.00	\$7,560.00									
	T&SC-181	Hardpoint assembly / test fixture assembly	04-Aug-16 A	20-Aug-16 A	100%	11	44.00	\$4,322.56	\$0.00	\$4,322.56									
	T&SC-181	Hardpoint strut assembly –7 units	04-Mar-16 A	15-Sep-17 A	100%	58	206.00	\$20,443.84	\$0.00	\$20,443.84									
	T&SC-181	Hardpoint strut assembly testing	15-Aug-17 A	11-Sep-17 A	100%	40	160.00	\$16,268.80	\$0.00	\$16,268.80									
	T&SC-181	Procedures for M1M3 Actuator installation/Removal in Mirror Cell	01-Mar-17 A	31-Jul-17 A	100%	63	0.00	\$0.00	\$16,666.67	\$16,666.67									
	T&SC-181	Procedures for M1M3 Thermal Units installation/Removal in Mirror Cell	24-May-17 A	31-Jul-17 A	100%	63	0.00	\$0.00	\$16,666.67	\$16,666.67									
	T&SC-181	Procedures for M1M3 Equipment installation/removal in Mirror Cell	24-May-17 A	31-Jul-17 A	100%	63	0.00	\$0.00	\$16,666.67	\$16,666.67									
	T&SC-191	Procure ILC to Valve cables	31-Oct-16 A	30-Nov-16 A	100%	20	0.00	\$0.00	\$3,213.66	\$3,213.66									
	T&SC-191	Equipment Layout cRIOs	14-Jul-16 A	01-Aug-16 A	100%	5	40.00	\$3,929.60	\$0.00	\$3,929.60									
	T&SC-191	Equipment Layout Temp sensors and readout boxes	14-Jul-16 A	01-Aug-16 A	100%	5	40.00	\$3,929.60	\$0.00	\$3,929.60									
	T&SC-191	Equipment Layout Junction Boxes	14-Jul-16 A	01-Aug-16 A	100%	5	40.00	\$3,929.60	\$0.00	\$3,929.60									
	T&SC-191	Equipment Layout Other equipment	14-Jul-16 A	01-Aug-16 A	100%	5	40.00	\$3,929.60	\$0.00	\$3,929.60									
	T&SC-191	Wiring and Cable Trays Power	01-Nov-16 A	03-Mar-17 A	100%	20	130.00	\$12,771.20	\$0.00	\$12,771.20									
	T&SC-191	Cable trays and AC Power Wiring design Completion	27-Feb-17 A	03-Mar-17 A	100%	16	0.00	\$0.00	\$0.00	\$0.00									
	T&SC-191	Wiring and Cable Trays Communications	01-Nov-16 A	03-Mar-17 A	100%	14	130.00	\$12,771.20	\$0.00	\$12,									

LSST May 2019 Month End Forecast																		
Activity ID	Activity Name	Start	Finish	Physical % Complete	Original Duration	Budgeted Labor Units	Budgeted Labor Cost	Budgeted Material Cost	Budgeted Total Cost no	Total Float	FY2015 2014-10-01	FY2016 2015-10-01	FY2017 2016-10-01	FY2018 2017-10-01	FY2019 2018-10-01	FY2020 2019-10-01	FY2021 2020-10-01	FY2022 2021-10-01
T&SC-19i	Utility Outlets and Cell lighting Design	03-Jul-17 A	28-Aug-17 A	100%	20	151.00	\$15,353.68	\$0.00	\$15,353.68				Utility Outlets and Cell lighting Design					
	Utility Outlets and Cell lighting Procurement	01-Sep-17 A	15-Sep-17 A	100%	5	40.00	\$2,778.00	\$0.00	\$2,778.00				Utility Outlets and Cell lighting Procurement					
	Utility Outlets and Cell lighting Lead Time	18-Sep-17 A	29-Sep-17 A	100%	40	0.00	\$0.00	\$0.00	\$0.00				Utility Outlets and Cell lighting Lead Time					
	Utility Outlets and Cell lighting Acceptance	17-Sep-17 A	30-Nov-17 A	100%	1	0.00	\$0.00	\$6,000.00	\$6,000.00				Utility Outlets and Cell lighting Acceptance					
	19" Electronic racks Procurement	11-Sep-17 A	07-Dec-17 A	100%	5	40.00	\$2,778.00	\$0.00	\$2,778.00				19" Electronic racks Procurement					
	19" Electronic racks Lead Time	08-Dec-17 A	08-Jan-18 A	100%	40	0.00	\$0.00	\$0.00	\$0.00				19" Electronic racks Lead Time					
	19" Electronic racks Acceptance	10-Jan-18 A	11-Jan-18 A	100%	1	0.00	\$0.00	\$7,500.00	\$7,500.00				19" Electronic racks Acceptance					
	Wiring Materials Complete		22-Feb-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00				Wiring Materials Complete					
	Accelerometers Procurement	12-Dec-16 A	14-Dec-16 A	100%	2	16.00	\$1,626.88	\$0.00	\$1,626.88				Accelerometers Procurement					
	Accelerometers Lead Time	16-Dec-16 A	16-Dec-16 A	100%	30	0.00	\$0.00	\$0.00	\$0.00				Accelerometers Lead Time					
	Accelerometers Acceptance	08-Feb-17 A	10-Feb-17 A	100%	1	0.00	\$0.00	\$22,800.00	\$22,800.00				Accelerometers Acceptance					
	Displacement sensors Procurement	10-Apr-17 A	12-Apr-17 A	100%	2	16.00	\$1,626.88	\$0.00	\$1,626.88				Displacement sensors Procurement					
	Displacement sensors Lead Time	12-Apr-17 A	28-Apr-17 A	100%	40	0.00	\$0.00	\$0.00	\$0.00				Displacement sensors Lead Time					
	Displacement sensors Acceptance	01-Aug-17 A	01-Aug-17 A	100%	1	0.00	\$0.00	\$6,000.00	\$6,000.00				Displacement sensors Acceptance					
	Inclinometers Procurement	20-Jul-17 A	25-Jul-17 A	100%	2	16.00	\$1,626.88	\$0.00	\$1,626.88				Inclinometers Procurement					
	Inclinometers Lead Time	25-Jul-17 A	31-Jul-17 A	100%	40	0.00	\$0.00	\$0.00	\$0.00				Inclinometers Lead Time					
	Inclinometers Acceptance	01-Aug-17 A	02-Aug-17 A	100%	1	0.00	\$0.00	\$200.00	\$200.00				Inclinometers Acceptance					
	Electric installation tools (COTS) procurements	06-Mar-18 A	30-Mar-18 A	100%	1	0.00	\$0.00	\$21,150.00	\$21,150.00				Electric installation tools (COTS) procurements					
	Vacuum Bulkhead Design	11-Sep-17 A	22-Feb-18 A	100%	20	0.00	\$0.00	\$0.00	\$0.00				Vacuum Bulkhead Design					
	Vacuum Bulkhead Components procurement	28-Feb-18 A	28-Feb-18 A	100%	10	0.00	\$0.00	\$0.00	\$0.00				Vacuum Bulkhead Components procurement					
	Vacuum Bulkhead Lead Time	28-Feb-18 A	21-Mar-18 A	100%	50	0.00	\$0.00	\$0.00	\$0.00				Vacuum Bulkhead Lead Time					
	Vacuum Bulkhead Acceptance	21-Mar-18 A	21-Mar-18 A	100%	1	0.00	\$0.00	\$100,000.00	\$100,000.00				Vacuum Bulkhead Acceptance					
	Post Design Review ATP	18-May-18 A	31-May-18 A	100%	5	0.00	\$0.00	\$42,585.34	\$42,585.34				Post Design Review ATP					
	Control Cabinets Testing	18-May-18 A	10-Mar-19 A	100%	63	0.00	\$0.00	\$35,854.93	\$35,854.93				Control Cabinets Testing					
	Cell Control and Electrical Power Distribution Cabine	22-May-18 A	22-May-18 A	100%	1	0.00	\$0.00	\$35,854.93	\$35,854.93				Cell Control and Electrical Power Distribution Cabinets final Payment					
	Outer Loop Modeling	02-Oct-17 A	10-Oct-17 A	100%	15	120.00	\$8,625.60	\$0.00	\$8,625.60				Outer Loop Modeling					
	M1M3 mirror modeling	11-Oct-17 A	18-Oct-17 A	100%	15	120.00	\$8,625.60	\$0.00	\$8,625.60				M1M3 mirror modeling					
	Integrate M1M3 Mirrot model into Outer Loop model	19-Oct-17 A	24-Nov-17 A	100%	10	80.00	\$5,750.40	\$0.00	\$5,750.40				Integrate M1M3 Mirrot model into Outer Loop model					
	Closed loop Outer loop model	27-Nov-17 A	30-Nov-17 A	100%	5	40.00	\$2,875.20	\$0.00	\$2,875.20				Closed loop Outer loop model					
	Outer Loop Simulations	04-Dec-17 A	05-Jan-18 A	100%	18	144.00	\$10,350.72	\$0.00	\$10,350.72				Outer Loop Simulations					
	Thermal Control Metering valve Modeling II	03-Jun-19	28-Jun-19	0%	20	0.00	\$0.00	\$0.00	\$0.00	240						Thermal Control Metering valve Modeling II		
	Thermal Control Metering valve Simulations II	01-Jul-19	01-Aug-19	0%	23	0.00	\$0.00	\$0.00	\$0.00	240						Thermal Control Metering valve Simulations II		
	Thermal Control Metering valve Modeling Testing Te	02-Aug-19	29-Aug-19	0%	20	0.00	\$0.00	\$0.00	\$0.00	240						Thermal Control Metering valve Modeling Testing Testing II		
	M1M3 Surrogate Conceptual Design	15-Aug-16 A	01-Oct-16 A	100%	11	0.00	\$0.00	\$0.00	\$0.00				M1M3 Surrogate Conceptual Design					
	M1M3 Surrogate Conceptual Design Review (CDR)	09-Aug-16 A	03-Oct-16 A	100%	1	0.00	\$0.00	\$0.00	\$0.00				M1M3 Surrogate Conceptual Design Review (CDR)					
	M1M3 Surrogate Technical Exchange/CAD Modeling	04-Oct-16 A	27-Oct-16 A	100%	40	0.00	\$0.00	\$0.00	\$0.00				M1M3 Surrogate Technical Exchange/CAD Modeling meeting Payment #1 Lead Time					
	M1M3 Surrogate Technical Exchange/CAD Modeling	06-Oct-16 A	27-Oct-16 A	100%	1	0.00	\$0.00	\$60,913.20	\$60,913.20				M1M3 Surrogate Technical Exchange/CAD Modeling meeting Payment #1					
	M1M3 Surrogate Optical Surface Design/Engineerin	10-Aug-16 A	05-Dec-16 A	100%	17	0.00	\$0.00	\$0.00	\$0.00				M1M3 Surrogate Optical Surface Design/Engineering/Analysis					
	M1M3 Surrogate Split Seam Design/Engineering/An	02-Sep-16 A	05-Dec-16 A	100%	7	0.00	\$0.00	\$0.00	\$0.00				M1M3 Surrogate Split Seam Design/Engineering/Analysis					
	M1M3 Surrogate Preliminary FEA	02-Mar-17 A	02-Mar-17 A	100%	17	0.00	\$0.00	\$0.00	\$0.00				M1M3 Surrogate Preliminary FEA					
	M1M3 Surrogate Preliminary Design Review (PDR)		12-Jan-17 A	100%	0	0.00	\$0.00	\$0.00	\$0.00				M1M3 Surrogate Preliminary Design Review (PDR)					
	M1M3 Surrogate Detailing & Shop Drawings	02-Mar-17 A	17-Mar-17 A	100%	13	0.00	\$0.00	\$0.00	\$0.00				M1M3 Surrogate Detailing & Shop Drawings					
	M1M3 Surrogate Solid Model & Manufacturing Dwgs		20-Apr-17 A	100%	0	0.00	\$0.00	\$0.00	\$0.00				M1M3 Surrogate Solid Model & Manufacturing Dwgs Delivered					
	M1M3 Surrogate Technical Exchange/CAD Modeling	15-Mar-17 A	18-Apr-17 A	100%	40	0.00	\$0.00	\$0.00	\$0.00				M1M3 Surrogate Technical Exchange/CAD Modeling meeting Payment #2 Lead Time					
	M1M3 Surrogate Technical Exchange/CAD Modeling	20-Apr-17 A	23-Apr-17 A	100%	1	0.00	\$0.00	\$134,009.04	\$134,009.04				M1M3 Surrogate Technical Exchange/CAD Modeling meeting Payment #2					
	M1M3 Surrogate Technical Exchange/CAD Modeling	16-Dec-16 A	17-Dec-16 A	100%	2	16.00	\$1,626.88	\$0.00	\$1,626.88				M1M3 Surrogate Technical Exchange/CAD Modeling meeting LSST Labor					
	M1M3 Surrogate Procurement	15-Mar-17 A	31-Mar-17 A	100%	4	0.00	\$0.00	\$0.00	\$0.00				M1M3 Surrogate Procurement					
	M1M3 Surrogate Fabrication	04-Apr-17 A	19-Jun-17 A	100%	10	0.00	\$0.00	\$0.00	\$0.00				M1M3 Surrogate Fabrication					
	M1M3 Surrogate Thermal Stress Relief	15-May-17 A	20-Jun-17 A	100%	66	0.00	\$0.00	\$0.00	\$0.00				M1M3 Surrogate Thermal Stress Relief					
	M1M3 Surrogate Thermal Stress Relief Payment #3	15-May-17 A	20-Jun-17 A	100%	89	0.00	\$0.00	\$0.00	\$0.00				M1M3 Surrogate Thermal Stress Relief Payment #3 Lead Time					
	M1M3 Surrogate Thermal Stress Relief Payment #3	20-Jun-17 A	20-Jun-17 A	100%	1	0.00	\$0.00	\$304,566.00	\$304,566.00				M1M3 Surrogate Thermal Stress Relief Payment #3					
	M1M3 Surrogate Machining (Pre-integration)	21-Jun-17 A	14-Jul-17 A	100%	9	0.00	\$0.00	\$0.00	\$0.00				M1M3 Surrogate Machining (Pre-integration)					
	M1M3 Surrogate Assembly (Ready for Integration) F	01-Oct-17 A	25-Oct-17 A	100%	23	0.00	\$0.00	\$54,821.88	\$54,821.88				M1M3 Surrogate Assembly (Ready for Integration) Payment #4a					
	Finish Surrogate (outer rim and Paint)	01-Dec-18 A	01-Mar-19 A	100%	6	0.00	\$0.00	\$0.00	\$0.00				Finish Surrogate (outer rim and Paint)					
	M1M3 Surrogate FAT		08-Nov-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00				M1M3 Surrogate FAT					
	M1M3 Surrogate FAT Lead Time	09-Nov-18 A	08-Jan-19 A	100%	40	0.00	\$0.00	\$0.00	\$0.00				M1M3 Surrogate FAT Lead Time					
	M1M3 Surrogate FAT Payment #4b	09-Jan-19 A	09-Jan-19 A	100%	1	0.00	\$0.00	\$143,360.88	\$143,360.88				M1M3 Surrogate FAT Payment #4b					
	Procurement of 50 SAA 50@20 & 63@50-mm cylind	28-Sep-17 A	08-Jan-18 A	100%	30	0.00	\$0.00	\$0.00	\$0.00				Procurement of 50 SAA 50@20 & 63@50-mm cylinder Lead Time					
	Acceptance of 50 SAA 50@20 & 63@50-mm cylinde	12-Jan-18 A	12-Jan-18 A	100%	1	0.00	\$0.00	\$20,000.00	\$20,000.00				Acceptance of 50 SAA 50@20 & 63@50-mm cylinder					
	Design of Cylinder to U-Joint Adapter Cones	20-Oct-17 A	20-Nov-17 A	100%	30	0.00	\$0.00	\$0.00	\$0.00				Design of Cylinder to U-Joint Adapter Cones					
	Drawings Completed for Cylinder to U-Joint Adapter	20-Oct-17 A	20-Nov-17 A	100%	30	0.00	\$0.00	\$0.00	\$0.00				Drawings Completed for Cylinder to U-Joint Adapter Cones					
	Procurement of Cylinder to U-Joint Adapter Cones	27-Nov-17 A	30-Nov-17 A	100%	30	0.00	\$0.00	\$0.00	\$0.00				Procurement of Cylinder to U-Joint Adapter Cones					
	Cylinder to U-Joint Adapter Cones Procurement Lea	21-Nov-17 A	20-Dec-17 A	100%	30	0.00	\$0.00	\$0.00	\$0.00				Cylinder to U-Joint Adapter Cones Procurement Lead time					
	Acceptance of Cylinder to U-Joint Adapter Cones	20-Dec-17 A	21-Dec-17 A	100%	1	0.00	\$0.00	\$10,500.00	\$10,500.00				Acceptance of Cylinder to U-Joint Adapter Cones					
	Procurement of Integration tools	01-Dec-17 A	30-Mar-18 A	100%	15	0.00	\$0.00	\$0.00	\$0.00				Procurement of Integration tools					
	Integration tools Lead time	12-Dec-17 A	30-Mar-18 A	100%	30	0.00	\$0.00	\$0.00	\$0.00				Integration tools Lead time					
	Acceptance of Integration tools	05-Jan-18 A	30-Mar-18 A	100%	1	0.00	\$0.00	\$30,000.00	\$30,000.00				Acceptance of Integration tools					
	Procurement of Laser tracker equipment	13-Jun-18 A	31-Jul-18 A	100%	15	0.00	\$0.00	\$0.00	\$0.00				Procurement of Laser tracker equipment					
	Laser tracker equipment Lead time	02-Jul-18 A	31-Jul-18 A	100%	30	0.00	\$0.00	\$0.00	\$0.00				Laser tracker equipment Lead time					
	Acceptance of Laser tracker equipment	01-Aug-18 A	03-Aug-18 A	100%	1	0.00	\$0.00	\$15,000.00	\$15,000.00				Acceptance of Laser tracker equipment					
	Procurement of hardpoint transport case	14-Dec-18 A	08-Jan-19 A	100%	15	0.00	\$0.00	\$0.00	\$0.00				Procurement of hardpoint transport case					
	hardpoint transport case Lead time	09-Jan-19 A	31-May-19 A	100%	30	0.00	\$0.00	\$0.00	\$0.00				hardpoint transport case Lead time					



LSST May 2019 Month End Forecast

Activity ID	Activity Name	Start	Finish	Physical % Complete	Original Duration	Budgeted Labor Units	Budgeted Labor Cost	Budgeted Material Cost	Budgeted Total Cost no	Total Float	FY2015 2014-10-01	FY2016 2015-10-01	FY2017 2016-10-01	FY2018 2017-10-01	FY2019 2018-10-01	FY2020 2019-10-01	FY2021 2020-10-01	FY2022 2021-10-01	
LSST ME 19-05.04C.06.03.01	T&SC-191	Acceptance of hardpoint transport case	31-May-19 A	31-May-19 A	100%	1	0.00	\$0.00	\$1,500.00	\$1,500.00								Acceptance of hardpoint transport case	
	T&SC-191	Design of Transport crates	09-Nov-18 A	14-Jun-19	80%	10	0.00	\$0.00	\$0.00	\$0.00	1094							Design of Transport crates	
	T&SC-191	Transport crates support Documents provided to procurement	23-Nov-18 A	14-Jun-19	80%	10	0.00	\$0.00	\$0.00	\$0.00	1094							Transport crates support Documents provided to procurement	
	T&SC-191	Issue Transport crates Bid Package	07-Dec-18 A	07-Jun-19	80%	5	0.00	\$0.00	\$0.00	\$0.00	1099							Issue Transport crates Bid Package	
	T&SC-191	Receive Transport crates Supplier Response	14-Dec-18 A	14-Jun-19	80%	10	0.00	\$0.00	\$0.00	\$0.00	1094							Receive Transport crates Supplier Response	
	T&SC-191	Transport crates vendor selection and contract award	02-Jan-19 A	08-Jan-19 A	100%	5	0.00	\$0.00	\$0.00	\$0.00								Transport crates vendor selection and contract award	
	T&SC-191	Transport crates Supplier lead time and delivery	09-Jan-19 A	15-Jul-19	80%	30	0.00	\$0.00	\$0.00	\$0.00	131							Transport crates Supplier lead time and delivery	
	T&SC-191	Acceptance of Transport crates	05-Feb-19 A	04-Jun-19	80%	2	0.00	\$0.00	\$5,000.00	\$5,000.00	159							Acceptance of Transport crates	
	T&SC-191	Fan units crates Supplier lead time and delivery	30-Oct-17 A	01-Dec-17 A	100%	30	0.00	\$0.00	\$0.00	\$0.00								Fan units crates Supplier lead time and delivery	
	T&SC-191	Acceptance of Fan units crates	04-Dec-17 A	08-Dec-17 A	100%	2	0.00	\$0.00	\$14,000.00	\$14,000.00								Acceptance of Fan units crates	
	T&SC-191	Procurement of Gyroscopes	08-Nov-17 A	15-Nov-17 A	100%	5	0.00	\$0.00	\$0.00	\$0.00								Procurement of Gyroscopes	
	T&SC-191	Gyroscopes equipment Lead time	17-Nov-17 A	29-Dec-17 A	100%	40	0.00	\$0.00	\$0.00	\$0.00								Gyroscopes equipment Lead time	
	T&SC-191	Acceptance of Gyroscopes	31-Jan-17 A	31-Jan-17 A	100%	1	0.00	\$0.00	\$15,500.00	\$15,500.00								Acceptance of Gyroscopes	
	T&SC-191	M1M3 Integration Tools Phase-2	25-Jul-18 A	31-May-19 A	100%	2	0.00	\$0.00	\$62,000.00	\$62,000.00								M1M3 Integration Tools Phase-2	
	T&SC-191	M1M3 Mirror Plenums Reinforcement Procurement	03-Aug-18 A	05-Sep-18 A	100%	2	0.00	\$0.00	\$5,852.00	\$5,852.00								M1M3 Mirror Plenums Reinforcement Procurement	
		LSST ME 19-05.04C.06.03.01 Fabrication, Assembly, Integr	19-May-17 A	24-Oct-19		676	17144.83	\$1,722,874.45	\$2,685,905.00	\$4,408,779.44	1002								
		T&SC- M1M3 Trial Integration Begins	23-Oct-17 A		100%	0	0.00	\$0.00	\$0.00	\$0.00									M1M3 Trial Integration Begins
		T&SC- Integration enclosure ready to begin integration	20-Oct-17 A	20-Oct-17 A	100%	1	0.00	\$0.00	\$280,000.00	\$280,000.00									Integration enclosure ready to begin integration
		T&SC- CAID effort for campaign planning, identify facility space	19-May-17 A	28-Sep-17 A	100%	15	0.00	\$0.00	\$20,000.00	\$20,000.00									CAID effort for campaign planning, identify facility space, inventory plan development, and long lead procurements
		T&SC- Install lighting and service power	27-Nov-17 A	30-Mar-18 A	100%	10	60.00	\$4,283.64	\$0.00	\$4,283.64									Install lighting and service power
		T&SC- Install static supports on Cell (x356)	23-Oct-17 A	27-Oct-17 A	100%	10	80.00	\$3,702.40	\$0.00	\$3,702.40									Install static supports on Cell (x356)
		T&SC- Static supports installed	27-Oct-17 A	27-Oct-17 A	100%	1	0.00	\$0.00	\$200,000.00	\$200,000.00									Static supports installed
		T&SC- Mount surrogate mirror to Cell	31-Oct-17 A	31-Oct-17 A	100%	2	0.00	\$0.00	\$0.00	\$0.00									Mount surrogate mirror to Cell
		T&SC- Remove the temporary bolt and install SS shoulder screws	06-Nov-17 A	08-Nov-17 A	100%	5	80.00	\$3,702.40	\$0.00	\$3,702.40									Remove the temporary bolt and install SS shoulder screw
		T&SC- Install actuators	08-Nov-17 A	20-Nov-17 A	100%	20	320.00	\$14,809.60	\$0.00	\$14,809.60									Install actuators
		T&SC- Actuators installed	20-Nov-17 A	20-Nov-17 A	100%	1	0.00	\$0.00	\$200,000.00	\$200,000.00									Actuators installed
		T&SC- Install hard points	15-Feb-18 A	31-May-18 A	100%	10	200.00	\$11,614.40	\$0.00	\$11,614.40									Install hard points
		T&SC- Install EGW & air distribution piping	16-Nov-17 A	27-Nov-17 A	100%	7	0.00	\$0.00	\$0.00	\$0.00									Install EGW & air distribution piping
		T&SC- Electric Installation	19-Dec-17 A	02-Jun-18 A	100%	13	312.00	\$22,426.56	\$0.00	\$22,426.56									Electric Installation
		T&SC- Electronics functionality and communication test	18-May-18 A	02-Jun-18 A	100%	15	120.00	\$8,625.60	\$0.00	\$8,625.60									Electronics functionality and communication test
		T&SC- Align static supports (x355)	04-Jun-18 A	06-Jun-18 A	100%	10	160.00	\$7,404.80	\$0.00	\$7,404.80									Align static supports (x355)
		T&SC- Install IMS & Laser tracker	01-Jun-18 A	05-Jul-18 A	100%	2	16.00	\$740.48	\$0.00	\$740.48									Install IMS & Laser tracker
		T&SC- Install inner and outer mirror baffles/plenums	20-May-18 A	05-Jun-19	20%	3	24.00	\$1,110.72	\$0.00	\$1,110.72	1101								Install inner and outer mirror baffles/plenums
		T&SC- Install door	01-Apr-19 A	05-Apr-19 A	100%	1	0.00	\$0.00	\$0.00	\$0.00									Install door
		T&SC- Ready to begin zenith pointing servo system tests	07-Jun-18 A	07-Jun-18 A	100%	1	0.00	\$0.00	\$200,000.00	\$200,000.00									Ready to begin zenith pointing servo system tests
		T&SC- Functional test mirror support systems CAID	20-May-18 A	23-Aug-18 A	100%	19	469.98	\$42,122.00	\$0.00	\$42,122.00									Functional test mirror support systems CAID
		T&SC- Cell panic test	28-Jun-18 A	28-Jun-18 A	100%	21	309.99	\$25,284.00	\$0.00	\$25,284.00									Cell panic test
		T&SC- M1M3 Cell Ready to Ship to UA Mirror Lab (Payment)	08-Oct-18 A	08-Oct-18 A	100%	1	0.00	\$0.00	\$115,600.00	\$115,600.00									M1M3 Cell Ready to Ship to UA Mirror Lab (Payment)
		T&SC- UAM1M3 Task Order #1	06-Jun-17 A	04-Aug-17 A	100%	15	0.00	\$0.00	\$21,010.00	\$21,010.00									UAM1M3 Task Order #1
		T&SC- UAM1M3 Cell Preparation Support	03-Jul-17 A	31-Jan-18 A	100%	140	0.00	\$0.00	\$125,000.00	\$125,000.00									UAM1M3 Cell Preparation Support
		T&SC- UAM1M3 integration labor support	01-Sep-17 A	15-Jun-18 A	100%	100	0.00	\$0.00	\$140,000.00	\$140,000.00									UAM1M3 integration labor support
		T&SC- Fabrication of RFCML Air Cart	01-Oct-18 A	09-Oct-18 A	100%	13	0.00	\$0.00	\$48,110.00	\$48,110.00									Fabrication of RFCML Air Cart
		T&SC- Mirror Lab Planning Package	08-Apr-19 A	08-Apr-19 A	100%	0	0.00	\$0.00	\$0.00	\$0.00									Mirror Lab Planning Package
		T&SC- Fabrication of Air Pallet System and Primary Mirror F	01-Oct-18 A	09-Oct-18 A	100%	49	0.00	\$0.00	\$154,717.00	\$154,717.00									Fabrication of Air Pallet System and Primary Mirror Positioner
		T&SC- Integration and Test Planning	01-Nov-18 A	15-Dec-18 A	100%	22	0.00	\$0.00	\$114,856.00	\$114,856.00									Integration and Test Planning
		T&SC- Integration of M1M3 mirror into cell	01-Nov-18 A	06-Jan-19 A	100%	49	0.00	\$0.00	\$252,213.00	\$252,213.00									Integration of M1M3 mirror into cell
		T&SC- Cell + Surrogate Mirror Integration Completed CAID		08-May-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00									Cell + Surrogate Mirror Integration Completed CAID
		T&SC- Mirror Cell test Starts at CAID	29-May-18 A		100%	0	0.00	\$0.00	\$0.00	\$0.00									Mirror Cell test Starts at CAID
		T&SC- Mirror support control system Test (zenith pointing)	01-Jun-18 A	21-Jul-18 A	100%	35	2070.00	\$217,846.80	\$0.00	\$217,846.80									Mirror support control system Test (zenith pointing)
		T&SC- Mirror Cart testing incl set-up	24-Aug-18 A	17-Sep-18 A	100%	10	900.00	\$94,716.00	\$0.00	\$94,716.00									Mirror Cart testing incl set-up
	T&SC- Off-Zenith 15 deg test set-up	19-Jul-18 A	25-Jul-18 A	100%	5	480.00	\$50,515.20	\$0.00	\$50,515.20									Off-Zenith 15 deg test set-up	
	T&SC- Mirror support control system Test (off-zenith pointing)	04-Aug-18 A	23-Aug-18 A	100%	30	2090.00	\$219,951.60	\$0.00	\$219,951.60									Mirror support control system Test (off-zenith pointing)	
	T&SC- Cell-Surrogate test completed CAID		04-Oct-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00									Cell-Surrogate test completed CAID	
	T&SC- Remove cell door	04-Sep-18 A	04-Sep-18 A	100%	1	34.00	\$3,578.16	\$0.00	\$3,578.16									Remove cell door	
	T&SC- Remove Laser Tracker	04-Sep-18 A	04-Sep-18 A	100%	1	34.00	\$3,578.16	\$0.00	\$3,578.16									Remove Laser Tracker	
	T&SC- Remove IMS sensor.	04-Sep-18 A	04-Sep-18 A	100%	1	34.00	\$3,578.16	\$0.00	\$3,578.16									Remove IMS sensor.	
	T&SC- Disconnect pneumatic branch lines, EGW branch line	05-Sep-18 A	11-Sep-18 A	100%	5	155.00	\$16,312.20	\$0.00	\$16,312.20									Disconnect pneumatic branch lines, EGW branch line hoses, electronics cabling to actuators and hard points	
	T&SC- Disconnect/partially remove hard points	12-Sep-18 A	19-Sep-18 A	100%	6	184.00	\$19,916.16	\$0.00	\$19,916.16									Disconnect/partially remove hard points	
	T&SC- Remove all actuators and store them in crates	19-Sep-18 A	05-Oct-18 A	100%	10	270.00	\$29,408.40	\$0.00	\$29,408.40									Remove all actuators and store them in crates	
	T&SC- Remove SS shoulder screw and install temporary bolt	18-Oct-18 A	22-Oct-18 A	100%	5	135.00	\$14,704.20	\$0.00	\$14,704.20									Remove SS shoulder screw and install temporary bolt to capture SS backing plate supports.	
	T&SC- Remove surrogate mirror from mirror cell.	04-Oct-18 A	04-Oct-18 A	100%	2	60.00	\$6,535.20	\$0.00	\$6,535.20									Remove surrogate mirror from mirror cell.	
	T&SC- Remove actuator interface cups from S mirror.	01-Oct-18 A	04-Oct-18 A	100%	1	32.00	\$3,485.44	\$0.00	\$3,485.44									Remove actuator interface cups from S mirror.	
	T&SC- Surrogate mirror removal procedures complete.		04-Oct-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00									Surrogate mirror removal procedures complete.	
	T&SC- Prepare surrogate for shipment to Chile	05-Feb-19 A	01-Mar-19 A	100%	10	300.00	\$32,676.00	\$0.00	\$32,676.00									Prepare surrogate for shipment to Chile	
	T&SC- Surrogate Mirror in transport to Chile	01-Apr-19 A	13-May-19 A	100%	39	618.00	\$67,312.56	\$0.00	\$67,312.56									Surrogate Mirror in transport to Chile	
	T&SC- Transport preps	01-Nov-18 A	05-Nov-18 A	100%	3	90.00	\$9,802.80	\$0.00	\$9,802.80									Transport preps	
	T&SC- Transport M1M3 cell to RFC ML for optical testing	08-Oct-18 A	09-Oct-18 A	100%	1	34.00	\$3,578.16	\$0.00	\$3,578.16									Transport M1M3 cell to RFC ML for optical testing	
	T&SC- Install SS backing plates on M1M3 Mirror	03-Oct-18 A	10-Oct-18 A	100%	3	90.00	\$9,471.60	\$0.00	\$9,471.60									Install SS backing plates on M1M3 Mirror	
	T&SC- M1M3 Cell at Mirror Lab		09-Oct-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00									M1M3 Cell at Mirror Lab	
	T&SC- Install M1M3 cell on Air Cart	01-Oct-18 A	05-Oct-18 A	100%	5	135.00	\$14,704.20	\$0.00	\$14,704.20									Install M1M3 cell on Air Cart	
	T&SC- Cell inspection after transport & before integration	09-Oct-18 A		100%	2	60.00	\$6,535.20	\$0.00	\$6,535.20									Cell inspection after transport & before integration	
	T&SC- Cell ready for mirror integration		09-Oct-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00									Cell ready for mirror integration	

LSST May 2019 Month End Forecast																			
Activity ID	Activity Name	Start	Finish	Physical % Complete	Original Duration	Budgeted Labor Units	Budgeted Labor Cost	Budgeted Material Cost	Budgeted Total Cost no	Total Float	FY2015 2014-10-01	FY2016 2015-10-01	FY2017 2016-10-01	FY2018 2017-10-01	FY2019 2018-10-01	FY2020 2019-10-01	FY2021 2020-10-01	FY2022 2021-10-01	
	T&SC- Transport Actuators crates and equipment from CAI	01-Oct-18 A	03-Oct-18 A	100%	3	90.00	\$9,802.80	\$0.00	\$9,802.80						Transport Actuators crates and equipment from CAID to Mirror Lab				
	T&SC- M1M3 Mirror at RFC Mirror Lab		18-Oct-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00						M1M3 Mirror at RFC Mirror Lab				
	T&SC- Assemble Mirror Lift	01-Oct-18 A	05-Oct-18 A	100%	5	135.00	\$14,704.20	\$0.00	\$14,704.20						Assemble Mirror Lift				
	T&SC- Remove old opticoat	19-Oct-18 A	19-Oct-18 A	100%	1	32.00	\$3,485.44	\$0.00	\$3,485.44						Remove old opticoat				
	T&SC- Apply new Opticoat on Mirror Surface	19-Oct-18 A	19-Oct-18 A	100%	2	60.00	\$6,535.20	\$0.00	\$6,535.20						Apply new Opticoat on Mirror Surface				
	T&SC- Mirror ready for Lift		24-Oct-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00						Mirror ready for Lift				
	T&SC- M1M3 mirror integration with Cell Start		25-Oct-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00						M1M3 mirror integration with Cell Start				
	T&SC- Mirror Lift	25-Oct-18 A	25-Oct-18 A	100%	2	60.00	\$6,535.20	\$0.00	\$6,535.20						Mirror Lift				
	T&SC- Remove temporary bolt and install SS shoulder screw	25-Oct-18 A	26-Oct-18 A	100%	5	150.00	\$16,338.00	\$0.00	\$16,338.00						Remove temporary bolt and install SS shoulder screw to capture the mirror on the static supports.				
	T&SC- Install actuators	26-Oct-18 A	15-Dec-18 A	100%	15	450.00	\$49,014.00	\$0.00	\$49,014.00						Install actuators				
	T&SC- Connect pneumatic branch lines, EGW branch line hoses	08-Dec-18 A	15-Dec-18 A	100%	7	210.00	\$22,873.20	\$0.00	\$22,873.20						Connect pneumatic branch lines, EGW branch line hoses, electronics cabling to actuators, hard points, and				
	T&SC- Electronics functionality and communications testing.	08-Dec-18 A	15-Dec-18 A	100%	5	150.00	\$16,338.00	\$0.00	\$16,338.00						Electronics functionality and communications testing.				
	T&SC- Float mirror and align static supports.	15-Dec-18 A	15-Dec-18 A	100%	3	96.00	\$10,456.32	\$0.00	\$10,456.32						Float mirror and align static supports.				
	T&SC- Install mount and SMRs around mirror	01-Mar-19 A	08-Mar-19 A	100%	1	32.00	\$3,485.44	\$0.00	\$3,485.44						Install mount and SMRs around mirror				
	T&SC- Install Plenums	04-Feb-19 A	05-Feb-19 A	100%	2	60.00	\$6,535.20	\$0.00	\$6,535.20						Install Plenums				
	T&SC- Mirror Cell Integration Completed		26-Oct-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00						Mirror Cell Integration Completed				
	T&SC- Remove opticoat for interferometric testing	20-Dec-18 A	20-Dec-18 A	100%	2	72.00	\$7,842.24	\$0.00	\$7,842.24						Remove opticoat for interferometric testing				
	T&SC- Inspect mirror surface	20-Dec-18 A	20-Dec-18 A	100%	2	72.00	\$7,842.24	\$0.00	\$7,842.24						Inspect mirror surface				
	T&SC- Position Mirror + cell under test tower	15-Dec-18 A	21-Dec-18 A	100%	2	72.00	\$7,842.24	\$0.00	\$7,842.24						Position Mirror + cell under test tower				
	T&SC- Bending Modes	14-Jan-19 A	11-Feb-19 A	100%	8	352.00	\$38,339.84	\$0.00	\$38,339.84						Bending Modes				
	T&SC- Influence Matrix Test	14-Jan-19 A	11-Feb-19 A	100%	9	270.00	\$29,408.40	\$0.00	\$29,408.40						Influence Matrix Test				
	T&SC- move mirror cell from test tower to integration lab	14-Feb-19 A	14-Feb-19 A	100%	2	36.00	\$3,921.12	\$0.00	\$3,921.12						move mirror cell from test tower to integration lab				
	T&SC- apply opticoat on mirror surface	22-Feb-19 A	22-Feb-19 A	100%	2	36.00	\$3,921.12	\$0.00	\$3,921.12						apply opticoat on mirror surface				
	T&SC- Remove Plenums	18-Feb-19 A	22-Feb-19 A	100%	1	18.00	\$1,960.56	\$0.00	\$1,960.56						Remove Plenums				
	T&SC- Remove SMRs and mounts	18-Feb-19 A	22-Feb-19 A	100%	1	18.00	\$1,960.56	\$0.00	\$1,960.56						Remove SMRs and mounts				
	T&SC- Remove Laser Tracker	18-Feb-19 A	22-Feb-19 A	100%	1	18.00	\$1,960.56	\$0.00	\$1,960.56						Remove Laser Tracker				
	T&SC- Remove IMS sensors.	18-Feb-19 A	22-Feb-19 A	100%	1	18.00	\$1,960.56	\$0.00	\$1,960.56						Remove IMS sensors.				
	T&SC- Disconnect pneumatic branch lines, EGW branch line hoses	18-Feb-19 A	22-Feb-19 A	100%	8	144.00	\$15,684.48	\$0.00	\$15,684.48						Disconnect pneumatic branch lines, EGW branch line hoses, electronics cabling to actuators and ha				
	T&SC- Disconnect/fully remove hard points. Pack hard points into shipping containers	18-Feb-19 A	31-May-19 A	100%	5	90.00	\$9,802.80	\$0.00	\$9,802.80						Disconnect/fully remove hard points. Pack hard points into shipping containers				
	T&SC- Remove all actuators. Pack actuators in shipping crates.	18-Feb-19 A	22-Feb-19 A	100%	10	180.00	\$19,605.60	\$0.00	\$19,605.60						Remove all actuators. Pack actuators in shipping crates.				
	T&SC- Remove SS shoulder screw and install temporary bolt to capture SS backing plate supports.	01-Mar-19 A	10-Mar-19 A	100%	3	54.00	\$5,881.68	\$0.00	\$5,881.68						Remove SS shoulder screw and install temporary bolt to capture SS backing plate supports.				
	T&SC- Remove actuator cups from load spreaders	18-Feb-19 A	22-Feb-19 A	100%	10	180.00	\$19,605.60	\$0.00	\$19,605.60						Remove actuator cups from load spreaders				
	T&SC- Install shipping plates into load spreaders	18-Feb-19 A	22-Feb-19 A	100%	10	180.00	\$19,605.60	\$0.00	\$19,605.60						Install shipping plates into load spreaders				
	T&SC- Mirror Lift preparations	08-Mar-19 A	11-Mar-19 A	100%	2	36.00	\$3,921.12	\$0.00	\$3,921.12						Mirror Lift preparations				
	T&SC- Lift Mirror From Cell	08-Mar-19 A	08-Mar-19 A	100%	1	18.00	\$1,960.56	\$0.00	\$1,960.56						Lift Mirror From Cell				
	T&SC- Install mirror into shipping container	11-Mar-19 A	15-Mar-19 A	100%	5	90.00	\$9,802.80	\$0.00	\$9,802.80						Install mirror into shipping container				
	T&SC- Prepare mirror and cell for sea transport	18-Mar-19 A	05-Apr-19 A	100%	15	270.00	\$29,408.40	\$0.00	\$29,408.40						Prepare mirror and cell for sea transport				
	T&SC- Mirror ready for transport	14-Mar-19 A	01-May-19 A	100%	0	0.00	\$0.00	\$0.00	\$0.00						Mirror ready for transport				
	T&SC- M1M3 mirror in Pachon		01-May-19 A	100%	0	0.00	\$0.00	\$0.00	\$0.00						M1M3 mirror in Pachon				
	T&SC- Install vacuum testing cover on M1M3 cell	11-Mar-19 A	13-Mar-19 A	100%	3	54.00	\$5,881.68	\$0.00	\$5,881.68						Install vacuum testing cover on M1M3 cell				
	T&SC- Install pressure door.	14-Mar-19 A	14-Mar-19 A	100%	1	18.00	\$1,960.56	\$0.00	\$1,960.56						Install pressure door.				
	T&SC- FEA model update Gravity Forces in 5 degree increments from 0-90	01-Oct-18 A	10-Feb-19 A	100%	5	200.00	\$21,048.00	\$0.00	\$21,048.00						FEA model update Gravity Forces in 5 degree increments from 0-90				
	T&SC- FEA model update Get mirror weight in N (ForceActuatorSettings.MirrorWeight)	01-Oct-18 A	31-Oct-18 A	100%	2	72.00	\$7,577.28	\$0.00	\$7,577.28						FEA model update Get mirror weight in N (ForceActuatorSettings.MirrorWeight)				
	T&SC- FEA model update Get X, Y, Z moment at horizon pointing in Nm	01-Oct-18 A	31-Oct-18 A	100%	2	72.00	\$7,577.28	\$0.00	\$7,577.28						FEA model update Get X, Y, Z moment at horizon pointing in Nm				
	T&SC- FEA model update Determine nearest 6 radius	29-Jun-18 A	15-Oct-18 A	100%	2	72.00	\$7,577.28	\$0.00	\$7,577.28						FEA model update Determine nearest 6 radius				
	T&SC- FEA model update Determine nearest 12 radius	01-Oct-18 A	31-Oct-18 A	100%	2	72.00	\$7,577.28	\$0.00	\$7,577.28						FEA model update Determine nearest 12 radius				
	T&SC- Exchange black cable ties with Blue vacuum compatible ones	01-Oct-18 A	01-Nov-18 A	100%	10	70.86	\$7,457.73	\$0.00	\$7,457.73						Exchange black cable ties with Blue vacuum compatible ones				
	T&SC- Update firmware to support wire-wound Pt100 temperature sensors/control of the M1M3 mirror.	01-Feb-19 A	21-Mar-19 A	100%	49	90.00	\$9,802.80	\$0.00	\$9,802.80						Update firmware to support wire-wound Pt100 temperature sensors/control of the M1M3 mirror.				
	T&SC- Procure wire-wound Pt100 temperature sensors	01-May-19 A	04-Jun-19 A	40%	2	0.00	\$0.00	\$35,000.00	\$35,000.00	\$35,000.00	296					Procure wire-wound Pt100 temperature sensors			
	T&SC- Additional M1M3 Cell preparations for shipping	01-Apr-19 A	13-May-19 A	100%	16	0.00	\$0.00	\$0.00	\$0.00	\$0.00					Additional M1M3 Cell preparations for shipping				
T&SC- Install 220V AC Power Outlet Conduit	05-Jan-18 A	05-Jan-18 A	100%	1	0.00	\$0.00	\$0.00	\$0.00	\$0.00					Install 220V AC Power Outlet Conduit					
T&SC- Install 220V AC Power Outlet Cables	08-Jan-18 A	08-Jan-18 A	100%	1	0.00	\$0.00	\$0.00	\$0.00	\$0.00					Install 220V AC Power Outlet Cables					
T&SC- QA of 220V AC Power Outlet	09-Jan-18 A	09-Jan-18 A	100%	1	0.00	\$0.00	\$0.00	\$0.00	\$0.00					QA of 220V AC Power Outlet					
T&SC- Install lighting Cables	09-Jan-18 A	10-Jan-18 A	100%	2	0.00	\$0.00	\$0.00	\$0.00	\$0.00					Install lighting Cables					
T&SC- Install lighting Lights	11-Jan-18 A	11-Jan-18 A	100%	1	0.00	\$0.00	\$0.00	\$0.00	\$0.00					Install lighting Lights					
T&SC- Terminations/Connectors	12-Jan-18 A	12-Jan-18 A	100%	1	0.00	\$0.00	\$0.00	\$0.00	\$0.00					Terminations/Connectors					
T&SC- QA of Lighting	16-Jan-18 A	16-Jan-18 A	100%	1	0.00	\$0.00	\$0.00	\$0.00	\$0.00					QA of Lighting					
T&SC- Review DC Power Electrical Drawings	17-Jan-18 A	22-Jan-18 A	100%	4	0.00	\$0.00	\$0.00	\$0.00	\$0.00					Review DC Power Electrical Drawings					
T&SC- Delivery of DC Power Materials and tools	17-Jan-18 A	22-Jan-18 A	100%	4	0.00	\$0.00	\$0.00	\$0.00	\$0.00					Delivery of DC Power Materials and tools					
T&SC- DC Power Terminal blocks	23-Jan-18 A	24-Jan-18 A	100%	2	0.00	\$0.00	\$0.00	\$0.00	\$0.00					DC Power Terminal blocks					
T&SC- Install DC Power Cables	25-Jan-18 A	21-Feb-18 A	100%	20	0.00	\$0.00	\$0.00	\$0.00	\$0.00					Install DC Power Cables					
T&SC- DC Power Terminations/Connectors	25-Jan-18 A	21-Feb-18 A	100%	20	0.00	\$0.00	\$0.00	\$0.00	\$0.00					DC Power Terminations/Connectors					
T&SC- QA of DC Power	22-Feb-18 A	22-Feb-18 A	100%	1	0.00	\$0.00	\$0.00	\$0.00	\$0.00					QA of DC Power					
T&SC- Communications Subnets Electrical Drawings Review	23-Jan-18 A	29-Jan-18 A	100%	5	0.00	\$0.00	\$0.00	\$0.00	\$0.00					Communications Subnets Electrical Drawings Review					
T&SC- Communications Subnets Materials and tools delivered	30-Jan-18 A	05-Feb-18 A	100%	5	0.00	\$0.00	\$0.00	\$0.00	\$0.00					Communications Subnets Materials and tools delivered					
T&SC- Communications Subnets Cables Installation	22-Feb-18 A	08-Mar-18 A	100%	10	0.00	\$0.00	\$0.00	\$0.00	\$0.00					Communications Subnets Cables Installation					
T&SC- Communications Subnets One Wire Programming	30-Jan-18 A	05-Feb-18 A	100%	5	0.00	\$0.00	\$0.00	\$0.00	\$0.00					Communications Subnets One Wire Programming					
T&SC- Communications Subnets Terminations/Connectors	06-Feb-18 A	19-Feb-18 A	100%	10	0.00	\$0.00	\$0.00	\$0.00	\$0.00					Communications Subnets Terminations/Connectors					
T&SC- Communications Subnets QA	20-Feb-18 A	20-Feb-18 A	100%	1	0.00	\$0.00	\$0.00	\$0.00	\$0.00					Communications Subnets QA					
T&SC- Install ILC	26-Feb-18 A	02-Mar-18 A	100%	5	0.00	\$0.00	\$0.00	\$0.00	\$0.00					Install ILC					
T&SC- Hard Points Electrical Control ILC programming and assembly	06-Feb-18 A	12-Feb-18 A	100%	5	0.00	\$0.00	\$0.00	\$0.00	\$0.00					Hard Points Electrical Control ILC programming and assembly					
T&SC- Hard Points Electrical Monitoring ILC programming and assembly	13-Feb-18 A	09-Jul-18 A	100%	5	0.00	\$0.00	\$0.00	\$0.00	\$0.00					Hard Points Electrical Monitoring ILC programming and assembly					

LSST May 2019 Month End Forecast																		
Activity ID	Activity Name	Start	Finish	Physical % Complete	Original Duration	Budgeted Labor Units	Budgeted Labor Cost	Budgeted Material Cost	Budgeted Total Cost no	Total Float	FY2015 2014-10-01	FY2016 2015-10-01	FY2017 2016-10-01	FY2018 2017-10-01	FY2019 2018-10-01	FY2020 2019-10-01	FY2021 2020-10-01	FY2022 2021-10-01
T&SC-	Hard Points Electrical wire harnesses	13-Feb-18 A	09-Jul-18 A	100%	5	0.00	\$0.00	\$0.00	\$0.00					Hard Points Electrical wire harnesses				
	Sensors Gyro Mounting Interface Design	06-Feb-18 A	12-Feb-18 A	100%	5	0.00	\$0.00	\$0.00	\$0.00					Sensors Gyro Mounting Interface Design				
	Sensors DC Accelerometers Mounting Interface Des	13-Feb-18 A	19-Feb-18 A	100%	5	0.00	\$0.00	\$0.00	\$0.00					Sensors DC Accelerometers Mounting Interface Design				
	Sensors Electrical Wiring Design	06-Feb-18 A	19-Feb-18 A	100%	10	0.00	\$0.00	\$0.00	\$0.00					Sensors Electrical Wiring Design				
	Sensors Electrical Drawings Review	20-Feb-18 A	27-Feb-18 A	100%	5	0.00	\$0.00	\$0.00	\$0.00					Sensors Electrical Drawings Review				
	Sensors Materials and tools delivered	28-Feb-18 A	06-Mar-18 A	100%	5	0.00	\$0.00	\$0.00	\$0.00					Sensors Materials and tools delivered				
	Gyroscope Cables Installation	13-Feb-18 A	13-Feb-18 A	100%	1	0.00	\$0.00	\$0.00	\$0.00					Gyroscope Cables Installation				
	Gyroscope Terminations/Connectors	15-May-18 A	15-May-18 A	100%	1	0.00	\$0.00	\$0.00	\$0.00					Gyroscope Terminations/Connectors				
	DC Accelerometers Cables Installation	20-Feb-18 A	20-Feb-18 A	100%	1	0.00	\$0.00	\$0.00	\$0.00					DC Accelerometers Cables Installation				
	DC Accelerometers Terminations/Connectors	21-Feb-18 A	21-Feb-18 A	100%	1	0.00	\$0.00	\$0.00	\$0.00					DC Accelerometers Terminations/Connectors				
	Inclinometer Cables Installation	21-Feb-18 A	21-Feb-18 A	100%	1	0.00	\$0.00	\$0.00	\$0.00					Inclinometer Cables Installation				
	Inclinometer Terminations/Connectors	22-Feb-18 A	22-Feb-18 A	100%	1	0.00	\$0.00	\$0.00	\$0.00					Inclinometer Terminations/Connectors				
	Sensors QA	15-May-18 A	16-May-18 A	100%	1	12.00	\$1,129.44	\$0.00	\$1,129.44					Sensors QA				
	Laser Tracker Electrical Drawings Review	28-Feb-18 A	01-Mar-18 A	100%	2	0.00	\$0.00	\$0.00	\$0.00					Laser Tracker Electrical Drawings Review				
	Laser Tracker Materials and tools delivered	02-Mar-18 A	05-Mar-18 A	100%	2	0.00	\$0.00	\$0.00	\$0.00					Laser Tracker Materials and tools delivered				
	Laser Tracker Cables Installation	06-Mar-18 A	06-Mar-18 A	100%	1	0.00	\$0.00	\$0.00	\$0.00					Laser Tracker Cables Installation				
	Laser Tracker Terminations/Connectors	16-May-18 A	16-May-18 A	100%	1	12.00	\$1,129.44	\$0.00	\$1,129.44					Laser Tracker Terminations/Connectors				
	Laser Tracker QA	17-May-18 A	17-May-18 A	100%	1	12.00	\$1,129.44	\$0.00	\$1,129.44					Laser Tracker QA				
	AC Accelerometers System Electrical Drawings Review	02-Mar-18 A	05-Mar-18 A	100%	2	0.00	\$0.00	\$0.00	\$0.00					AC Accelerometers System Electrical Drawings Review				
	AC Accelerometers System Materials and tools delivered	06-Mar-18 A	07-Mar-18 A	100%	2	0.00	\$0.00	\$0.00	\$0.00					AC Accelerometers System Materials and tools delivered				
	AC Accelerometers System Cables Installation	08-Mar-18 A	08-Mar-18 A	100%	1	0.00	\$0.00	\$0.00	\$0.00					AC Accelerometers System Cables Installation				
	AC Accelerometers System Terminations/Connectors	09-Mar-18 A	09-Mar-18 A	100%	1	0.00	\$0.00	\$0.00	\$0.00					AC Accelerometers System Terminations/Connectors				
	AC Accelerometers System QA	17-May-18 A	17-May-18 A	100%	1	12.00	\$1,129.44	\$0.00	\$1,129.44					AC Accelerometers System QA				
	External Equipment Electrical Drawings Review	02-Jul-18 A	03-Jul-18 A	100%	2	24.00	\$2,258.88	\$0.00	\$2,258.88					External Equipment Electrical Drawings Review				
	External Equipment Cables Installation	05-Jul-18 A	05-Jul-18 A	100%	1	12.00	\$1,129.44	\$0.00	\$1,129.44					External Equipment Cables Installation				
	External Equipment Light Switch	03-Jun-19	04-Jun-19	0%	2	24.00	\$2,337.84	\$0.00	\$2,337.84	246				External Equipment Light Switch				
	External Equipment Air Supply Valve	15-Jul-18 A	16-Jul-18 A	100%	3	36.00	\$3,388.32	\$0.00	\$3,388.32					External Equipment Air Supply Valve				
	External Equipment QA	03-Jun-19	03-Jun-19	0%	1	12.00	\$1,168.92	\$0.00	\$1,168.92	247				External Equipment QA				
	M1M3 Electronics Cabinets Preliminary Design Review	19-Jan-18 A	19-Jan-18 A	100%	1	0.00	\$0.00	\$0.00	\$0.00					M1M3 Electronics Cabinets Preliminary Design Review				
	M1M3 Electronics Cabinets Panels Acceptance Test	04-Jun-18 A	10-Mar-19 A	100%	10	0.00	\$0.00	\$0.00	\$0.00					M1M3 Electronics Cabinets Panels Acceptance Test				
	Outer Loop Simulations	04-Dec-17 A	03-Jan-18 A	100%	20	0.00	\$0.00	\$0.00	\$0.00					Outer Loop Simulations				
	Outer Loop Tuning	04-Jan-18 A	01-Feb-18 A	100%	20	0.00	\$0.00	\$0.00	\$0.00					Outer Loop Tuning				
	Outer Loop Deliverable to Software	02-Feb-18 A	08-Feb-18 A	100%	5	0.00	\$0.00	\$0.00	\$0.00					Outer Loop Deliverable to Software				
	Outer Loop Dynamic Tests with Disabled Actuators	09-Feb-18 A	22-Feb-18 A	100%	10	0.00	\$0.00	\$0.00	\$0.00					Outer Loop Dynamic Tests with Disabled Actuators				
	Inner Loop Smaller Cylinders Tuning	26-Feb-18 A	14-Mar-18 A	100%	13	0.00	\$0.00	\$0.00	\$0.00					Inner Loop Smaller Cylinders Tuning				
	Inner Loop Pneumatic Actuators Cold Environment Test	12-Jul-18 A	25-Jul-18 A	100%	10	0.00	\$0.00	\$0.00	\$0.00					Inner Loop Pneumatic Actuators Cold Environment Test				
	Communications test (Laptop computer)	25-Apr-18 A	25-Apr-18 A	100%	1	0.00	\$0.00	\$0.00	\$0.00					Communications test (Laptop computer)				
	Communications with ILCs	26-Apr-18 A	02-May-18 A	100%	5	0.00	\$0.00	\$0.00	\$0.00					Communications with ILCs				
	Actuators Bump Test	03-May-18 A	09-May-18 A	100%	5	60.00	\$5,647.20	\$0.00	\$5,647.20					Actuators Bump Test				
	Hard Points Bump Test	10-May-18 A	16-May-18 A	100%	5	60.00	\$5,647.20	\$0.00	\$5,647.20					Hard Points Bump Test				
	Mirror Lift Test	17-May-18 A	17-May-18 A	100%	1	12.00	\$1,129.44	\$0.00	\$1,129.44					Mirror Lift Test				
	Mirror Park test	18-May-18 A	18-May-18 A	100%	1	12.00	\$1,129.44	\$0.00	\$1,129.44					Mirror Park test				
	Characterization	02-Jul-18 A	03-Jul-18 A	100%	2	24.00	\$2,258.88	\$0.00	\$2,258.88					Characterization				
	Hard Points Offloading System Tuning	23-May-18 A	29-May-18 A	100%	5	60.00	\$5,647.20	\$0.00	\$5,647.20					Hard Points Offloading System Tuning				
	Offloading system test	30-May-18 A	30-May-18 A	100%	1	12.00	\$1,129.44	\$0.00	\$1,129.44					Offloading system test				
	Fine tuning of hard point offloading system	02-Jul-18 A	14-Jul-18 A	100%	3	36.00	\$3,388.32	\$0.00	\$3,388.32					Fine tuning of hard point offloading system				
	Mirror Lift Test	05-Jun-18 A	05-Jun-18 A	100%	1	12.00	\$1,129.44	\$0.00	\$1,129.44					Mirror Lift Test				
	Mirror Park Test	06-Jun-18 A	06-Jun-18 A	100%	1	12.00	\$1,129.44	\$0.00	\$1,129.44					Mirror Park Test				
	Bulkhead panel assembly Package preparation	07-Jun-18 A	08-Jun-18 A	100%	2	24.00	\$2,258.88	\$0.00	\$2,258.88					Bulkhead panel assembly Package preparation				
	Bulkhead panel assembly Information transfer to CA	11-Jun-18 A	11-Jun-18 A	100%	1	12.00	\$1,129.44	\$0.00	\$1,129.44					Bulkhead panel assembly Information transfer to CAID personnel				
	Bulkhead Panel assembly	12-Jun-18 A	14-Jun-18 A	100%	3	36.00	\$3,388.32	\$0.00	\$3,388.32					Bulkhead Panel assembly				
	Electronics Cabinets Integration to Mirror Cell	15-Aug-18 A	15-Aug-18 A	100%	1	12.00	\$1,129.44	\$0.00	\$1,129.44					Electronics Cabinets Integration to Mirror Cell				
	Load Software on Controllers	18-Jun-18 A	18-Jun-18 A	100%	1	12.00	\$1,129.44	\$0.00	\$1,129.44					Load Software on Controllers				
	Reconfirm communications	19-Jun-18 A	19-Jun-18 A	100%	1	12.00	\$1,129.44	\$0.00	\$1,129.44					Reconfirm communications				
	Inclinometer Integration Tests	20-Jun-18 A	20-Jun-18 A	100%	1	12.00	\$1,129.44	\$0.00	\$1,129.44					Inclinometer Integration Tests				
	DC Accelerometers Integration Tests	21-Jun-18 A	21-Jun-18 A	100%	1	12.00	\$1,129.44	\$0.00	\$1,129.44					DC Accelerometers Integration Tests				
	Gyro Integration Tests	22-Jun-18 A	22-Jun-18 A	100%	1	12.00	\$1,129.44	\$0.00	\$1,129.44					Gyro Integration Tests				
	IMS Integration Tests	25-Jun-18 A	26-Jun-18 A	100%	2	24.00	\$2,258.88	\$0.00	\$2,258.88					IMS Integration Tests				
	Support System External Equipment Integration Test	27-Jun-18 A	12-Aug-18 A	100%	1	12.00	\$1,129.44	\$0.00	\$1,129.44					Support System External Equipment Integration Tests				
	Pilz testing verified	28-Jun-18 A	28-Jun-18 A	100%	1	12.00	\$1,129.44	\$0.00	\$1,129.44					Pilz testing verified				
	Interlock system test	29-Jun-18 A	05-Jul-18 A	100%	4	48.00	\$4,517.76	\$0.00	\$4,517.76					Interlock system test				
	Deliver Mirror Cell for testing	06-Jul-18 A	06-Jul-18 A	100%	1	12.00	\$1,129.44	\$0.00	\$1,129.44					Deliver Mirror Cell for testing				
	AC Power Conduits Installation	27-Nov-17 A	29-Nov-17 A	100%	3	0.00	\$0.00	\$0.00	\$0.00					AC Power Conduits Installation				
	AC Power Cables Installation	30-Nov-17 A	01-Dec-17 A	100%	2	0.00	\$0.00	\$0.00	\$0.00					AC Power Cables Installation				
	AC Power PDU Boxes	04-Dec-17 A	07-Dec-17 A	100%	4	0.00	\$0.00	\$0.00	\$0.00					AC Power PDU Boxes				
	AC Power Terminations/Connectors	08-Dec-17 A	12-Dec-17 A	100%	3	0.00	\$0.00	\$0.00	\$0.00					AC Power Terminations/Connectors				
	AC Power Cables Replacement	13-Dec-17 A	19-Dec-17 A	100%	5	0.00	\$0.00	\$0.00	\$0.00					AC Power Cables Replacement				
	AC Power Termination	20-Dec-17 A	22-Dec-17 A	100%	3	0.00	\$0.00	\$0.00	\$0.00					AC Power Termination				
	AC Power QA	27-Dec-17 A	27-Dec-17 A	100%	1	0.00	\$0.00	\$0.00	\$0.00					AC Power QA				
	Thermal System Electrical Wiring Design	06-Jul-18 A	02-Aug-18 A	100%	20	240.00	\$23,378.40	\$0.00	\$23,378.40					Thermal System Electrical Wiring Design				
	Thermal System Electrical Drawings Review	03-Aug-18 A	09-Aug-18 A	100%	5	34.00	\$3,565.16	\$0.00	\$3,565.16					Thermal System Electrical Drawings Review				
	Thermal System Materials and tools delivered	05-Jun-19	11-Jun-19	0%	5	78.00	\$6,838.32	\$0.00	\$6,838.32	296				Thermal System Materials and tools delivered				



LSST May 2019 Month End Forecast																			
Activity ID	Activity Name	Start	Finish	Physical % Complete	Original Duration	Budgeted Labor Units	Budgeted Labor Cost	Budgeted Material Cost	Budgeted Total Cost no	Total Float	FY2015 2014-10-01	FY2016 2015-10-01	FY2017 2016-10-01	FY2018 2017-10-01	FY2019 2018-10-01	FY2020 2019-10-01	FY2021 2020-10-01	FY2022 2021-10-01	
T&SC-091	Prototype Thermal Scanners Support for Windows Computers	02-Apr-18 A	06-Apr-18 A	100%	5	0.00	\$0.00	\$0.00	\$0.00					Prototype Thermal Scanners Support for Windows Computers					
	Assembly Thermal Scanners Support for Windows Computers	01-Feb-19 A	14-Feb-19 A	100%	10	0.00	\$0.00	\$0.00	\$0.00					Assembly Thermal Scanners Support for Windows Computers					
	Thermal System Cables	23-Apr-18 A	23-Apr-18 A	100%	1	0.00	\$0.00	\$0.00	\$0.00					Thermal System Cables					
	Thermal System Terminations/Connectors	24-Apr-18 A	24-Apr-18 A	100%	1	0.00	\$0.00	\$0.00	\$0.00					Thermal System Terminations/Connectors					
	Fan Coils Thermocouples Cables	29-May-19 A	31-May-19 A	100%	10	84.00	\$9,011.16	\$0.00	\$9,011.16					Fan Coils Thermocouples Cables					
	Mirror Cell Air Thermocouples	03-Jun-19	05-Jun-19	0%	3	36.00	\$3,506.76	\$0.00	\$3,506.76	245				Mirror Cell Air Thermocouples					
	Thermal System QA	24-Jul-19	24-Jul-19	0%	1	12.00	\$1,168.92	\$0.00	\$1,168.92	212				Thermal System QA					
	Thermal System External Equipment Electrical Draw	03-Jun-19	07-Jun-19	0%	5	0.00	\$0.00	\$0.00	\$0.00	212				Thermal System External Equipment Electrical Drawings Review					
	Thermal System External Equipment Material procurement	10-Jun-19	21-Jun-19	0%	10	120.00	\$11,689.20	\$0.00	\$11,689.20	212				Thermal System External Equipment Material procurement					
	Thermal System External Equipment Materials and tools delivered	24-Jun-19	28-Jun-19	0%	5	52.00	\$5,249.48	\$0.00	\$5,249.48	212				Thermal System External Equipment Materials and tools delivered					
	Thermal System External Equipment Cables Installation	01-Jul-19	02-Jul-19	0%	2	64.00	\$5,313.44	\$0.00	\$5,313.44	212				Thermal System External Equipment Cables Installation					
	Thermal System External Equipment Flow Meter	03-Jul-19	05-Jul-19	0%	2	20.00	\$2,040.28	\$0.00	\$2,040.28	212				Thermal System External Equipment Flow Meter					
	Thermal System External Equipment Mixing Valve	08-Jul-19	09-Jul-19	0%	2	20.00	\$2,040.28	\$0.00	\$2,040.28	212				Thermal System External Equipment Mixing Valve					
	Thermal System External Equipment Coolant Pump	10-Jul-19	11-Jul-19	0%	2	20.00	\$2,040.28	\$0.00	\$2,040.28	212				Thermal System External Equipment Coolant Pump					
	Thermal System External Equipment Door Switch	12-Jul-19	15-Jul-19	0%	2	20.00	\$2,040.28	\$0.00	\$2,040.28	212				Thermal System External Equipment Door Switch					
	Thermal System External Equipment Pump E-stop	16-Jul-19	17-Jul-19	0%	2	20.00	\$2,040.28	\$0.00	\$2,040.28	212				Thermal System External Equipment Pump E-stop					
	Thermal System External Equipment Wind Sensors	18-Jul-19	22-Jul-19	0%	3	28.00	\$2,911.64	\$0.00	\$2,911.64	212				Thermal System External Equipment Wind Sensors					
	Thermal System External Equipment QA	23-Jul-19	23-Jul-19	0%	1	12.00	\$1,168.92	\$0.00	\$1,168.92	212				Thermal System External Equipment QA					
	Inner Loop Fan Speed Cotrols Development System	12-Jan-18 A	12-Jan-18 A	100%	1	0.00	\$0.00	\$0.00	\$0.00					Inner Loop Fan Speed Cotrols Development System Characterization					
	Inner Loop Fan Speed Cotrols Development Tuning	16-Jan-18 A	16-Jan-18 A	100%	1	0.00	\$0.00	\$0.00	\$0.00					Inner Loop Fan Speed Cotrols Development Tuning					
	Inner Loop Fan Speed Cotrols Development Tests	17-Jan-18 A	17-Jan-18 A	100%	1	0.00	\$0.00	\$0.00	\$0.00					Inner Loop Fan Speed Cotrols Development Tests					
	Inner Loop Firmware development	18-Jan-18 A	08-Feb-18 A	100%	16	0.00	\$0.00	\$0.00	\$0.00					Inner Loop Firmware development					
	Inner Loop Fan Coil Units tests with ILC	09-Feb-18 A	15-Feb-18 A	100%	5	0.00	\$0.00	\$0.00	\$0.00					Inner Loop Fan Coil Units tests with ILC					
	Outer Loop Mixing Valve Controls Thermal system model	03-Jun-19	28-Jun-19	0%	20	0.00	\$0.00	\$0.00	\$0.00	207				Outer Loop Mixing Valve Controls Thermal system model					
	Outer Loop Mixing Valve Controls Mixing valve controller	01-Jul-19	15-Jul-19	0%	10	0.00	\$0.00	\$0.00	\$0.00	207				Outer Loop Mixing Valve Controls Mixing valve controller					
	Outer Loop Mixing Valve Controls Mixing Valve System Simulations	16-Jul-19	17-Jul-19	0%	2	24.00	\$2,337.84	\$0.00	\$2,337.84	207				Outer Loop Mixing Valve Controls Mixing Valve System Simulations					
	Outer Loop Mixing Valve Controls Data Analysis	18-Jul-19	29-Jul-19	0%	8	96.00	\$9,351.36	\$0.00	\$9,351.36	207				Outer Loop Mixing Valve Controls Data Analysis					
	Outer Loop Mixing Valve Controls Controller Tuning	30-Jul-19	05-Aug-19	0%	5	60.00	\$5,844.60	\$0.00	\$5,844.60	207				Outer Loop Mixing Valve Controls Controller Tuning					
	Outer Loop Mixing Valve Controls Verification Testing	06-Aug-19	12-Aug-19	0%	5	60.00	\$5,844.60	\$0.00	\$5,844.60	207				Outer Loop Mixing Valve Controls Verification Testing					
	FCU Modeling	27-May-19 A	28-Jun-19	30%	20	240.00	\$23,378.40	\$0.00	\$23,378.40	207				FCU Modeling					
	FCU Temperature Controllers	01-Jul-19	15-Jul-19	0%	10	120.00	\$11,689.20	\$0.00	\$11,689.20	207				FCU Temperature Controllers					
	FCU System Simulations	16-Jul-19	17-Jul-19	0%	2	24.00	\$2,337.84	\$0.00	\$2,337.84	207				FCU System Simulations					
	FCU Data Analysis	18-Jul-19	29-Jul-19	0%	8	76.00	\$7,587.32	\$0.00	\$7,587.32	207				FCU Data Analysis					
	FCU Controllers Tuning	30-Jul-19	05-Aug-19	0%	5	34.00	\$3,565.16	\$0.00	\$3,565.16	207				FCU Controllers Tuning					
	FCU Verification Testing	06-Aug-19	12-Aug-19	0%	5	34.00	\$3,565.16	\$0.00	\$3,565.16	207				FCU Verification Testing					
	Full Outer Loop Simulations	13-Aug-19	19-Aug-19	0%	5	34.00	\$3,565.16	\$0.00	\$3,565.16	207				Full Outer Loop Simulations					
	Data Analysis	20-Aug-19	26-Aug-19	0%	5	48.00	\$4,951.92	\$0.00	\$4,951.92	207				Data Analysis					
	Controllers retuning	27-Aug-19	03-Sep-19	0%	5	60.00	\$5,844.60	\$0.00	\$5,844.60	207				Controllers retuning					
	Verification Testing	04-Sep-19	10-Sep-19	0%	5	60.00	\$5,844.60	\$0.00	\$5,844.60	207				Verification Testing					
	Deliverable to Software Engineering	11-Sep-19	24-Sep-19	0%	10	120.00	\$11,689.20	\$0.00	\$11,689.20	207				Deliverable to Software Engineering					
	Fine tune and answer questions for software engine	25-Sep-19	01-Oct-19	0%	5	60.00	\$5,885.52	\$0.00	\$5,885.52	207				Fine tune and answer questions for software engineering					
	Design Thermal System Software Simulator	03-Jun-19	03-Jul-19	0%	23	0.00	\$0.00	\$0.00	\$0.00	201				Design Thermal System Software Simulator					
	Drawings for Thermal System Software Simulator	05-Jul-19	11-Jul-19	0%	5	0.00	\$0.00	\$0.00	\$0.00	201				Drawings for Thermal System Software Simulator					
	Thermal System Software Simulator - Procurements	12-Jul-19	12-Jul-19	0%	1	0.00	\$0.00	\$15,000.00	\$15,000.00	201				Thermal System Software Simulator - Procurements					
	Thermal System Software Simulator - Lead Time	15-Jul-19	08-Aug-19	0%	19	0.00	\$0.00	\$0.00	\$0.00	201				Thermal System Software Simulator - Lead Time					
	Thermal System Software Simulator - Fabrication	09-Aug-19	05-Sep-19	0%	19	0.00	\$0.00	\$0.00	\$0.00	201				Thermal System Software Simulator - Fabrication					
	Thermal System Software Simulator - Delivery to Software Engineering	06-Sep-19	12-Sep-19	0%	5	0.00	\$0.00	\$0.00	\$0.00	201				Thermal System Software Simulator - Delivery to Software Engineering					
	Absolute temperature sensor adapter board layout design	01-May-19 A	22-May-19 A	100%	18	0.00	\$0.00	\$0.00	\$0.00					Absolute temperature sensor adapter board layout design					
	Absolute temperature sensor procurement	23-May-19 A	18-Jun-19	50%	12	0.00	\$0.00	\$0.00	\$0.00	236				Absolute temperature sensor procurement					
	Absolute temperature sensor lead time	19-Jun-19	18-Jul-19	0%	21	0.00	\$0.00	\$0.00	\$0.00	236				Absolute temperature sensor lead time					
	Absolute temperature sensor adapter board build	23-May-19 A	02-Aug-19	20%	44	0.00	\$0.00	\$0.00	\$0.00	225				Absolute temperature sensor adapter board build					
	Absolute temperature sensor adapter board installation in ILC connector	05-Aug-19	30-Aug-19	0%	20	0.00	\$0.00	\$0.00	\$0.00	225				Absolute temperature sensor adapter board installation in ILC connector					
	Absolute temperature sensnr installation in FCU and wiring to adapter board	03-Sep-19	13-Sep-19	0%	9	0.00	\$0.00	\$0.00	\$0.00	225				Absolute temperature sensnr installation in FCU and wiring to adapter board					
	Test Stand Assembly (design, redesign, adapt, etc.)	09-Aug-19	28-Aug-19	0%	14	0.00	\$0.00	\$0.00	\$0.00	211				Test Stand Assembly (design, redesign, adapt, etc.)					
	Test Software Development	13-Sep-19	09-Oct-19	0%	19	0.00	\$0.00	\$0.00	\$0.00	201				Test Software Development					
	FCU installation in Test Stand	10-Oct-19	10-Oct-19	0%	1	0.00	\$0.00	\$0.00	\$0.00	201				FCU installation in Test Stand					
	Temperature controller characterization	11-Oct-19	17-Oct-19	0%	5	0.00	\$0.00	\$0.00	\$0.00	201				Temperature controller characterization					
	Temperature controller tuning	18-Oct-19	24-Oct-19	0%	5	0.00	\$0.00	\$0.00	\$0.00	201				Temperature controller tuning					
	M1M3 Thermal System Ready for Installation		24-Oct-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	201				M1M3 Thermal System Ready for Installation					
	Additional SOML Effort	18-Oct-19	24-Oct-19	0%	5	0.00	\$0.00	\$486,114.00	\$486,114.00	201				Additional SOML Effort					
	Additional CAID Effort	18-Oct-19	24-Oct-19	0%	5	0.00	\$0.00	\$278,285.00	\$278,285.00	201				Additional CAID Effort					
LSST ME 19-05.04C.06.04 Secondary Mirror M2 Contract		01-Aug-14 A	12-Dec-18 A		1104	2025.00	\$200,621.25	\$13,740,842.44	\$13,941,463.69										
T&SC-091	Secondary Mirror Fabrication Mgt Labor - FY 1 - LOE	01-Aug-14 A	30-Sep-14 A	100%	42	225.00	\$21,152.25	\$0.00	\$21,152.25		Secondary Mirror Fabrication Mgt Labor - FY 1 - LOE Labor								
T&SC-091	Secondary Mirror Fabrication Mgt Labor -																		

LSST May 2019 Month End Forecast																			
Activity ID	Activity Name	Start	Finish	Physical % Complete	Original Duration	Budgeted Labor Units	Budgeted Labor Cost	Budgeted Material Cost	Budgeted Total Cost no	Total Float		FY2015 2014-10-01	FY2016 2015-10-01	FY2017 2016-10-01	FY2018 2017-10-01	FY2019 2018-10-01	FY2020 2019-10-01	FY2021 2020-10-01	FY2022 2021-10-01
	T&SC-09i M2 Phase B Kickoff Meeting - Complete		21-Oct-14 A	100%	0	0.00	\$0.00	\$0.00	\$0.00		◆ M2 Phase B Kickoff Meeting - Complete								
	T&SC-09i Completion of Kick-off Meeting for Phase B - Supplie	29-Aug-14 A	29-Oct-14 A	100%	21	0.00	\$0.00	\$0.00	\$0.00		■ Completion of Kick-off Meeting for Phase B - Supplier Leadtime & Delivery								
	T&SC-09i Payment Completion of Kick-off Meeting for Phase B	30-Oct-14 A	28-Nov-14 A	100%	5	0.00	\$0.00	\$400,000.00	\$400,000.00		■ Payment Completion of Kick-off Meeting for Phase B - Delivery Acceptance								
	T&SC-09i Transport container modifications and packaging - R	02-Nov-14 A		100%	0	0.00	\$0.00	\$0.00	\$0.00		◆ Transport container modifications and packaging - Review								
	T&SC-09i Optical fabrication support equipment (Status)	02-Nov-14 A	20-May-15 A	100%	79	0.00	\$0.00	\$0.00	\$0.00		■ Optical fabrication support equipment (Status)								
	T&SC-09i Optical Fabrication Support Equip Review - Complet		21-May-15 A	100%	0	0.00	\$0.00	\$0.00	\$0.00		◆ Optical Fabrication Support Equip Review - Complete								
	T&SC-09i Optical fabrication support equipment review - Suppl	21-May-15 A	22-Jun-15 A	100%	21	0.00	\$0.00	\$0.00	\$0.00		■ Optical fabrication support equipment review - Supplier Leadtime & Delivery								
	T&SC-09i Optical fabrication support equipment review - Delive	01-Apr-15 A	22-May-15 A	100%	5	0.00	\$0.00	\$375,000.00	\$375,000.00		■ Optical fabrication support equipment review - Delivery Acceptance								
	T&SC-09i M2 Cell Assy Final Design & Analysis (PDR to CDR)	22-May-15 A	13-May-16 A	100%	26	0.00	\$0.00	\$0.00	\$0.00		■ M2 Cell Assy Final Design & Analysis (PDR to CDR) (incl. actuator mech. flexures) - (Status)								
	T&SC-09i M2 Cell Assy Final Design & Analysis (PDR to CDR)		16-May-16 A	100%	0	0.00	\$0.00	\$0.00	\$0.00		◆ M2 Cell Assy Final Design & Analysis (PDR to CDR) (incl. actuator mech. flexures) - Complete								
	T&SC-09i M2 Cell Assy Final Design & Analysis (PDR to CDR)	16-May-16 A	31-May-16 A	100%	20	0.00	\$0.00	\$0.00	\$0.00		■ M2 Cell Assy Final Design & Analysis (PDR to CDR) (incl. actuator mech. flexures) - Supplier Leadtime & Delivery								
	T&SC-09i M2 Cell Assy Final Design & Analysis (PDR to CDR)	01-May-15 A	31-May-16 A	100%	5	0.00	\$0.00	\$375,000.00	\$375,000.00		■ M2 Cell Assy Final Design & Analysis (PDR to CDR) (incl. actuator mech. flexures) - Delivery Acceptance								
	T&SC-09i M2 Controller Simulator Design (Status)	07-May-15 A	13-May-16 A	100%	21	0.00	\$0.00	\$0.00	\$0.00		■ M2 Controller Simulator Design (Status)								
	T&SC-09i M2 Controller Simulator Design - Complete		16-May-16 A	100%	0	0.00	\$0.00	\$0.00	\$0.00		◆ M2 Controller Simulator Design - Complete								
	T&SC-09i M2 Controller Simulator Design - Supplier Leadtime	16-May-16 A	31-May-16 A	100%	20	0.00	\$0.00	\$0.00	\$0.00		■ M2 Controller Simulator Design - Supplier Leadtime & Delivery								
	T&SC-09i M2 Controller Simulator Design - Delivery Acceptanc	30-Jul-15 A	31-May-16 A	100%	5	0.00	\$0.00	\$375,000.00	\$375,000.00		■ M2 Controller Simulator Design - Delivery Acceptance								
	T&SC-09i M2 Controller Design (Status)	07-May-15 A	13-May-16 A	100%	21	0.00	\$0.00	\$0.00	\$0.00		■ M2 Controller Design (Status)								
	T&SC-09i M2 Controller Design - Complete		16-May-16 A	100%	0	0.00	\$0.00	\$0.00	\$0.00		◆ M2 Controller Design - Complete								
	T&SC-09i M2 Controller Design - Supplier Leadtime & Delivery	16-May-16 A	31-May-16 A	100%	20	0.00	\$0.00	\$0.00	\$0.00		■ M2 Controller Design - Supplier Leadtime & Delivery								
	T&SC-09i M2 Controller Design - Delivery Acceptance	01-May-15 A	31-May-16 A	100%	5	0.00	\$0.00	\$375,000.00	\$375,000.00		■ M2 Controller Design - Delivery Acceptance								
	T&SC-09i Cell Assy Final Design Review (Optional) - Complete		16-May-16 A	100%	0	0.00	\$0.00	\$0.00	\$0.00		◆ Cell Assy Final Design Review (Optional) - Complete								
	T&SC-09i Cell Assy fabrication readiness review (Optional) - C	16-May-16 A	31-May-16 A	100%	20	0.00	\$0.00	\$0.00	\$0.00		■ Cell Assy fabrication readiness review (Optional) - Complete								
	T&SC-09i Cell Assy Final Design Review (Optional) - Delivery	21-May-15 A	31-May-16 A	100%	5	0.00	\$0.00	\$443,330.00	\$443,330.00		■ Cell Assy Final Design Review (Optional) - Delivery Acceptance								
	T&SC-09i Cell Assy fabrication readiness review (Optional) - C		19-May-15 A	100%	0	0.00	\$0.00	\$0.00	\$0.00		◆ Cell Assy fabrication readiness review (Optional) - Complete								
	T&SC-09i Cell Assy fabrication readiness review (Optional) - S	19-May-15 A	22-May-15 A	100%	20	0.00	\$0.00	\$0.00	\$0.00		■ Cell Assy fabrication readiness review (Optional) - Supplier Leadtime & Delivery								
	T&SC-09i Cell Assy fabrication readiness review (Optional) - D	19-May-15 A	31-May-15 A	100%	5	0.00	\$0.00	\$443,330.00	\$443,330.00		■ Cell Assy fabrication readiness review (Optional) - Delivery Acceptance								
	T&SC-09i M2 surrogate mirror design (Status)	29-Apr-15 A	23-Jul-15 A	100%	15	0.00	\$0.00	\$0.00	\$0.00		■ M2 surrogate mirror design (Status)								
	T&SC-09i M2 surrogate mirror design - Complete		24-Jul-15 A	100%	0	0.00	\$0.00	\$0.00	\$0.00		◆ M2 surrogate mirror design - Complete								
	T&SC-09i M2 surrogate mirror design - Supplier Leadtime & D	24-Jul-15 A	31-Jul-15 A	100%	20	0.00	\$0.00	\$0.00	\$0.00		■ M2 surrogate mirror design - Supplier Leadtime & Delivery								
	T&SC-09i M2 surrogate mirror design - Delivery Acceptance	24-Jul-15 A	31-Jul-15 A	100%	5	0.00	\$0.00	\$443,330.00	\$443,330.00		■ M2 surrogate mirror design - Delivery Acceptance								
	T&SC-09i Mirror control system review (Optional) (Status)	30-Apr-15 A	13-May-16 A	100%	17	0.00	\$0.00	\$0.00	\$0.00		■ Mirror control system review (Optional) (Status)								
	T&SC-09i Mirror control system review (Optional) - Complete		16-May-16 A	100%	0	0.00	\$0.00	\$0.00	\$0.00		◆ Mirror control system review (Optional) - Complete								
	T&SC-09i Mirror control system review (Optional) - Supplier Le	16-May-16 A	31-May-16 A	100%	20	0.00	\$0.00	\$0.00	\$0.00		■ Mirror control system review (Optional) - Supplier Leadtime & Delivery								
	T&SC-09i Mirror control system review (Optional) - Delivery Ac	01-Jun-15 A	31-May-16 A	100%	5	0.00	\$0.00	\$1,300,000.00	\$1,300,000.00		■ Mirror control system review (Optional) - Delivery Acceptance								
	T&SC-09i M2 Mirror Measurements and Test Plan (Status)	30-Apr-15 A	11-Sep-15 A	100%	18	0.00	\$0.00	\$0.00	\$0.00		■ M2 Mirror Measurements and Test Plan (Status)								
	T&SC-09i M2 Mirror Measurements and Test Plan - Complete		14-Sep-15 A	100%	0	0.00	\$0.00	\$0.00	\$0.00		◆ M2 Mirror Measurements and Test Plan - Complete								
	T&SC-09i M2 Mirror Measurements and Test Plan - Supplier L	14-Sep-15 A	18-Sep-15 A	100%	20	0.00	\$0.00	\$0.00	\$0.00		■ M2 Mirror Measurements and Test Plan - Supplier Leadtime & Delivery								
	T&SC-09i M2 Mirror Measurements and Test Plan - Delivery A	04-Aug-15 A	30-Sep-15 A	100%	5	0.00	\$0.00	\$650,000.00	\$650,000.00		■ M2 Mirror Measurements and Test Plan - Delivery Acceptance								
	T&SC-09i Optical Test Set Design (Status)	27-May-15 A	09-Dec-15 A	100%	64	0.00	\$0.00	\$0.00	\$0.00		■ Optical Test Set Design (Status)								
	T&SC-09i Optical Test Set Design - Complete		10-Dec-15 A	100%	0	0.00	\$0.00	\$0.00	\$0.00		◆ Optical Test Set Design - Complete								
	T&SC-09i Optical Test Set Design - Supplier Leadtime & Delive	10-Dec-15 A	10-Dec-15 A	100%	20	0.00	\$0.00	\$0.00	\$0.00		■ Optical Test Set Design - Supplier Leadtime & Delivery								
	T&SC-09i Optical Test Set Design - Delivery Acceptance	01-May-15 A	10-Dec-15 A	100%	5	0.00	\$0.00	\$650,000.00	\$650,000.00		■ Optical Test Set Design - Delivery Acceptance								
	T&SC-09i Pad bonding & pull testing (Status)	25-Aug-15 A	15-Jul-16 A	100%	17	0.00	\$0.00	\$0.00	\$0.00		■ Pad bonding & pull testing (Status)								
	T&SC-09i Pad bonding & pull testing - Complete		18-Jul-16 A	100%	0	0.00	\$0.00	\$0.00	\$0.00		◆ Pad bonding & pull testing - Complete								
	T&SC-09i Pad bonding & pull testing - Supplier Leadtime & Del	18-Jul-16 A	29-Jul-16 A	100%	20	0.00	\$0.00	\$0.00	\$0.00		■ Pad bonding & pull testing - Supplier Leadtime & Delivery								
	T&SC-09i Pad bonding & pull testing - Delivery Acceptance	01-May-15 A	18-Jul-16 A	100%	5	0.00	\$0.00	\$350,000.00	\$350,000.00		■ Pad bonding & pull testing - Delivery Acceptance								
	T&SC-09i Pad bonding & pull testing - Additional M2 Bond Sam	01-Apr-16 A	31-May-16 A	100%	5	0.00	\$0.00	\$77,086.00	\$77,086.00		■ Pad bonding & pull testing - Additional M2 Bond Samples								
	T&SC-09i M2 Mirror Acceptance Test Plan (Status)	27-May-15 A	14-Aug-15 A	100%	20	0.00	\$0.00	\$0.00	\$0.00		■ M2 Mirror Acceptance Test Plan (Status)								
	T&SC-09i M2 Mirror Acceptance Test Plan - Complete		17-Aug-15 A	100%	0	0.00	\$0.00	\$0.00	\$0.00		◆ M2 Mirror Acceptance Test Plan - Complete								
	T&SC-09i M2 Mirror Acceptance Test Plan - Supplier Leadtime	17-Aug-15 A	31-Aug-15 A	100%	20	0.00	\$0.00	\$0.00	\$0.00										



LSST May 2019 Month End Forecast												FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022
Activity ID	Activity Name	Start	Finish	Physical % Complete	Original Duration	Budgeted Labor Units	Budgeted Labor Cost	Budgeted Material Cost	Budgeted Total Cost no	Total Float		2014-10-01	2015-10-01	2016-10-01	2017-10-01	2018-10-01	2019-10-01	2020-10-01	2021-10-01
T&SC-091	M2 surrogate mirror PFAT - Complete		16-May-16 A	100%	0	0.00	\$0.00	\$0.00	\$0.00				M2 surrogate mirror PFAT - Complete						
	M2 surrogate mirror PFAT - Supplier Leadtime & Delivery	16-May-16 A	31-May-16 A	100%	21	0.00	\$0.00	\$0.00	\$0.00				M2 surrogate mirror PFAT - Supplier Leadtime & Delivery						
	M2 surrogate mirror PFAT - Delivery Acceptance	01-Oct-15 A	31-May-16 A	100%	5	0.00	\$0.00	\$455,000.00	\$455,000.00				M2 surrogate mirror PFAT - Delivery Acceptance						
	M2 mirror cover PFAT (Status)	03-Sep-15 A	15-Jan-16 A	100%	36	0.00	\$0.00	\$0.00	\$0.00				M2 mirror cover PFAT (Status)						
	M2 mirror cover PFAT - Complete		18-Jan-16 A	100%	0	0.00	\$0.00	\$0.00	\$0.00				M2 mirror cover PFAT - Complete						
	M2 mirror cover PFAT - Supplier Leadtime & Delivery	18-Jan-16 A	18-Jan-16 A	100%	21	0.00	\$0.00	\$0.00	\$0.00				M2 mirror cover PFAT - Supplier Leadtime & Delivery						
	M2 mirror cover PFAT - Delivery Acceptance	01-Oct-15 A	18-Jan-16 A	100%	5	0.00	\$0.00	\$455,000.00	\$455,000.00				M2 mirror cover PFAT - Delivery Acceptance						
	M2 cell handling cart PFAT (Status)	26-Oct-15 A	03-Jun-16 A	100%	46	0.00	\$0.00	\$0.00	\$0.00				M2 cell handling cart PFAT (Status)						
	M2 cell handling cart PFAT - Complete		06-Jun-16 A	100%	0	0.00	\$0.00	\$0.00	\$0.00				M2 cell handling cart PFAT - Complete						
	M2 cell handling cart PFAT - Supplier Leadtime & Delivery	06-Jun-16 A	07-Jun-16 A	100%	20	0.00	\$0.00	\$0.00	\$0.00				M2 cell handling cart PFAT - Supplier Leadtime & Delivery						
	M2 cell handling cart PFAT - Delivery Acceptance	01-Oct-15 A	08-Jun-16 A	100%	5	0.00	\$0.00	\$310,000.00	\$310,000.00				M2 cell handling cart PFAT - Delivery Acceptance						
	Bond/Test Pads Onto Surrogate - Delivery Acceptance	01-Aug-16 A	08-Dec-16 A	100%	5	0.00	\$0.00	\$310,000.00	\$310,000.00				Bond/Test Pads Onto Surrogate - Delivery Acceptance						
	M2 grind & tub polish (Status)	26-Oct-15 A	25-Feb-16 A	100%	47	0.00	\$0.00	\$0.00	\$0.00				M2 grind & tub polish (Status)						
	M2 grind & tub polish - Complete		26-Feb-16 A	100%	0	0.00	\$0.00	\$0.00	\$0.00				M2 grind & tub polish - Complete						
	M2 grind & tub polish - Supplier Leadtime & Delivery	26-Feb-16 A	26-Feb-16 A	100%	20	0.00	\$0.00	\$0.00	\$0.00				M2 grind & tub polish - Supplier Leadtime & Delivery						
	M2 grind & tub polish - Delivery Acceptance	02-Nov-15 A	26-Feb-16 A	100%	5	0.00	\$0.00	\$183,330.00	\$183,330.00				M2 grind & tub polish - Delivery Acceptance						
	Actuator PFAT (testing only) (Status)	03-Sep-15 A	22-Dec-15 A	100%	77	0.00	\$0.00	\$0.00	\$0.00				Actuator PFAT (testing only) (Status)						
	Actuator PFAT (testing only) - Delivery Acceptance	01-Feb-16 A	15-Sep-17 A	100%	5	0.00	\$0.00	\$180,000.00	\$180,000.00				Actuator PFAT (testing only) - Delivery Acceptance						
	M2 Cell PFAT (fab. the steel structure) (Status)	05-Jan-16 A	30-Jun-16 A	100%	50	0.00	\$0.00	\$0.00	\$0.00				M2 Cell PFAT (fab. the steel structure) (Status)						
	M2 Cell PFAT (fab. the steel structure) - Complete		01-Jul-16 A	100%	0	0.00	\$0.00	\$0.00	\$0.00				M2 Cell PFAT (fab. the steel structure) - Complete						
	M2 Cell PFAT (fab. the steel structure) - Supplier Leadtime & Delivery	06-Jun-16 A	07-Jun-16 A	100%	21	0.00	\$0.00	\$0.00	\$0.00				M2 Cell PFAT (fab. the steel structure) - Supplier Leadtime & Delivery						
	M2 Cell PFAT (fab. the steel structure) - Delivery Acceptance	01-Jul-15 A	07-Jun-16 A	100%	5	0.00	\$0.00	\$364,861.00	\$364,861.00				M2 Cell PFAT (fab. the steel structure) - Delivery Acceptance						
	Bond/Test Pads Onto M2 Optic (Status)	17-Mar-16 A	22-Jun-16 A	100%	70	0.00	\$0.00	\$0.00	\$0.00				Bond/Test Pads Onto M2 Optic (Status)						
	Bond/Test Pads Onto M2 Optic - Delivery Acceptance	01-Feb-17 A	07-Jun-17 A	100%	5	0.00	\$0.00	\$525,000.00	\$525,000.00				Bond/Test Pads Onto M2 Optic - Delivery Acceptance						
	Redesign the M2 controller box for the M2 Cell Assembly	05-Jul-16 A	18-Nov-16 A	100%	80	0.00	\$0.00	\$99,933.00	\$99,933.00				Redesign the M2 controller box for the M2 Cell Assembly						
	Integrate Components onto M2 Cell	05-Jul-16 A	16-Jun-17 A	100%	93	0.00	\$0.00	\$0.00	\$0.00				Integrate Components onto M2 Cell						
	Develop Controller Software	05-Jul-16 A	07-Dec-16 A	100%	132	0.00	\$0.00	\$0.00	\$0.00				Develop Controller Software						
	Optical Test Set PFAT & Calibration	05-Jul-16 A	30-Oct-17 A	100%	219	0.00	\$0.00	\$0.00	\$0.00				Optical Test Set PFAT & Calibration						
	Axial Actuator Assembly and Test	11-Jul-16 A	15-Sep-16 A	100%	44	0.00	\$0.00	\$0.00	\$0.00				Axial Actuator Assembly and Test						
	Tangential Actuator Assembly and Test	11-Jul-16 A	04-Nov-16 A	100%	83	0.00	\$0.00	\$0.00	\$0.00				Tangential Actuator Assembly and Test						
	M2 Early Ion and Smoothing	03-Jul-16 A	11-Jan-17 A	100%	94	0.00	\$0.00	\$0.00	\$0.00				M2 Early Ion and Smoothing						
	Bond Pads onto Surrogate	15-Jul-16 A	16-Nov-16 A	100%	85	0.00	\$0.00	\$0.00	\$0.00				Bond Pads onto Surrogate						
	Develop Controller Algorithm	27-Jul-16 A	04-Aug-17 A	100%	111	0.00	\$0.00	\$0.00	\$0.00				Develop Controller Algorithm						
	M2 Controller / Interface Testing	11-Aug-16 A	13-Dec-16 A	100%	70	0.00	\$0.00	\$0.00	\$0.00				M2 Controller / Interface Testing						
	M2 Controller Assembly and Test (Box #1)	17-Aug-16 A	21-Apr-17 A	100%	66	0.00	\$0.00	\$0.00	\$0.00				M2 Controller Assembly and Test (Box #1)						
	Cell Assy final acceptance review (Optional) (Status)	23-Jun-16 A	30-May-17 A	100%	52	0.00	\$0.00	\$0.00	\$0.00				Cell Assy final acceptance review (Optional) (Status)						
	Cell Assy final acceptance review (Optional) - Delivery Acceptance	31-May-17 A	31-May-17 A	100%	5	0.00	\$0.00	\$200,000.00	\$200,000.00				Cell Assy final acceptance review (Optional) - Delivery Acceptance						
	Integrate / Test M2 Controller Software	26-Sep-16 A	14-Oct-16 A	100%	15	0.00	\$0.00	\$0.00	\$0.00				Integrate / Test M2 Controller Software						
	Optical Test Set Mechanical Install / Align / C/O	26-Sep-16 A	10-Apr-17 A	100%	107	0.00	\$0.00	\$0.00	\$0.00				Optical Test Set Mechanical Install / Align / C/O						
	Secondary Mirror Fabrication Mgt PROC - FY 4 - LOE	01-Oct-16 A	31-Mar-17 A	100%	108	0.00	\$0.00	\$47,646.00	\$47,646.00				Secondary Mirror Fabrication Mgt PROC - FY 4 - LOE						
	Actuator Spare Assembly and Test	16-Nov-16 A	15-Sep-17 A	100%	166	0.00	\$0.00	\$0.00	\$0.00				Actuator Spare Assembly and Test						
	M2 Controller Box Redesign implementation	25-Oct-16 A	18-Nov-16 A	100%	5	0.00	\$0.00	\$176,919.00	\$176,919.00				M2 Controller Box Redesign implementation						
	Surrogate and Cell Handling / Integration Demonstration	15-Feb-17 A	28-Jun-17 A	100%	54	0.00	\$0.00	\$0.00	\$0.00				Surrogate and Cell Handling / Integration Demonstration						
	Integrate Surrogate to Cell	28-Nov-16 A	17-Dec-16 A	100%	16	0.00	\$0.00	\$0.00	\$0.00				Integrate Surrogate to Cell						
	Bond/Test Pads Onto Surrogate - Complete		08-Dec-16 A	100%	0	0.00	\$0.00	\$0.00	\$0.00				Bond/Test Pads Onto Surrogate - Complete						
	Integrated Surrogate and Cell Control System Test	19-Dec-16 A	23-Jun-17 A	100%	27	0.00	\$0.00	\$0.00	\$0.00				Integrated Surrogate and Cell Control System Test						
	Bond Pads Onto Optic	02-Feb-17 A	05-May-17 A	100%	58	0.00	\$0.00	\$110,000.48	\$110,000.48				Bond Pads Onto Optic						
	M2 Surrogate to M2 Cell Integration - Complete		28-Jun-17 A	100%	0	0.00	\$0.00	\$0.00	\$0.00				M2 Surrogate to M2 Cell Integration - Complete						
	Integrate Optic to Cell	28-Jun-17 A	07-Jul-17 A	100%	17	0.00	\$0.00	\$110,000.00	\$110,000.00				Integrate Optic to Cell						
	Bond/Test Pads Onto M2 Optic - Complete		05-May-17 A	100%	0	0.00	\$0.00	\$0.00	\$0.00				Bond/Test Pads Onto M2 Optic - Complete						
	Cell Assy final acceptance review (Optional) - Complete		31-May-17 A	100%	0	0.00	\$0.00	\$0.00	\$0.00				Cell Assy final acceptance review (Optional) - Complete						
	M2 Optic to M2 Cell Integration - Complete		07-Jul-17 A	100%	0	0.00	\$0.00	\$0.00	\$0.00				M2 Optic to M2 Cell Integration - Complete						
	Initial Optical Test	07-Jul-17 A	29-Sep-17 A	100%	36	0.00	\$0.00	\$0.00	\$0.00				Initial Optical Test						
	Ion Iteration #1 / Optical Test #1	06-Oct-17 A	06-Dec-17 A	100%	52	0.00	\$0.00	\$280,000.00	\$280,000.00				Ion Iteration #1 / Optical Test #1						
	Actuator PFAT (testing only) - Complete		15-Sep-17 A	100%	0	0.00	\$0.00	\$0.00	\$0.00				Actuator PFAT (testing only) - Complete						
	M2 finishing - post ion it. #1 optical test - Complete		06-Dec-17 A	100%	0	0.00	\$0.00	\$0.00	\$0.00				M2 finishing - post ion it. #1 optical test - Complete						
	Ion Iteration #2 / Optical Test #2	12-Dec-17 A	09-Feb-18 A	100%	41	0.00	\$0.00	\$280,000.00	\$280,000.00				Ion Iteration #2 / Optical Test #2						
	M2 finishing - post ion it. #2 optical test - Complete		09-Feb-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00				M2 finishing - post ion it. #2 optical test - Complete						
	Ion Iteration #3 / Optical Test #3	15-May-18 A	22-Jun-18 A	100%	52	0.00	\$0.00	\$180,000.00	\$180,000.00				Ion Iteration #3 / Optical Test #3						
	M2 finishing - Complete Optical Test Repeatability (3X) - Complete		22-Jun-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00				M2 finishing - Complete Optical Test Repeatability (3X) - Complete						
	Ion Iteration #3 / Optical Test #3 / Repeatability	21-Feb-18 A	23-Apr-18 A	100%	37	0.00	\$0.00	\$280,000.00	\$280,000.00				Ion Iteration #3 / Optical Test #3 / Repeatability						
	M2 finishing - Complete Optical Test Repeatability (3X) - Complete		23-Apr-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00				M2 finishing - Complete Optical Test Repeatability (3X) - Complete						
	Ion Iteration #4 / Optical Test #4 (Final)	23-Jun-18 A	20-Jul-18 A	100%	28	0.00	\$0.00	\$119,167.00	\$119,167.00				Ion Iteration #4 / Optical Test #4 (Final)						
	M2 mirror final acceptance testing final - Complete		16-Aug-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00				M2 mirror final acceptance testing final - Complete						
	Integrated M2 and Cell Control System Test	31-Aug-18 A	12-Nov-18 A	100%	15	0.00	\$0.00	\$169,167.00	\$169,167.00				Integrated M2 and Cell Control System Test						
	Finished M2/Cell Assy acceptance testing - Complete		28-Sep-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00				Finished M2/Cell Assy acceptance testing - Complete						
	Authorization to Proceed - Complete		28-Sep-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00				Authorization to Proceed - Complete						
	Integrated M2 Cell Assembly Pack and Prepare for Delivery	31-Aug-18 A	12-Nov-18 A	100%	17	0.00	\$0.00	\$0.00	\$0.00				Integrated M2 Cell Assembly Pack and Prepare for Delivery						
	Final Data Pack	17-Sep-18 A	05-Oct-18 A	100%	20	0.00	\$0.00	\$42,000.00	\$42,000.00				Final Data Pack						
	Final Datapack - Complete		28-Sep-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00				Final Datapack - Complete						
	Pack and Ship Deliverable Hardware	13-Nov-18 A	15-Nov-18 A	100%	7	0.00	\$0.00	\$80,000.00	\$80,000.00				Pack and Ship Deliverable Hardware						
	Ship to nearest deep sea port - Complete		12-Dec-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00				Ship to nearest deep sea port - Complete						



## LSST May 2019 Month End Forecast

Activity ID	Activity Name	Start	Finish	Physical % Complete	Original Duration	Budgeted Labor Units	Budgeted Labor Cost	Budgeted Material Cost	Budgeted Total Cost no	Total Float	FY2015 2014-10-01	FY2016 2015-10-01	FY2017 2016-10-01	FY2018 2017-10-01	FY2019 2018-10-01	FY2020 2019-10-01	FY2021 2020-10-01	FY2022 2021-10-01	
LSST ME 19-05.04C.06.05 Mirror Shipping and Storage	T&SC-09  M2 Contract Complete	15-Nov-18 A		100%	0	0.00	\$0.00	\$0.00	\$0.00						M2 Contract Complete				
	T&SC-10  Contractual Authorization / ATP	02-Oct-17 A		100%	0	0.00	\$0.00	\$0.00	\$0.00						Contractual Authorization / ATP				
	T&SC-10  Test Planning and Preparations	02-Oct-17 A	06-Oct-17 A	100%	2	0.00	\$0.00	\$0.00	\$0.00						Test Planning and Preparations				
	T&SC-10  Assembly / Test Facility Preparations	09-Oct-17 A	13-Oct-17 A	100%	2	0.00	\$0.00	\$0.00	\$0.00						Assembly / Test Facility Preparations				
	T&SC-10  Test Actuator S/N 001	16-Oct-17 A	03-Nov-17 A	100%	15	0.00	\$0.00	\$0.00	\$0.00						Test Actuator S/N 001				
	T&SC-10  Disassemble Actuator S/N 001	06-Nov-17 A	10-Nov-17 A	100%	5	0.00	\$0.00	\$0.00	\$0.00	\$0.00					Disassemble Actuator S/N 001				
	T&SC-10  Test Harmonic Drives EM, S/N 001, S/N 009	13-Nov-17 A	17-Nov-17 A	100%	3	0.00	\$0.00	\$0.00	\$0.00	\$0.00					Test Harmonic Drives EM, S/N 001, S/N 009				
	T&SC-10  Assemble and Test Actuator S/N 001	20-Nov-17 A	24-Nov-17 A	100%	10	0.00	\$0.00	\$0.00	\$0.00	\$0.00					Assemble and Test Actuator S/N 001				
	T&SC-10  Generate Final Documentation	25-Dec-17 A	22-Jan-18 A	100%	37	0.00	\$0.00	\$0.00	\$0.00	\$0.00					Generate Final Documentation				
	T&SC-10  Deconfigure Assembly and Test Facilities	29-Jan-18 A	31-Jan-18 A	100%	3	0.00	\$0.00	\$199,156.00	\$199,156.00	\$199,156.00					Deconfigure Assembly and Test Facilities				
	LSST ME 19-05.04C.06.05 Mirror Shipping and Storage	01-Sep-14 A	30-Oct-18 A		1100	0.00	\$0.00	\$336,469.48	\$336,469.48	\$336,469.48									
	LSST ME 19-05.04C.06.05.01 M1M3 Shipping and Storage	01-Sep-14 A	30-Oct-18 A		1100	0.00	\$0.00	\$336,469.48	\$336,469.48	\$336,469.48									
	T&SC- M1M3 Tucson Storage	01-Sep-14 A	31-Jan-18 A	100%	886	0.00	\$0.00	\$220,464.78	\$220,464.78	\$220,464.78						M1M3 Tucson Storage			
	T&SC- M1M3 U of A to Tucson Storage	19-May-15 A	20-May-15 A	100%	16	0.00	\$0.00	\$62,004.69	\$62,004.69	\$62,004.69						M1M3 U of A to Tucson Storage			
	T&SC- M1M3 Storage of pallets used for mirror lifting equip	25-May-15 A	30-Jun-17 A	100%	529	0.00	\$0.00	\$12,000.01	\$12,000.01	\$12,000.01						M1M3 Storage of pallets used for mirror lifting equipment			
	T&SC- M1M3 Tucson Storage FY18	01-Feb-18 A	30-Oct-18 A	100%	214	0.00	\$0.00	\$42,000.00	\$42,000.00	\$42,000.00						M1M3 Tucson Storage FY18			
	LSST ME 19-05.04C.07 Wavefront and Alignment Sensing	01-Sep-14 A	31-Oct-16 A		549	4105.15	\$454,012.66	\$151,194.65	\$605,207.30	\$605,207.30									
	LSST ME 19-05.04C.07.01 WFS/AOS System Mgmt and Engin	01-May-15 A	31-Oct-16 A		549	1713.15	\$283,782.14	\$121,611.42	\$405,393.56	\$405,393.56									
	T&SC-20  WFS Technical Mgmt - FY 1 - LOE Labor	01-May-15 A	29-May-15 A	100%	42	66.67	\$10,314.00	\$0.00	\$10,314.00	\$10,314.00						WFS Technical Mgmt - FY 1 - LOE Labor			
	T&SC-20  WFS Technical Mgmt - FY 2 - LOE Labor	29-May-15 A	30-Sep-15 A	100%	252	840.00	\$137,163.60	\$0.00	\$137,163.60	\$137,163.60						WFS Technical Mgmt - FY 2 - LOE Labor			
	T&SC-20  WFS Technical Mgmt - FY 3 - LOE Labor	01-Oct-15 A	30-Sep-16 A	100%	254	806.49	\$136,304.54	\$0.00	\$136,304.54	\$136,304.54						WFS Technical Mgmt - FY 3 - LOE Labor			
	T&SC-20  WFS Technical Mgmt NonLabor	01-May-15 A	31-Oct-16 A	100%	549	0.00	\$0.00	\$121,611.42	\$121,611.42	\$121,611.42						WFS Technical Mgmt NonLabor			
	LSST ME 19-05.04C.07.02 WFS/AOS Software Pipeline	01-Sep-14 A	31-Oct-16 A		548	2392.00	\$170,230.52	\$29,583.23	\$199,813.75	\$199,813.75									
	T&SC-58  Image Processing Module - FY 1 - Labor	01-Sep-14 A	30-Sep-14 A	100%	42	225.00													

## LSST May 2019 Month End Forecast

Activity ID	Activity Name	Start	Finish	Physical % Complete	Original Duration	Budgeted Labor Units	Budgeted Labor Cost	Budgeted Material Cost	Budgeted Total Cost no	Total Float	FY2015 2014-10-01	FY2016 2015-10-01	FY2017 2016-10-01	FY2018 2017-10-01	FY2019 2018-10-01	FY2020 2019-10-01	FY2021 2020-10-01	FY2022 2021-10-01
T&SC-21	White Light Source - Procurement Prepares and Iss	15-Jun-18 A	15-Jul-18 A	100%	20	0.00	\$0.00	\$0.00	\$0.00									
	White Light Source - Supplier Response	24-Aug-18 A	21-Sep-18 A	100%	20	0.00	\$0.00	\$0.00	\$0.00									
	White Light Source - Supplier Selection and Contrac	24-Sep-18 A	19-Oct-18 A	100%	20	0.00	\$0.00	\$0.00	\$0.00									
	White Light Source - Supplier Leadtime & Delivery	22-Oct-18 A	02-Nov-18 A	100%	10	0.00	\$0.00	\$0.00	\$0.00									
	White Light Source - Delivery Acceptance	30-Oct-19	12-Nov-19	0%	10	0.00	\$0.00	\$48,473.18	\$48,473.18	139								
	White Light Source - ElectroMechanical Design	13-Nov-19	26-Nov-19	0%	10	190.00	\$14,630.00	\$0.00	\$14,630.00	171								
	Calibration Equipment Shipping to Chile	27-Nov-19	02-Jan-20	0%	22	0.00	\$0.00	\$0.00	\$0.00	171								
	NIST diodes - Issue Order	01-Apr-16 A	30-Sep-18 A	100%	10	20.00	\$991.40	\$0.00	\$991.40									
	NIST diodes - Delivery Acceptance	03-Jun-19	14-Jun-19	0%	10	0.00	\$0.00	\$55,951.28	\$55,951.28	353								
	NIST diodes electronics - Delivery Acceptance	06-Jun-16 A	29-Jul-16 A	100%	10	0.00	\$0.00	\$41,605.94	\$41,605.94									
	NIST Diode Multi-Instance Control Software Initial Ve		15-Jul-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00									
	SED Spectrograph - SOW/ACL Developed and Prov	01-Apr-16 A	08-Apr-16 A	100%	5	20.00	\$894.20	\$0.00	\$894.20									
	SED Spectrograph - Procurement Prepares and Issu	11-Apr-16 A	15-Apr-16 A	100%	10	0.00	\$0.00	\$0.00	\$0.00									
	SED Spectrograph - Supplier Response	18-Apr-16 A	13-May-16 A	100%	20	0.00	\$0.00	\$0.00	\$0.00									
	SED Spectrograph - Supplier Selection and Contrac	16-May-16 A	17-May-16 A	100%	20	0.00	\$0.00	\$0.00	\$0.00									
	SED Spectrograph - Supplier Leadtime & Delivery	19-May-16 A	15-Jul-16 A	100%	5	0.00	\$0.00	\$0.00	\$0.00									
	SED Spectrograph - Delivery Acceptance	18-Jul-16 A	22-Jul-16 A	100%	60	0.00	\$0.00	\$80,949.16	\$80,949.16									
	Tucson Integration of In-Dome Hardware	15-Aug-16 A	30-Aug-18 A	100%	275	724.78	\$32,193.82	\$0.00	\$32,193.82									
	Tucson Integration of In-Dome Hardware - Delivery	24-Feb-18 A	15-Feb-19 A	100%	53	0.00	\$0.00	\$20,000.00	\$20,000.00									
	SED Spectrograph Wavelength calibration sources and	30-Aug-19	22-Nov-19	0%	60	0.00	\$0.00	\$19,245.72	\$19,245.72	173								
	Light Delivery System Optical Design	01-Oct-16 A	27-Jul-17 A	100%	99	300.00	\$30,504.00	\$0.00	\$30,504.00									
	Light Delivery System Cleanliness System Design	15-Feb-17 A	25-Apr-17 A	100%	125	0.00	\$0.00	\$0.00	\$0.00									
	Laser Delivery System Dome Enclosure Design	15-Jan-18 A	15-May-18 A	100%	60	0.00	\$0.00	\$0.00	\$0.00									
	Light Delivery System Mechanical Design of Reflecto	15-Nov-17 A	30-Jul-18 A	100%	90	200.00	\$14,376.00	\$0.00	\$14,376.00									
	Purchase Optomechanical componetry	01-Feb-18 A	30-Mar-18 A	100%	45	0.00	\$0.00	\$15,000.00	\$15,000.00									
	Light Delivery System Optical Parts Procurement - P	23-May-18 A	30-Sep-18 A	100%	60	0.00	\$0.00	\$77,463.51	\$77,463.51									
	Light Delivery System Optical Parts Procurement - P	01-Oct-18 A	24-Oct-18 A	100%	60	0.00	\$0.00	\$0.00	\$0.00									
	Light Delivery System Optical Parts Procurement - P	07-Mar-19 A	26-Aug-19	90%	60	0.00	\$0.00	\$10,999.99	\$10,999.99	91								
	Light Delivery System Optical Parts Labor- Part 3	07-Mar-19 A	26-Aug-19	85%	60	400.00	\$25,608.00	\$0.00	\$25,608.00	46								
	Light Delivery System Optical Parts Labor- Part 3b	27-Aug-19	29-Oct-19	0%	45	0.00	\$0.00	\$0.00	\$0.00	46								
	Light Delivery System Optical Parts Procurement - P	25-Oct-18 A	06-Mar-19 A	100%	90	0.00	\$0.00	\$0.00	\$0.00									
	Light Delivery System Optical Parts Procurement - P	30-Oct-19	12-Dec-19	0%	30	100.00	\$6,626.00	\$0.00	\$6,626.00	46								
	Light Delivery System Optical Parts Procurement - P	13-Dec-19	29-Jan-20	0%	30	0.00	\$0.00	\$24,271.99	\$24,271.99	46								
	Light Delivery System Optical Parts Labor - Part 5	13-Dec-19	29-Jan-20	0%	30	200.00	\$13,252.00	\$0.00	\$13,252.00	46								
	Light Delivery System Lab Testing	15-Sep-18 A	29-Aug-19	30%	120	390.00	\$27,834.00	\$0.00	\$27,834.00	40								
	Light Delivery System Lab Testing Materials	15-Sep-18 A	29-Aug-19	50%	120	0.00	\$0.00	\$35,486.10	\$35,486.10	40								
	Light Delivery System Lab Testing Additional Effort	30-Aug-19	30-Aug-19	0%	0	390.00	\$0.00	\$0.00	\$0.00	40								
	Light Delivery System Fiber Procurement	30-Aug-19	22-Nov-19	0%	60	0.00	\$0.00	\$19,239.52	\$19,239.52	121								
	Laser Enclosure and Thermal Design	30-Aug-19	10-Jan-20	0%	90	480.00	\$30,137.12	\$0.00	\$30,137.12	40								
	Laser Enclosure Fabrication	13-Jan-20	19-May-20	0%	90	0.00	\$0.00	\$55,682.00	\$55,682.00	40								
	Laser Control System electronics	13-Jan-20	07-Apr-20	0%	60	0.00	\$0.00	\$24,272.40	\$24,272.40	70								
	Calibration Screen cRIO Procurement	15-Feb-18 A	22-Feb-18 A	100%	58	0.00	\$0.00	\$11,000.00	\$11,000.00									
	Calibration Screen - SOW/ACL Developed and Prov	19-Apr-17 A	19-May-17 A	100%	5	0.00	\$0.00	\$0.00	\$0.00									
	Calibration Screen - Procurement Prepares and Issu	20-May-17 A	21-May-17 A	100%	10	0.00	\$0.00	\$0.00	\$0.00									
	Calibration Screen - Supplier Response	22-May-17 A	16-Jun-17 A	100%	20	0.00	\$0.00	\$0.00	\$0.00									
	Calibration Screen - Supplier Selection and Contract	16-Jun-17 A	16-Jul-17 A	100%	20	0.00	\$0.00	\$0.00	\$0.00									
	Calibration Screen - Supplier Leadtime & Support	15-Nov-17 A	30-Oct-18 A	100%	190	280.00	\$17,675.20	\$0.00	\$17,675.20									
	CBP Control System Initial Software Version Comple		10-Jan-19 A	100%	0	0.00	\$0.00	\$0.00	\$0.00									
	CBP Coordinate Transform Software Integration Co		15-Jan-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00									
	Fiber Spectrograph Multi-Instance Control Software		15-Oct-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00									
All-sky Camera - Camera 1 procurement	25-Aug-17 A	27-Aug-18 A	100%	100	0.00	\$0.00	\$17,044.61	\$17,044.61										
All-sky Camera - Camera 1 installation in tucson	23-Dec-17 A	25-Feb-18 A	100%	5	40.00	\$1,851.20	\$0.00	\$1,851.20										
All-sky Camera Control System Initial Software Versi		03-Jun-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	303									
All-sky Camera - Mount Procurement in Chile	25-Jul-18 A	08-Oct-19	99%	90	0.00	\$0.00	\$46,025.72	\$46,025.72	213									
All-sky Camera - Mount installation in Chile	10-Sep-18 A	08-Oct-19	95%	90	280.01	\$21,797.40	\$0.00	\$21,797.40	152									
All-Sky Camera Integration, Evaluation and Test	20-Dec-17 A	20-Dec-17 A	100%	60	0.00	\$0.00	\$0.00	\$0.00										
All-sky Camera - Camera 2-3 installation	25-Nov-19	24-Feb-20	0%	60	80.00	\$3,965.60	\$0.00	\$3,965.60	180									
All-sky Camera - Camera 2-3 procurement	30-Aug-19	22-Nov-19	0%	60	0.00	\$0.00	\$49,365.57	\$49,365.57	121									
Atmospheric Calibration Labor Team NonLabor	01-Jul-15 A	29-Apr-16 A	100%	211	0.00	\$0.00	\$27,340.01	\$27,340.01										
LSST ME 19-05.04C.08.03 Auxiliary Telescope System										830								
Aux Telescope Authorization to Refurbish	01-Aug-14 A	01-Jul-20		0	0.00	\$0.00	\$0.00	\$0.00										
Aux Telescope Telescope Re-Assembly	01-Aug-14 A	31-Aug-14 A	100%	5	0.00	\$0.00	\$0.00	\$0.00										
Dome Fabrication - SOW/ACL Developed and Provi	01-Mar-16 A	31-Mar-16 A	100%	60	40.00	\$2,206.00	\$0.00	\$2,206.00										
Dome Fabrication - Procurement Prepares and Issu	01-Apr-16 A	13-May-16 A	100%	40	0.00	\$0.00	\$0.00	\$0.00										
Dome Fabrication - Supplier Response	13-May-16 A	17-May-16 A	100%	25	0.00	\$0.00	\$0.00	\$0.00										
Dome Fabrication - Supplier Selection and Contract	18-May-16 A	20-May-16 A	100%	1	0.00	\$0.00	\$0.00	\$0.00										
Dome Fabrication - Auxiliary Telescope Dome contra	23-May-16 A	14-Jul-16 A	100%	5	0.00	\$0.00	\$73,327.50	\$73,327.50										
Dome Fabrication - Supplier Leadtime	23-May-16 A	25-Nov-16 A	100%	212	0.00	\$0.00	\$0.00	\$0.00										
AT TCS to MCS Application Functionality		31-May-19 A	100%	0	0.00	\$0.00	\$0.00	\$0.00										
Dome Fabrication - Delivery Acceptance	30-Nov-16 A	30-Nov-16 A	100%	5	0.00	\$0.00	\$73,327.50	\$73,327.50										
Dome Assembly and Installation	21-Mar-17 A	26-May-17 A	100%	20	0.00	\$0.00	\$27,000.00	\$27,000.00										
Custom Dome modification	01-Jul-17 A	07-Aug-17 A	100%	60	0.00	\$0.00	\$30,562.26	\$30,562.26										



LSST May 2019 Month End Forecast																		
Activity ID	Activity Name	Start	Finish	Physical % Complete	Original Duration	Budgeted Labor Units	Budgeted Labor Cost	Budgeted Material Cost	Budgeted Total Cost no	Total Float	FY2015 2014-10-01	FY2016 2015-10-01	FY2017 2016-10-01	FY2018 2017-10-01	FY2019 2018-10-01	FY2020 2019-10-01	FY2021 2020-10-01	FY2022 2021-10-01
T&SC-68i	Dome and Building Painting	12-Mar-20	03-Jun-20	0%	60	0.00	\$0.00	\$11,010.00	\$11,010.00	109								
	AT - Install Compressor, Mirror Washing equip, Inst.	01-Mar-18 A	25-May-18 A	100%	40	160.00	\$7,404.80	\$0.00	\$7,404.80									
	Aux Telescope Dome Calibration hardware	15-Dec-16 A	15-Jul-18 A	100%	169	120.00	\$5,271.92	\$0.00	\$5,271.92									
	Aux Telescope Dome Calibration hardware - Deliver	15-Nov-17 A	25-Jul-19	95%	38	0.00	\$0.00	\$22,612.71	\$22,612.71	173								
	Aux Telescope Monochrometer and white light illumir	15-Jul-16 A	30-Aug-16 A	100%	38	0.00	\$0.00	\$40,510.00	\$40,510.00									
	Aux Telescope SED Spectrograph - Delivery Accepte	20-Jun-16 A	29-Jul-16 A	100%	38	0.00	\$0.00	\$10,236.25	\$10,236.25									
	AT Electrometer Stable Version		20-Jan-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00									
	AT Monochromator Control Software Initial Version		29-Jun-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00									
	AT White Light Source and Water Chiller Control So		30-Apr-19 A	100%	0	0.00	\$0.00	\$0.00	\$0.00									
	TCS Initial Scripting Capability		06-Jul-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00									
	Aux Telescope Upgrade - SO W/ACL Developed and	30-Sep-15 A	21-Oct-15 A	100%	20	40.00	\$2,206.00	\$0.00	\$2,206.00									
	Aux Telescope Upgrade - Procurement Prepares an	21-Oct-15 A	23-Nov-15 A	100%	20	0.00	\$0.00	\$0.00	\$0.00									
	Aux Telescope Upgrade - Supplier Response	30-Nov-15 A	31-Dec-15 A	100%	20	0.00	\$0.00	\$0.00	\$0.00									
	Aux Telescope Upgrade - Approval of Mount Design	01-Feb-16 A	02-May-16 A	100%	98	0.00	\$0.00	\$65,090.00	\$65,090.00									
	Aux Telescope Upgrade - Auxiliary Telescope Mount	01-Aug-16 A	23-Aug-16 A	100%	5	0.00	\$0.00	\$41,000.00	\$41,000.00									
	Aux Telescope Upgrade - Approval of Hexapod and	18-Jul-16 A	19-Jul-16 A	100%	14	0.00	\$0.00	\$160,200.00	\$160,200.00									
	Aux Telescope Upgrade - Design of M3 Rotator and	22-Jul-16 A	23-Aug-16 A	100%	21	0.00	\$0.00	\$128,200.00	\$128,200.00									
	Aux Telescope Upgrade - Return of mount from pair	15-Sep-16 A	31-Oct-16 A	100%	35	0.00	\$0.00	\$152,200.00	\$152,200.00									
	Aux Telescope Upgrade - Manufacture surrogate M2	01-Sep-16 A	30-Nov-16 A	100%	34	0.00	\$0.00	\$96,120.00	\$96,120.00									
	Aux Telescope Upgrade - AZ Bearing Replacement	12-Oct-16 A	25-Oct-16 A	100%	34	0.00	\$0.00	\$11,911.00	\$11,911.00									
	Aux Telescope Upgrade - Completion of electronics	11-Jan-17 A	25-Jan-18 A	100%	19	0.00	\$0.00	\$56,000.00	\$56,000.00									
	Aux Telescope Upgrade - Completion of SmartDome	15-Feb-17 A	30-Mar-18 A	100%	20	0.00	\$0.00	\$65,090.00	\$65,090.00									
	Aux Telescope Upgrade - Switch to CRIO controllers	02-Apr-17 A	30-Nov-17 A	100%	58	0.00	\$0.00	\$65,000.00	\$65,000.00									
	Aux Telescope Upgrade - High bay acceptance testir	15-Feb-18 A	22-Feb-18 A	100%	77	0.00	\$0.00	\$80,100.00	\$80,100.00									
	Aux Telescope Upgrade - High bay acceptance testir	01-Feb-18 A	22-Feb-18 A	100%	31	0.00	\$0.00	\$0.00	\$0.00									
	Aux Telescope Upgrade - High bay acceptance testir	01-Feb-18 A	22-Feb-18 A	100%	44	120.00	\$9,748.40	\$0.00	\$9,748.40									
	Aux Telescope Upgrade - Packing of Telescope for tr	22-Feb-18 A	26-Feb-18 A	100%	30	0.00	\$0.00	\$64,533.00	\$64,533.00									
	Aux Telescope Upgrade - Telescope in Transit to Chi	08-Mar-18 A	27-Apr-18 A	100%	45	0.00	\$0.00	\$0.00	\$0.00									
	Aux Telescope Upgrade - Completion of Vendor Fin	15-May-18 A	07-Sep-18 A	100%	30	0.00	\$0.00	\$0.00	\$0.00									
	Aux Telescope Upgrade - Completion of Off-Sky Ver	10-Jan-19 A	25-Jan-19 A	100%	30	0.00	\$0.00	\$31,710.67	\$31,710.67									
	Aux Telescope Upgrade - Completion of Vendor Fin	01-May-18 A	07-Sep-18 A	100%	30	560.00	\$36,400.00	\$0.00	\$36,400.00									
	Aux Telescope - Verification of draft documentation fr	03-Jun-19	12-Sep-19	0%	72	0.00	\$0.00	\$0.00	\$0.00	139								
	Aux Telescope Upgrade - Electronics Cabinet Pack-	15-Feb-18 A	22-Feb-18 A	100%	25	0.00	\$0.00	\$0.00	\$0.00									
	Aux Telescope - Delivery of Off-Sky Documentation f	10-Jan-19 A	25-Jan-19 A	100%	40	0.00	\$0.00	\$0.00	\$0.00									
	Aux Telescope Upgrade - Completion of On-Sky Ver	03-Apr-20	03-Apr-20	0%	1	0.00	\$0.00	\$31,710.67	\$31,710.67	152								
	ATMCS - On-site Acceptance Test Supervision and b	10-Jun-18 A	10-Sep-18 A	100%	10	120.00	\$10,969.60	\$0.00	\$10,969.60									
	ATMCS - Architecture, Basic Communications, Func	15-Dec-17 A	15-Jul-19	97%	30	132.00	\$10,867.56	\$0.00	\$10,867.56	99								
	ATMCS - Copley and Kollmorgen training and protot	28-Mar-18 A	30-Apr-18 A	100%	45	185.00	\$14,627.95	\$0.00	\$14,627.95									
	ATMCS - Copley and Kollmorgen training and protot	10-Apr-18 A	10-Jun-18 A	100%	45	185.00	\$15,231.05	\$0.00	\$15,231.05									
	ATMCS - Copley and Kollmorgen training and protot	20-Jun-18 A	15-Jul-19	95%	30	116.00	\$9,550.28	\$0.00	\$9,550.28	99								
	ATMCS - Copley and Kollmorgen training and protot	25-Apr-18 A	15-Jul-19	92%	30	116.00	\$9,550.28	\$0.00	\$9,550.28	99								
	ATMCS - Auxiliary Controls (mirror cover, pneumatic	01-Dec-18 A	23-Jul-19	63%	36	144.00	\$11,855.52	\$0.00	\$11,855.52	93								
	ATMCS - Hand Paddle design/Implementation (local	01-Sep-18 A	23-Jul-19	73%	36	144.00	\$12,270.24	\$0.00	\$12,270.24	93								
	ATMCS - Test Software and Analysis Tools Developr	01-Sep-18 A	29-Jul-19	94%	40	160.00	\$13,172.80	\$0.00	\$13,172.80	89								
	ATMCS - Trajectory Generator	01-Sep-18 A	25-Sep-18 A	100%	10	40.00	\$3,408.40	\$0.00	\$3,408.40									
	ATMCS - Dynamic Controls (M3, Rotators, Elevation	01-Dec-18 A	17-Jul-19	85%	32	128.00	\$10,906.88	\$0.00	\$10,906.88	97								
	ATMCS - Dynamic Controls (azimuth + limits + safety	01-Dec-18 A	21-Jun-19	72%	15	112.00	\$9,306.98	\$0.00	\$9,306.98	114								
	ATMCS - Interfacing to DDS, GUIs, Human Machine	01-Sep-18 A	24-Jun-19	89%	16	120.00	\$9,987.60	\$0.00	\$9,987.60	1088								
	Primary Mirror installation hardware verification	01-Dec-18 A	25-Apr-19 A	100%	71	0.00	\$0.00	\$0.00	\$0.00									
	ATMCS - Off-Sky Testing and Analysis	25-Oct-18 A	29-Jul-19	90%	40	320.00	\$31,780.80	\$0.00	\$31,780.80	89								
	Primary mirror installation hardware fabrication	22-May-18 A	28-Feb-19 A	100%	1	0.00	\$0.00	\$20,684.00	\$20,684.00									
	Solid modeling of procedure, design and fabrication	01-Jul-18 A	15-Mar-19 A	100%	16	40.00	\$2,975.60	\$0.00	\$2,975.60									
	AT mirror installation	15-May-19 A	18-May-19 A	100%	5	80.00	\$3,832.00	\$0.00	\$3,832.00									
	AT mirror installation Materials	05-Jan-19 A	25-Mar-19 A	100%	5	0.00	\$0.00	\$6,500.00	\$6,500.00									
	ATMCS - On-sky Tuning/testing + Analysis - Phase 1	30-Jul-19	10-Sep-19	0%	30	360.00	\$34,060.80	\$0.00	\$34,060.80	89								
	ATMCS - Off-Sky Testing and Analysis - Additional W	08-Feb-19 A	29-Jul-19	60%	40	0.00	\$0.00	\$0.00	\$0.00	89								
	AT UPS Repairs Hardware	05-Nov-18 A	10-Nov-18 A	100%	15	0.00	\$0.00	\$5,914.35	\$5,914.35									
	AT UPS Repairs LABOR	15-Oct-18 A	10-Nov-18 A	100%	1	80.00	\$3,832.00	\$0.00	\$3,832.00									
	ATMCS - On-sky Tuning/testing + Analysis - Phase 2	09-Oct-19	07-Jan-20	0%	60	600.00	\$59,922.00	\$0.00	\$59,922.00	152								
	AT Surrogate Mirror Installation Support and proced	08-Apr-19 A	28-Jun-19	66%	50	570.00	\$37,197.84	\$0.00	\$37,197.84	104								
	AT Glass Mirror Installation - LABOR	01-Jul-19	08-Jul-19	0%	5	167.00	\$13,066.42	\$0.00	\$13,066.42	104								
	ATMCS - On-site Technical Support	15-Jul-18 A	28-Jun-19	80%	250	600.00	\$33,665.40	\$0.00	\$33,665.40	191								
	AT Azimuth Hysteresis Diagnostics and Fix	09-Oct-19	07-Jan-20	0%	60	520.00	\$43,476.00	\$0.00	\$43,476.00	152								
	AT Glass Mirror Collimation - LABOR	09-Jul-19	19-Aug-19	0%	30	264.00	\$19,696.32	\$0.00	\$19,696.32	187								
	AT Mirror Installation, Alignment, Electrical and Collin	08-Apr-19 A	09-Aug-19	50%	90	0.00	\$0.00	\$20,108.79	\$20,108.79	253								
	OCS-ATCS Summit Integration	15-Dec-18 A	29-Dec-18 A	100%	40	100.00	\$4,628.00	\$0.00	\$4,628.00									
	ATMCS-ATCS Summit Integration - Phase 1	10-Oct-18 A	21-Nov-19	75%	122	320.00	\$15,281.26	\$0.00	\$15,281.26	180								
	ATMCS-ATCS Summit Integration - Phase 2	08-Jan-20	02-Apr-20	0%	60	560.00	\$27,759.20	\$0.00	\$27,759.20	152								
	AT Scheduler Initial Version		16-Oct-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	75								
	AT Scheduler - Design	01-Aug-18 A	14-Aug-18 A	100%	10	0.00	\$0.00	\$0.00	\$0.00									
	AT Scheduler - Coding	15-Aug-18 A	16-Oct-19	80%	96	0.00	\$0.00	\$0.00	\$0.00	17								
	AT Scheduler - Simulation & Validation	17-Oct-19	13-Jan-20	0%	58	0.00	\$0.00	\$0.00	\$0.00	17								



LSST May 2019 Month End Forecast																		
Activity ID	Activity Name	Start	Finish	Physical % Complete	Original Duration	Budgeted Labor Units	Budgeted Labor Cost	Budgeted Material Cost	Budgeted Total Cost no	Total Float	FY2015 2014-10-01	FY2016 2015-10-01	FY2017 2016-10-01	FY2018 2017-10-01	FY2019 2018-10-01	FY2020 2019-10-01	FY2021 2020-10-01	FY2022 2021-10-01
T&SC-68i	AT Scheduler Integration	14-Jan-20	11-Mar-20	0%	40	80.00	\$3,965.60	\$0.00	\$3,965.60	17								
	Aux Tel Optics Recoating Labor	15-Feb-17 A	15-Aug-17 A	100%	151	200.00	\$8,986.21	\$0.00	\$8,986.21									
	Aux Tel Primary Mirror Shipping Case Procurement	31-Aug-17 A	15-Dec-17 A	100%	35	0.00	\$0.00	\$5,570.76	\$5,570.76									
	Aux Tel Primary Mirror Recoating - Delivery acceptance	14-Jul-20	01-Jul-20	0%	35	0.00	\$0.00	\$65,151.00	\$65,151.00	89								
	Aux Tel Optics secondary and tertiary Recoating - Delivery acceptance	01-Jun-18 A	14-Jun-18 A	100%	35	0.00	\$0.00	\$21,010.00	\$21,010.00									
	Aux Tel Specific Control System Electrical Design	12-Apr-17 A	20-May-17 A	100%	20	150.00	\$15,378.00	\$0.00	\$15,378.00									
	Auxiliary Telescope Full Electrical Plan	15-May-17 A	15-Sep-17 A	100%	60	120.00	\$12,201.60	\$0.00	\$12,201.60									
	Aux Telescope Tucson Integration and Test	01-Jun-18 A	30-Sep-18 A	100%	133	480.00	\$31,132.92	\$0.00	\$31,132.92									
	AT Calibration System Control Electronics	12-Aug-19	04-Nov-19	0%	60	0.00	\$0.00	\$40,000.00	\$40,000.00	210								
	AT Calibration System Illumination System Enclosure	25-Oct-18 A	26-Aug-19	15%	60	0.00	\$0.00	\$11,828.70	\$11,828.70	151								
	AT Calibration System Illumination System Enclosure	15-Oct-18 A	08-Oct-19	30%	90	140.00	\$9,898.20	\$0.00	\$9,898.20	54								
	AT Spectrograph Perform optical design	01-Jan-16 A	29-Jul-16 A	100%	209	560.00	\$39,564.78	\$0.00	\$39,564.78									
	AT Spectrograph Review	15-Jan-17 A	31-May-17 A	100%	31	110.00	\$7,120.20	\$0.00	\$7,120.20									
	AT Spectrograph Instrument - Supplier Selection	06-Jun-17 A	27-Jun-17 A	100%	120	0.00	\$0.00	\$0.00	\$0.00									
	AT Spectrograph Instrument fabrication and assembly Phase I	27-Jun-17 A	22-Dec-17 A	100%	184	180.00	\$12,074.71	\$0.00	\$12,074.71									
	AT Spectrograph Detector - Supplier Selection	17-Mar-17 A	14-Sep-17 A	100%	40	0.00	\$0.00	\$0.00	\$0.00									
	AT Spectrograph Instrument fabrication and assembly Phase II	01-Dec-17 A	15-Jan-18 A	100%	160	60.00	\$5,035.27	\$0.00	\$5,035.27									
	AT Spectrograph Instrument fabrication and assembly Phase II	16-Jan-18 A	15-Jun-18 A	100%	57	60.00	\$0.00	\$0.00	\$0.00									
	AT Spectrograph Instrument Only Lab testing	14-Jun-18 A	05-Apr-19 A	100%	20	120.00	\$5,553.60	\$0.00	\$5,553.60									
	AT Spectrograph Detector+Instrument Lab testing in Tucson	10-Sep-18 A	23-Apr-19 A	100%	100	0.00	\$0.00	\$0.00	\$0.00									
	AT Spectrograph Detector+Instrument Lab testing in Tucson Additional Effort	24-Apr-19 A	29-Jul-19	60%	40	0.00	\$0.00	\$0.00	\$0.00	45								
	AT Spectrograph Labor Pack and Ship to Chile	09-Oct-19	15-Oct-19	0%	5	50.00	\$2,478.50	\$0.00	\$2,478.50	54								
	AT Spectrograph Instrument+Detector Off Telescope Testing in Chile	29-Oct-19	11-Nov-19	0%	10	200.00	\$9,914.00	\$0.00	\$9,914.00	45								
	AT Spectrograph Instrument+Detector On Telescope Testing in Chile	12-Nov-19	30-Jan-20	0%	52	1125.18	\$72,490.97	\$0.00	\$72,490.97	45								
	Atmospheric Telescope Ready at Summit		11-Mar-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	17								
	Spectrograph Observing	12-Nov-19	13-May-20	0%	125	540.00	\$26,767.80	\$0.00	\$26,767.80	89								
	AT Spectrograph Instrument+Detector On Telescope Testing and Verification	12-Mar-20	03-Jun-20	0%	60	0.00	\$0.00	\$39,262.16	\$39,262.16	109								
	AT Maintenance Activities FY19B	30-Jul-19	06-Jan-20	0%	109	776.00	\$48,979.82	\$0.00	\$48,979.82	214								
	AT Spectrograph Instrument+Detector Off Telescope Testing in Chile - Software	29-Oct-19	25-Nov-19	0%	20	160.00	\$7,931.20	\$0.00	\$7,931.20	47								
	AT Spectrograph Instrument+Detector On Telescope Testing and Verification	26-Nov-19	28-Jan-20	0%	40	320.00	\$21,483.20	\$0.00	\$21,483.20	47								
	GPS - SOW/ACL Devepned and Provided to Procurement	03-Jun-19	28-Jun-19	0%	20	20.00	\$958.00	\$0.00	\$958.00	203								
	GPS - Procurement Prepares and Issues Bid Package	01-Jul-19	29-Jul-19	0%	20	0.00	\$0.00	\$0.00	\$0.00	203								
	GPS - Supplier Response	30-Jul-19	26-Aug-19	0%	20	0.00	\$0.00	\$0.00	\$0.00	203								
	GPS - Supplier Selection and Contract Award	27-Aug-19	10-Sep-19	0%	10	0.00	\$0.00	\$0.00	\$0.00	203								
	GPS - Supplier Leadtime & Delivery	11-Sep-19	07-Jan-20	0%	80	0.00	\$0.00	\$0.00	\$0.00	203								
	GPS - Delivery Acceptance	12-Mar-20	25-Mar-20	0%	10	0.00	\$0.00	\$62,904.62	\$62,904.62	159								
	Pilz Controller Firmware Development	25-Nov-17 A	03-Sep-19	50%	65	160.00	\$12,222.40	\$0.00	\$12,222.40	124								
	Pilz Controller Hardware Procurement	11-Aug-17 A	30-Aug-17 A	100%	10	0.00	\$0.00	\$8,000.00	\$8,000.00									
	Pilz Hardware for Entry control and equipment storage	26-Nov-19	31-Dec-19	0%	22	0.00	\$0.00	\$6,068.10	\$6,068.10	65								
	AT Spectrograph Instrument - Preperation for PDR	15-Jul-17 A	20-Oct-17 A	100%	15	0.00	\$0.00	\$0.00	\$0.00									
	AT Spectrograph Instrument - Preliminary Design Review	15-Sep-17 A	20-Oct-17 A	100%	5	0.00	\$0.00	\$57,486.60	\$57,486.60									
	AT Spectrograph Instrument - Final Design Review	10-Oct-17 A	12-Jan-18 A	100%	30	0.00	\$0.00	\$56,476.60	\$56,476.60									
	AT Spectrograph Instrument - Completion of Spectrograph Mechanicals	22-Dec-17 A	31-May-18 A	100%	45	0.00	\$0.00	\$42,357.45	\$42,357.45									
	AT Spectrograph Instrument - Completion of Spectrograph Control Cabinet	01-Mar-18 A	31-May-18 A	100%	45	0.00	\$0.00	\$42,357.45	\$42,357.45									
	AT Spectrograph Instrument - Completion of Spectrograph Control Cabinet	01-Mar-18 A	02-Mar-18 A	100%	24	0.00	\$0.00	\$0.00	\$0.00									
	AT Spectrograph Instrument - Installation on LSST AT in Tucson	15-Jan-18 A	23-Jul-18 A	100%	10	0.00	\$0.00	\$28,238.30	\$28,238.30									
	AT Spectrograph Instrument - Completion of Acceptance Tests in Tucson	28-May-18 A	14-Jun-19	98%	10	0.00	\$0.00	\$56,476.60	\$56,476.60	139								
	AT Spectrograph Instrument - Additional effort for acceptance tests	31-May-18 A	30-Oct-18 A	100%	20	0.00	\$0.00	\$0.00	\$0.00									
	AT Instrument Control System Initial Version		25-Mar-19 A	100%	0	0.00	\$0.00	\$0.00	\$0.00									
	AT Spectrograph Instrument - Filter and Disperser Procurement	03-Jun-19	26-Aug-19	0%	60	0.00	\$0.00	\$0.00	\$0.00	151								
	AT Spectrograph Support	10-Sep-17 A	29-Jan-19 A	100%	147	600.00	\$45,370.50	\$0.00	\$45,370.50									
	AT Spectrograph Detector - Contract Kickoff	15-Sep-17 A	15-Sep-17 A	100%	10	0.00	\$0.00	\$153,689.10	\$153,689.10									
	AT Spectrograph Detector - Critical Design Stage	15-Sep-17 A	15-Sep-17 A	100%	10	0.00	\$0.00	\$153,689.10	\$153,689.10									
	AT Spectrograph Detector - Final Design Stage	31-Oct-17 A	31-Jan-18 A	100%	43	0.00	\$0.00	\$76,844.55	\$76,844.55									
	AT Spectrograph Detector - Acceptance Testing and Review	15-Dec-17 A	31-Jan-18 A	100%	13	0.00	\$0.00	\$0.00	\$0.00									
	AT Spectrograph Detector - Electronics-Dewar Integration	01-Mar-18 A	30-Apr-18 A	100%	43	0.00	\$0.00	\$76,844.55	\$76,844.55									
	OCS functionality for ACCS control of AT spectrograph		29-Dec-17 A	100%	0	0.00	\$0.00	\$0.00	\$0.00									
	AT Spectrograph Detector - Ship to Tucson	03-Apr-18 A	07-Apr-18 A	100%	7	0.00	\$0.00	\$2,440.28	\$2,440.28									
	AT Spectrograph Detector - Additional Effort and Setup in Tucson	03-Apr-18 A	07-Apr-18 A	100%	20	0.00	\$0.00	\$0.00	\$0.00									
	AT Spectrograph Detector Complete		03-Jun-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	229								
	AT Spectrograph Detector Hardware and Documentation Delivered	13-Jul-18 A	23-Aug-18 A	100%	30	0.00	\$0.00	\$25,614.50	\$25,614.50									
	AT Spectrograph Detector Full Verification Achieved	28-Jun-19	09-Aug-19	0%	30	0.00	\$0.00	\$25,614.47	\$25,614.47	210								
	AT Spectrograph Detector - SLAC DAQ Support - Labor	02-Nov-17 A	14-Sep-18 A	100%	180	75.00	\$14,918.25	\$0.00	\$14,918.25									
	AT Spectrograph Detector - Detector Swap Travel support	01-May-19 A	28-Jun-19	66%	1	0.00	\$0.00	\$20,012.70	\$20,012.70	193								
	AT Spectrograph Detector - SLAC DAC Support - Travel	06-Nov-17 A	14-Sep-18 A	100%	180	0.00	\$0.00	\$15,233.28	\$15,233.28									
	AT Spectrograph Detector - SLAC CCS Support - Labor	01-Feb-18 A	14-Sep-18 A	100%	180	635.00	\$126,307.00	\$0.00	\$126,307.00									
	AT Spectrograph Detector - SLAC CCS Support - Travel	06-Nov-17 A	14-Sep-18 A	100%	180	0.00	\$0.00	\$15,233.28	\$15,233.28									
	AT Spectrograph Detector - Travel to Chile for Integration	29-Oct-19	11-Mar-20	0%	90	0.00	\$0.00	\$58,893.14	\$58,893.14	109								
	AT Spectrograph Detector Cable Wrap Fiber Procurement	01-Mar-18 A	25-Mar-18 A	100%	10	0.00	\$0.00	\$3,000.00	\$3,000.00									
	AT Spectrograph Detector Inter-Building Fiber Procurement	01-Mar-18 A	25-Mar-18 A	100%	10	0.00	\$0.00	\$8,500.00	\$8,500.00									
	AT Spectrograph Detector - SLAC CCS/DAQ Support - Additional Labor	03-Jan-19 A	27-Sep-19	53%	200	414.99	\$87,258.20	\$0.00	\$87,258.20	280								
	AT Spectrograph Detector - SLAC CCS/DAQ Support - Travel to Chile	12-Nov-19	27-Dec-19	0%	30	0.00	\$0.00	\$14,022.20	\$14,022.20	219								

## LSST May 2019 Month End Forecast

Activity ID	Activity Name	Start	Finish	Physical % Complete	Original Duration	Budgeted Labor Units	Budgeted Labor Cost	Budgeted Material Cost	Budgeted Total Cost no	Total Float	FY2015 2014-10-01	FY2016 2015-10-01	FY2017 2016-10-01	FY2018 2017-10-01	FY2019 2018-10-01	FY2020 2019-10-01	FY2021 2020-10-01	FY2022 2021-10-01
LSST ME 19-05.04C.08.04 Collimated Beam Projector	AT - Procure Instrument Gantry Crane	25-Jan-18 A	10-May-18 A	100%	40	0.00	\$0.00	\$13,834.80	\$13,834.80									
	Prototyping effort	01-Sep-15 A	16-Sep-20	100%	22	0.00	\$0.00	\$6,443.30	\$6,443.30	15								
	Prototype demonstration and evaluation	23-Nov-15 A	31-May-16 A	100%	19	310.00	\$17,578.00	\$0.00	\$17,578.00									
	Collimated Beam Projector - SOW/ACL Developed and Provided to Procurement	11-Jan-16 A	31-Jan-16 A	100%	10	20.00	\$864.00	\$0.00	\$864.00									
	Collimated Beam Projector - Procurement Prepares and Issues Bid Package	23-May-16 A	13-Jul-16 A	100%	10	0.00	\$0.00	\$0.00	\$0.00									
	Collimated Beam Projector - Supplier Response	18-Aug-16 A	22-Aug-16 A	100%	20	0.00	\$0.00	\$0.00	\$0.00									
	Collimated Beam Projector - Supplier Selection and Contract Award	24-Aug-16 A	08-Dec-16 A	100%	20	0.00	\$0.00	\$0.00	\$0.00									
	Preliminary Design Review- OK to buy glass	16-Feb-17 A	30-Mar-17 A	100%	23	0.00	\$0.00	\$51,730.00	\$51,730.00									
	Final Design and schedule acceptance	18-May-17 A	31-Jul-17 A	100%	15	0.00	\$0.00	\$50,720.00	\$50,720.00									
	Completion of mount	15-Jul-17 A	25-Nov-17 A	100%	76	0.00	\$0.00	\$38,040.00	\$38,040.00									
	Completion of mirrors and corrector lenses	15-Jul-17 A	28-Feb-18 A	100%	43	0.00	\$0.00	\$38,040.00	\$38,040.00									
	Acceptance Testing Review Completion	15-Dec-17 A	25-Apr-18 A	100%	81	0.00	\$0.00	\$50,720.00	\$50,720.00									
	CBP Shipping to Tucson	10-Jul-18 A	14-Aug-18 A	100%	19	0.00	\$0.00	\$25,360.00	\$25,360.00									
	Implement enhanced shipping and handling	10-Jul-18 A	31-Jul-18 A	100%	19	0.00	\$0.00	\$5,600.00	\$5,600.00									
	Collimated Beam Projector Travel	25-Nov-19	12-May-20	0%	115	0.00	\$0.00	\$31,548.91	\$31,548.91	15								
	CBP Electrical Design and Material Procurement	25-Nov-19	07-Apr-20	0%	90	80.00	\$6,160.00	\$13,349.82	\$19,509.82	100								
	CBP Electrical/Network Installation	05-Aug-20	16-Sep-20	0%	30	80.00	\$3,965.60	\$0.00	\$3,965.60	15								
	CBP Mask fabrication - Labor	13-May-20	04-Aug-20	0%	60	40.00	\$4,509.20	\$0.00	\$4,509.20	15								
	CBP Lab testing in Tucson	25-Oct-18 A	05-Jun-19	35%	90	0.00	\$0.00	\$0.00	\$0.00	15								
	CBP Lab testing in Tucson - Additional Effort	06-Jun-19	06-Jun-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	15								
	CBP Calibration Unit	06-Jun-19	22-Nov-19	0%	120	0.00	\$0.00	\$0.00	\$0.00	15								
	CBP Calibration Unit - LABOR	06-Jun-19	22-Nov-19	0%	120	120.00	\$9,028.59	\$0.00	\$9,028.59	190								
	CBP Mask fabrication - NonLabor	13-May-20	04-Aug-20	0%	60	0.00	\$0.00	\$21,845.16	\$21,845.16	15								
	LSST ME 19-05.04C.09 Reflective Coating System	01-Apr-15 A	22-Jan-20		1343	6380.00	\$491,703.80	\$18,664,863.99	\$19,156,567.79	687								
	Coating Technical Management - FY2 - PROC	01-Apr-15 A	31-Aug-18 A	100%	959	5750.00	\$439,718.00	\$320,234.08	\$759,952.08									
	Coating Technical Management - FY3 - PROC	01-Apr-15 A	30-Sep-15 A	100%	107	0.00	\$0.00	\$85,428.00	\$85,428.00									
	Coating Technical Management - FY4 - PROC	01-Oct-15 A	30-Sep-16 A	100%	254	0.00	\$0.00	\$88,416.00	\$88,416.00									
	Coating Technical Management - FY5 - PROC	03-Oct-16 A	29-Sep-17 A	100%	254	0.00	\$0.00	\$91,512.00	\$91,512.00									
	Coating Technical Management - FY2 - Labor	02-Oct-17 A	31-Oct-17 A	100%	20	0.00	\$0.00	\$10,524.00	\$10,524.00									
	Coating Technical Management - FY3 - Labor	01-Dec-15 A	31-Dec-15 A	100%	107	450.00	\$42,714.00	\$0.00	\$42,714.00									
	Coating Technical Management - FY4 - Labor	01-Jan-16 A	30-Sep-16 A	100%	254	900.00	\$88,416.00	\$0.00	\$88,416.00									
	Coating Technical Management - FY5 - Labor	03-Oct-16 A	29-Sep-17 A	100%	254	2700.00	\$175,320.00	\$0.00	\$175,320.00									
	Coating Technical Management NonLabor	02-Oct-17 A	31-Aug-18 A	100%	199	1700.00	\$133,268.00	\$0.00	\$133,268.00									
	Coating Manager Recruitment	01-Feb-16 A	31-Oct-17 A	100%	717	0.00	\$0.00	\$44,354.08	\$44,354.08									
	Final Coating and Cleaning Process Design and Revw	01-May-15 A	29-May-15 A	100%	63	0.00	\$0.00	\$0.00	\$0.00	\$0.00								
Procurement Process	01-Jul-15 A	03-Jul-15 A	100%	58	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
Award Coating and Cleaning System Contracts	17-Jul-15 A	29-Feb-16 A	100%	58	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
Coating Chamber On Summit	01-Mar-16 A		31-Oct-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00									
Receipt of Order	02-Mar-16 A	03-Mar-16 A	100%	3	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
Conception and Project Preparation	08-Mar-16 A	31-Mar-16 A	100%	20	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
Kickoff meeting at VA	04-Apr-16 A	05-Apr-16 A	100%	2	0.00	\$0.00	\$1,642,510.00	\$1,642,510.00										
Coating Design and Process Analysis	01-Apr-16 A	31-Jan-17 A	100%	39	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
May Monthly Status Review (MSR)	31-May-16 A	31-May-16 A	100%	1	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
Delivery of Development of Coating Design and Proc	01-Jun-16 A	01-Jun-16 A	100%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
Mandatory Inspection Point (MIP) 1	29-Jul-16 A	29-Jul-16 A	100%	1	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
June MSR	01-Jun-16 A	01-Jun-16 A	100%	1	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
Development for Technology and Technical Items	03-Jun-16 A	04-Aug-16 A	100%	41	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
July MSR	12-Jul-16 A	12-Jul-16 A	100%	1	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
Aug MSR	08-Aug-16 A	08-Aug-16 A	100%	1	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
Sep MSR	07-Sep-16 A	07-Sep-16 A	100%	1	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
Intermediate Design review	04-Aug-16 A	05-Aug-16 A	100%	2	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
Development for Technology and Technical Items - Start of Supplier Evaluation	05-Aug-16 A	29-Sep-17 A	100%	43	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
Oct MSR	05-Oct-16 A	05-Oct-16 A	100%	1	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
Special MSR - Ordering of Preliminary Chmaber Raw Material	05-Oct-16 A	05-Oct-16 A	100%	1	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
MIP 2	05-Oct-16 A	25-Oct-16 A	100%	1	0.00	\$0.00	\$3,284,010.00	\$3,284,010.00										
Conception and Design Procurement	06-Oct-16 A	29-Sep-17 A	100%	18	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
Nov MSR	09-Oct-16 A	31-Oct-16 A	100%	1	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
Preliminary Design Review - Approval Long Lead Time Items	30-Nov-16 A	30-Nov-16 A	100%	2	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
MIP 3	05-Jul-17 A	04-Aug-17 A	100%	1	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
Coating Chamber Magnetron Target Silver Material Acquisition	06-Oct-16 A	01-Aug-17 A	100%	1	0.00	\$0.00	\$50,000.00	\$50,000.00										
Detail Design	06-Oct-16 A	24-Mar-17 A	100%	78	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
Procuremnt for Long Lead Time Item	06-Oct-16 A	24-Mar-17 A	100%	78	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
Dec MSR	20-Nov-16 A	30-Nov-16 A	100%	1	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
Jan MSR	07-Jan-17 A	07-Jan-17 A	100%	1	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
Feb MSR	01-Feb-17 A	01-Feb-17 A	100%	1	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
Mar MSR	01-Mar-17 A	01-Mar-17 A	100%	1	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
Final design review (payment 20% of contract price, splitting of the payment in 80% and 20%)	01-Mar-17 A	01-Mar-17 A	100%	2	0.00	\$0.00	\$2,626,400.00	\$2,626,400.00										
Final Design Review	20-Mar-17 A	24-Mar-17 A	100%	5	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
Final Design Review Final Payment	27-Mar-17 A	27-Mar-17 A	100%	1	0.00	\$0.00	\$657,610.00	\$657,610.00										

LSST May 2019 Month End Forecast																			
Activity ID	Activity Name	Start	Finish	Physical % Complete	Original Duration	Budgeted Labor Units	Budgeted Labor Cost	Budgeted Material Cost	Budgeted Total Cost no	Total Float		FY2015 2014-10-01	FY2016 2015-10-01	FY2017 2016-10-01	FY2018 2017-10-01	FY2019 2018-10-01	FY2020 2019-10-01	FY2021 2020-10-01	FY2022 2021-10-01
	T&SC-29 Task: detail software and control	06-Oct-16 A	31-Oct-18 A	100%	160	0.00	\$0.00	\$0.00	\$0.00							Task: detail software and control			
	T&SC-29 D33 - Report Reception	24-May-17 A	24-May-17 A	100%	1	0.00	\$0.00	\$0.00	\$0.00						└ D33 - Report Reception				
	T&SC-29 D33 - Report Checkout	25-May-17 A	29-May-17 A	100%	3	0.00	\$0.00	\$0.00	\$0.00					└ D33 - Report Checkout					
	T&SC-29 D33 - Report Approval	30-May-17 A	30-May-17 A	100%	1	0.00	\$0.00	\$0.00	\$0.00					└ D33 - Report Approval					
	T&SC-29 Task: procurement for long lead time item - coater	06-Oct-16 A	31-Mar-17 A	100%	118	0.00	\$0.00	\$0.00	\$0.00					Task: procurement for long lead time item - coater					
	T&SC-29 D34 - Report Reception	27-Mar-17 A	27-Mar-17 A	100%	1	0.00	\$0.00	\$0.00	\$0.00					└ D34 - Report Reception					
	T&SC-29 D34 - Report Checkout	28-Mar-17 A	30-Mar-17 A	100%	3	0.00	\$0.00	\$0.00	\$0.00					└ D34 - Report Checkout					
	T&SC-29 D34 - Report Approval	31-Mar-17 A	31-Mar-17 A	100%	1	0.00	\$0.00	\$0.00	\$0.00					└ D34 - Report Approval					
	T&SC-29 MIP 3 - Onsite Inspection	07-Jul-17 A	07-Jul-17 A	100%	1	0.00	\$0.00	\$0.00	\$0.00					└ MIP 3 - Onsite Inspection					
	T&SC-29 MIP 3 - Report Reception	06-Jul-17 A	31-Jul-17 A	100%	1	0.00	\$0.00	\$0.00	\$0.00					└ MIP 3 - Report Reception					
	T&SC-29 MIP 3 - Report Checkout	01-Aug-17 A	03-Aug-17 A	100%	3	0.00	\$0.00	\$0.00	\$0.00					└ MIP 3 - Report Checkout					
	T&SC-29 MIP 3 - Report Approval	04-Aug-17 A	04-Aug-17 A	100%	1	0.00	\$0.00	\$0.00	\$0.00					└ MIP 3 - Report Approval					
	T&SC-29 Task: quality assurance and supplier audits	02-Mar-17 A	29-Sep-17 A	100%	109	0.00	\$0.00	\$0.00	\$0.00					Task: quality assurance and supplier audits					
	T&SC-29 D41 - Report Reception	03-Aug-17 A	03-Aug-17 A	100%	1	0.00	\$0.00	\$0.00	\$0.00					└ D41 - Report Reception					
	T&SC-29 D41 - Report Checkout	04-Aug-17 A	08-Aug-17 A	100%	3	0.00	\$0.00	\$0.00	\$0.00					└ D41 - Report Checkout					
	T&SC-29 D41 - Report Approval	09-Aug-17 A	09-Aug-17 A	100%	1	0.00	\$0.00	\$0.00	\$0.00					└ D41 - Report Approval					
	T&SC-29 Task: coater procurement	02-Mar-17 A	29-Sep-17 A	100%	98	0.00	\$0.00	\$0.00	\$0.00					Task: coater procurement					
	T&SC-29 D42 - Report Reception	19-Jul-17 A	19-Jul-17 A	100%	1	0.00	\$0.00	\$0.00	\$0.00					└ D42 - Report Reception					
	T&SC-29 D42 - Report Checkout	20-Jul-17 A	24-Jul-17 A	100%	3	0.00	\$0.00	\$0.00	\$0.00					└ D42 - Report Checkout					
	T&SC-29 D42 - Report Approval	25-Jul-17 A	25-Jul-17 A	100%	1	0.00	\$0.00	\$0.00	\$0.00					└ D42 - Report Approval					
	T&SC-29 Task: washing station procurement	03-Mar-17 A	29-Sep-17 A	100%	88	0.00	\$0.00	\$0.00	\$0.00					Task: washing station procurement					
	T&SC-29 D43 - Report Reception	08-Sep-17 A	08-Sep-17 A	100%	1	0.00	\$0.00	\$0.00	\$0.00					└ D43 - Report Reception					
	T&SC-29 D43 - Report Checkout	08-Sep-17 A	08-Sep-17 A	100%	3	0.00	\$0.00	\$0.00	\$0.00					└ D43 - Report Checkout					
	T&SC-29 D43 - Report Approval	08-Sep-17 A	08-Sep-17 A	100%	1	0.00	\$0.00	\$0.00	\$0.00					└ D43 - Report Approval					
	T&SC-29 D39 - Monthly status review and report (April 2017)	01-Apr-17 A	01-Apr-17 A	100%	1	0.00	\$0.00	\$0.00	\$0.00					└ D39 - Monthly status review and report (April 2017)					
	T&SC-29 D40 - Monthly status review and report (May 2017)	03-May-17 A	03-May-17 A	100%	1	0.00	\$0.00	\$0.00	\$0.00					└ D40 - Monthly status review and report (May 2017)					
	T&SC-29 D43 - FAP Report Reception	05-Jun-17 A	05-Jun-17 A	100%	1	0.00	\$0.00	\$0.00	\$0.00					└ D43 - FAP Report Reception					
	T&SC-29 D43 - FAP Report Checkout	05-Jun-17 A	20-Jul-17 A	100%	3	0.00	\$0.00	\$0.00	\$0.00					└ D43 - FAP Report Checkout					
	T&SC-29 D43 - FAP Report Approval	26-Jul-17 A	26-Jul-17 A	100%	1	0.00	\$0.00	\$0.00	\$0.00					└ D43 - FAP Report Approval					
	T&SC-29 FAP System and Schedule	05-Jul-17 A	05-Jul-17 A	100%	1	0.00	\$0.00	\$0.00	\$0.00					└ FAP System and Schedule					
	T&SC-29 FAP Engineering	06-Jul-17 A	06-Jul-17 A	100%	1	0.00	\$0.00	\$0.00	\$0.00					└ FAP Engineering					
	T&SC-29 CCCS and WCS + Packing and Shipping	07-Jul-17 A	07-Jul-17 A	100%	1	0.00	\$0.00	\$0.00	\$0.00					└ CCCS and WCS + Packing and Shipping					
	T&SC-29 Reports Reception	10-Jul-17 A	20-Jul-17 A	100%	1	0.00	\$0.00	\$0.00	\$0.00					└ Reports Reception					
	T&SC-29 Reports Checkout	21-Jul-17 A	25-Jul-17 A	100%	3	0.00	\$0.00	\$0.00	\$0.00					└ Reports Checkout					
	T&SC-29 Reports and FAP Approval	26-Jul-17 A	26-Jul-17 A	100%	1	0.00	\$0.00	\$0.00	\$0.00					└ Reports and FAP Approval					
	T&SC-29 Chamber ready for assembly - MILESTONE		27-Jul-17 A	100%	0	0.00	\$0.00	\$0.00	\$0.00					◆ Chamber ready for assembly - MILESTONE					
	T&SC-29 D41 - Monthly status review and Report (June 2017)	01-Jun-17 A	05-Jun-17 A	100%	1	0.00	\$0.00	\$0.00	\$0.00					└ D41 - Monthly status review and Report (June 2017)					
	T&SC-29 MIP 4 - Onsite Inspection	25-Oct-17 A	27-Oct-17 A	100%	1	0.00	\$0.00	\$0.00	\$0.00					└ MIP 4 - Onsite Inspection					
	T&SC-29 D44 - MIP 4 - Report Reception	16-Oct-17 A	16-Oct-17 A	100%	1	0.00	\$0.00	\$0.00	\$0.00					└ D44 - MIP 4 - Report Reception					
	T&SC-29 D44 - MIP 4 - Report Checkout	17-Oct-17 A	19-Oct-17 A	100%	3	0.00	\$0.00	\$0.00	\$0.00					└ D44 - MIP 4 - Report Checkout					
	T&SC-29 D44 - MIP 4 - Report Approval	20-Oct-17 A	20-Oct-17 A	100%	1	0.00	\$0.00	\$0.00	\$0.00					└ D44 - MIP 4 - Report Approval					
	T&SC-29 Task: Assembly Phase for Coating Chamber	24-Jul-17 A	31-Oct-17 A	100%	76	0.00	\$0.00	\$0.00	\$0.00					Task: Assembly Phase for Coating Chamber					
	T&SC-29 D45 - Report Reception	04-Oct-17 A	04-Oct-17 A	100%	1	0.00	\$0.00	\$0.00	\$0.00					└ D45 - Report Reception					
	T&SC-29 D45 - Report Checkout	05-Oct-17 A	09-Oct-17 A	100%	3	0.00	\$0.00	\$0.00	\$0.00					└ D45 - Report Checkout					
	T&SC-29 D45 - Report Approval	10-Oct-17 A	10-Oct-17 A	100%	1	0.00	\$0.00	\$0.00	\$0.00					└ D45 - Report Approval					
	T&SC-29 Task: Assembly Phase for Washing Station	15-Jun-17 A	01-Dec-17 A	100%	52	0.00	\$0.00	\$0.00	\$0.00					Task: Assembly Phase for Washing Station					
	T&SC-29 D46 - Report Reception	29-Aug-17 A	29-Aug-17 A	100%	1	0.00	\$0.00	\$0.00	\$0.00					└ D46 - Report Reception					
	T&SC-29 D46 - Report Checkout	30-Aug-17 A	01-Sep-17 A	100%	3	0.00	\$0.00	\$0.00	\$0.00					└ D46 - Report Checkout					
	T&SC-29 D46 - Report Approval	05-Sep-17 A	05-Sep-17 A	100%	1	0.00	\$0.00	\$0.00	\$0.00					└ D46 - Report Approval					
	T&SC-29 D47 - Monthly status review and Report (July 2017)	05-Jul-17 A	05-Jul-17 A	100%	1	0.00	\$0.00	\$0.00	\$0.00					└ D47 - Monthly status review and Report (July 2017)					
	T&SC-29 Coating Chamber Ready for Commissioning		09-Mar-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00					◆ Coating Chamber Ready for Commissioning					
	T&SC-29 Washing Station Ready for Commissioning		12-Jan-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00					◆ Washing Station Ready for Commissioning					
	T&SC-29 D48 - Monthly status review and Report (Aug 2017)	02-Aug-17 A	02-Aug-17 A	100%	1	0.00	\$0.00	\$0.00	\$0.00					└ D48 - Monthly status review and Report (Aug 2017)					
	T&SC-29 Task: Commissioning Phase for Coating Chamber	09-Mar-18 A	11-Jun-18 A	100%	105	0.00	\$0.00	\$0.00	\$0.00					Task: Commissioning Phase for Coating Chamber					
	T&SC-29 Task: Coating Chamber Seismic Requirements	09-Nov-17 A	15-Nov-17 A	100%	31	0.00	\$0.00	\$245,000.00	\$245,000.00					└ Task: Coating Chamber Seismic Requirements					
	T&SC-29 D49 - Report Reception	14-Mar-18 A	14-Mar-18 A	100%	1	0.00	\$0.00	\$0.00	\$0.00					└ D49 - Report Reception					
	T&SC-29 D49 - Report Checkout	15-Mar-18 A	19-Mar-18 A	100%	3	0.00	\$0.00	\$0.00	\$0.00					└ D49 - Report Checkout					
	T&SC-29 D49 - Report Approval	20-Mar-18 A	20-Mar-18 A	100%	1	0.00	\$0.00	\$0.00	\$0.00					└ D49 - Report Approval					
	T&SC-29 Task: commissioning phase for washing station	04-Dec-17 A	19-Jan-18 A	100%	21	0.00	\$0.00	\$0.00	\$0.00					Task: commissioning phase for washing station					
	T&SC-29 Task: washing station Seismic Requirements	09-Nov-17 A	15-Nov-17 A	100%	4	0.00	\$0.00	\$33,000.00	\$33,000.00					└ Task: washing station Seismic Requirements					
	T&SC-29 D50 - Report Reception	15-Nov-17 A	16-Nov-17 A	100%	1	0.00	\$0.00	\$0.00	\$0.00					└ D50 - Report Reception					
	T&SC-29 D50 - Report Checkout	16-Nov-17 A	21-Nov-17 A	100%	3	0.00	\$0.00	\$0.00	\$0.00					└ D50 - Report Checkout					
	T&SC-29 D50 - report Approval	21-Nov-17 A	22-Nov-17 A	100%	1	0.00	\$0.00	\$0.00	\$0.00					└ D50 - report Approval					
	T&SC-29 D51 - Monthly status review and report (Sept 2017)	06-Sep-17 A	06-Sep-17 A	100%	1	0.00	\$0.00	\$0.00	\$0.00					└ D51 - Monthly status review and report (Sept 2017)					
	T&SC-29 D52 - Monthly status review and report (Oct 2017)	04-Oct-17 A	04-Oct-17 A	100%	1	0.00	\$0.00	\$0.00	\$0.00					└ D52 - Monthly status review and report (Oct 2017)					
	T&SC-29 D53 - Monthly status review and report (Nov 2017)	01-Nov-17 A	01-Nov-17 A	100%	1	0.00	\$0.00	\$0.00	\$0.00					└ D53 - Monthly status review and report (Nov 2017)					
	T&SC-29 D54 - P&SP Report Reception	12-Feb-18 A	12-Feb-18 A	100%	1	0.00	\$0.00	\$0.00	\$0.00					└ D54 - P&SP Report Reception					
	T&SC-29 D55 - P&SP Report Checkout	13-Feb-18 A	15-Feb-18 A	100%	3	0.00	\$0.00	\$0.00	\$0.00					└ D55 - P&SP Report Checkout					
	T&SC-29 D56 - P&SP Report Approval	16-Feb-18 A	16-Feb-18 A	100%	1	0.00	\$0.00	\$0.00	\$0.00					└ D56 - P&SP Report Approval					
	T&SC-29 D57 - Monthly status review and report (Dec 2017)	06-Oct-17 A	30-Nov-17 A	100%	1	0.00	\$0.00	\$0.00	\$0.00					└ D57 - Monthly status review and report (Dec 2017)					
	T&SC-29 PSP System and Schedule	19-Feb-18 A	02-Jun-18 A	100%	1	0.00	\$0.00	\$0.00	\$0.00					└ PSP System and Schedule					
	T&SC-29 Coating chamber fully tested and ready for decommi		22-Jun-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00					◆ Coating chamber fully tested and ready for decommissioning and logistic					



LSST May 2019 Month End Forecast																				
Activity ID		Activity Name	Start	Finish	Physical % Complete	Original Duration	Budgeted Labor Units	Budgeted Labor Cost	Budgeted Material Cost	Budgeted Total Cost no	Total Float	FY2015 2014-10-01	FY2016 2015-10-01	FY2017 2016-10-01	FY2018 2017-10-01	FY2019 2018-10-01	FY2020 2019-10-01	FY2021 2020-10-01	FY2022 2021-10-01	
	T&SC-29	MIP 5 - Onsite Inspection (3 days)	16-Feb-18 A	16-Feb-18 A	100%	3	0.00	\$0.00	\$0.00	\$0.00						•   MIP 5 - Onsite Inspection (3 days)				
	T&SC-29	D60 - MIP 5 - Report Reception	16-Feb-18 A	16-Feb-18 A	100%	1	0.00	\$0.00	\$0.00	\$0.00						•   D60 - MIP 5 - Report Reception				
	T&SC-29	D60 - MIP 5 - Report Checkout	16-Feb-18 A	16-Feb-18 A	100%	3	0.00	\$0.00	\$0.00	\$0.00						•   D60 - MIP 5 - Report Checkout				
	T&SC-29	D60 - MIP 5 - Report Approval	16-Feb-18 A	16-Feb-18 A	100%	1	0.00	\$0.00	\$0.00	\$0.00						•   D60 - MIP 5 - Report Approval				
	T&SC-29	D61-A - Report Reception	30-Jan-18 A	30-Jan-18 A	100%	1	0.00	\$0.00	\$0.00	\$0.00						•   D61-A - Report Reception				
	T&SC-29	D61-A - Report Checkout	31-Jan-18 A	02-Feb-18 A	100%	3	0.00	\$0.00	\$0.00	\$0.00						•   D61-A - Report Checkout				
	T&SC-29	D61-A - Report Approval	05-Feb-18 A	05-Feb-18 A	100%	1	0.00	\$0.00	\$0.00	\$0.00						•   D61-A - Report Approval				
	T&SC-29	[PAT] Provisional Acceptance Test - Meeting Technical	18-Jun-18 A	18-Jun-18 A	100%	1	0.00	\$0.00	\$0.00	\$0.00						•   [PAT] Provisional Acceptance Test - Meeting Technical Introduction				
	T&SC-29	[PAT] Provisional Acceptance Test - Meeting Vacuum	22-Jun-18 A	22-Jun-18 A	100%	1	0.00	\$0.00	\$0.00	\$0.00						•   [PAT] Provisional Acceptance Test - Meeting Vacuum System				
	T&SC-29	[PAT] Provisional Acceptance Test - Meeting Sputteri	22-Jun-18 A	22-Jun-18 A	100%	1	0.00	\$0.00	\$0.00	\$0.00						•   [PAT] Provisional Acceptance Test - Meeting Sputtering System for M1M3				
	T&SC-29	[PAT] Provisional Acceptance Test - Meeting Sputteri	22-Jun-18 A	22-Jun-18 A	100%	1	0.00	\$0.00	\$0.00	\$0.00						•   [PAT] Provisional Acceptance Test - Meeting Sputtering System for M2				
	T&SC-29	RVM Review	22-Jun-18 A	22-Jun-18 A	100%	1	0.00	\$0.00	\$0.00	\$0.00						•   RVM:Review				
	T&SC-29	D61 - B - Report Reception	30-Mar-18 A	30-Mar-18 A	100%	1	0.00	\$0.00	\$0.00	\$0.00						•   D61 - B - Report Reception				
	T&SC-29	D61 - B - Report Checkout	02-Apr-18 A	04-Apr-18 A	100%	3	0.00	\$0.00	\$0.00	\$0.00						•   D61 - B - Report Checkout				
	T&SC-29	D61 - B - Report Approval	05-Apr-18 A	05-Apr-18 A	100%	1	0.00	\$0.00	\$0.00	\$0.00						•   D61 - B - Report Approval				
	T&SC-29	D63 - SAP Report Reception	21-May-18 A	25-May-18 A	100%	1	0.00	\$0.00	\$0.00	\$0.00						•   D63 - SAP Report Reception				
	T&SC-29	D63 - SAP Report Checkout	28-May-18 A	01-Jul-18 A	100%	3	0.00	\$0.00	\$0.00	\$0.00						•   D63 - SAP Report Checkout				
	T&SC-29	D63 - SAP Report Approval	05-Mar-18 A	05-Mar-18 A	100%	1	0.00	\$0.00	\$0.00	\$0.00						•   D63 - SAP Report Approval				
	T&SC-29	SAP System and Schedule	01-Oct-18 A	01-Oct-18 A	100%	1	0.00	\$0.00	\$0.00	\$0.00						•   SAP System and Schedule				
	T&SC-29	Coating Plant Additional Earthquake Load Simulation	30-Mar-18 A	30-Mar-18 A	100%	8	0.00	\$0.00	\$67,926.00	\$67,926.00						•   Coating Plant Additional Earthquake Load Simulations				
	T&SC-29	Coating Plant Improved Coating Sample Holder	30-Mar-18 A	30-Mar-18 A	100%	9	0.00	\$0.00	\$154,550.00	\$154,550.00						•   Coating Plant Improved Coating Sample Holder				
	T&SC-29	Coating Plant Additional Load Design Changes	30-Mar-18 A	30-Mar-18 A	100%	9	0.00	\$0.00	\$213,960.00	\$213,960.00						•   Coating Plant Additional Load Design Changes				
	T&SC-29	Coating Plant Rotating Magnetron Drive System	30-Mar-18 A	30-Mar-18 A	100%	9	0.00	\$0.00	\$370,968.00	\$370,968.00						•   Coating Plant Rotating Magnetron Drive System				
	T&SC-29	Coating Plant Layer Stack Development Improvements	30-Mar-18 A	30-Mar-18 A	100%	9	0.00	\$0.00	\$342,430.00	\$342,430.00						•   Coating Plant Layer Stack Development Improvements				
	T&SC-29	Magnetron Sputter test and measuring samples	16-Apr-18 A	15-Jun-18 A	100%	45	0.00	\$0.00	\$0.00	\$0.00						•   Magnetron Sputter test and measuring samples				
	T&SC-29	Site Assembly Plan (Chile) and Packing and Shipping	30-Mar-18 A	30-Mar-18 A	100%	23	0.00	\$0.00	\$0.00	\$0.00						•   Site Assembly Plan (Chile) and Packing and Shipping Plan (Coater)				
	T&SC-29	Provisional Acceptance Test (Payment 7.5% of contr.	17-May-18 A	17-May-18 A	100%	1	0.00	\$0.00	\$1,231,630.21	\$1,231,630.21						•   Provisional Acceptance Test (Payment 7.5% of contract price) and Meeting				
	T&SC-29	Provisional Acceptance Test (Payment 7.5% of contr.	18-Jun-18 A	22-Jun-18 A	100%	5	0.00	\$0.00	\$1,231,630.21	\$1,231,630.21						•   Provisional Acceptance Test (Payment 7.5% of contract price)				
	T&SC-29	Provisional Acceptance Test Review	25-Jun-18 A	25-Jun-18 A	100%	1	0.00	\$0.00	\$0.00	\$0.00						•   Provisional Acceptance Test Review				
	T&SC-29	Disassembly of Coater	26-Jun-18 A	01-Aug-18 A	100%	14	0.00	\$0.00	\$0.00	\$0.00						•   Disassembly of Coater				
	T&SC-29	Task: Packaging and Logistic Germany	26-Jun-18 A	01-Aug-18 A	100%	20	0.00	\$0.00	\$0.00	\$0.00						•   Task: Packaging and Logistic Germany				
	T&SC-29	FOB Deep Water Port Europe		07-Sep-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00						•   FOB Deep Water Port Europe				
	T&SC-29	FOB Deep Water Port Europe - Washing Station	03-Jul-18 A	03-Jul-18 A	100%	1	0.00	\$0.00	\$1,641,500.00	\$1,641,500.00						•   FOB Deep Water Port Europe - Washing Station				
	T&SC-29	FOB Deep Water Port Europe - Coating Chamber	14-Aug-18 A	28-Sep-18 A	100%	1	0.00	\$0.00	\$1,642,510.00	\$1,642,510.00						•   FOB Deep Water Port Europe - Coating Chamber				
	T&SC-29	[FAR] Final Acceptance Review - Meeting	20-May-19 A	24-May-19 A	100%	1	0.00	\$0.00	\$2,463,260.00	\$2,463,260.00						•   [FAR] Final Acceptance Review - Meeting				
	T&SC-29	Mirror Coating and Cleaning Project Finish		22-Apr-19 A	100%	0	0.00	\$0.00	\$0.00	\$0.00						•   Mirror Coating and Cleaning Project Finish				
	T&SC-29	Ship arrives Port		23-Nov-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00						•   Ship arrives Port				
	T&SC-29	Unload Chambers / Containers	23-Oct-18 A	23-Oct-18 A	100%	1	0.00	\$0.00	\$0.00	\$0.00						•   Unload Chambers / Containers				
	T&SC-29	Unpack chambers / erect scaffold for access	25-Oct-18 A	25-Oct-18 A	100%	1	0.00	\$0.00	\$0.00	\$0.00						•   Unpack chambers / erect scaffold for access				
	T&SC-29	Split Lower & Upper chambers	26-Oct-18 A	26-Oct-18 A	100%	1	0.00	\$0.00	\$0.00	\$0.00						•   Split Lower & Upper chambers				
	T&SC-29	Install Upper chamber on frame and reseal	29-Oct-18 A	29-Oct-18 A	100%	1	0.00	\$0.00	\$0.00	\$0.00						•   Install Upper chamber on frame and reseal				
	T&SC-29	Load Upper vessel on Trailer	29-Oct-18 A	29-Oct-18 A	100%	1	0.00	\$0.00	\$0.00	\$0.00						•   Load Upper vessel on Trailer				
	T&SC-29	Reseal lower vessel & load on Trailer	29-Oct-18 A	29-Oct-18 A	100%	1	0.00	\$0.00	\$0.00	\$0.00						•   Reseal lower vessel & load on Trailer				
	T&SC-29	Transport lower chamber to Pachon	30-Oct-18 A	08-Nov-18 A	100%	6	0.00	\$0.00	\$0.00	\$0.00						•   Transport lower chamber to Pachon				
	T&SC-29	Transport upper chamber to Pachon	30-Oct-18 A	08-Nov-18 A	100%	6	0.00	\$0.00	\$0.00	\$0.00						•   Transport upper chamber to Pachon				
	T&SC-29	Transport Tool container from Port to Pachon	30-Oct-18 A	30-Oct-18 A	100%	1	0.00	\$0.00	\$0.00	\$0.00						•   Transport Tool container from Port to Pachon				
	T&SC-29	Verify containers / order	24-Oct-18 A	24-Oct-18 A	100%	1	0.00	\$0.00	\$0.00	\$0.00						•   Verify containers / order				
	T&SC-29	Transport first containers / equipment to Pachon	25-Oct-18 A	25-Oct-18 A	100%	1	0.00	\$0.00	\$0.00	\$0.00						•   Transport first containers / equipment to Pachon				
	T&SC-29	Physical Installation Start	08-Nov-18 A		100%	0	0.00	\$0.00	\$0.00	\$0.00						•   Physical Installation Start				
	T&SC-29	Chamber arrival at Pachon	15-Nov-18 A		100%	0	0.00	\$0.00	\$0.00	\$0.00						•   Chamber arrival at Pachon				
T&SC-29	Install chamber carriage	08-Nov-18 A	09-Nov-18 A	100%	2	0.00	\$0.00	\$0.00	\$0.00						•   Install chamber carriage					
T&SC-29	VA offsite for holidays	12-Nov-18 A	31-Dec-18 A	100%	35	0.00	\$0.00	\$0.00	\$0.00						•   VA offsite for holidays					
T&SC-29	Install lifting jacks	07-Jan-19 A	08-Jan-19 A	100%	2	0.00	\$0.00	\$0.00	\$0.00						•   Install lifting jacks					
T&SC-29	Connect Hydraulic system	09-Jan-19 A	09-Jan-19 A	100%	1	0.00	\$0.00	\$0.00	\$0.00						•   Connect Hydraulic system					
T&SC-29	Move lower chamber inside	15-Nov-18 A	15-Nov-18 A	100%	1	0.00	\$0.00	\$0.00	\$0.00						•   Move lower chamber inside					
T&SC-29	Install lower chamber on carriage	09-Jan-19 A	09-Jan-19 A	100%	1	0.00	\$0.00	\$0.00	\$0.00						•   Install lower chamber on carriage					
T&SC-29	Move upper chamber inside	16-Nov-18 A	16-Nov-18 A	100%	1	0.00	\$0.00	\$0.00	\$0.00						•   Move upper chamber inside					
T&SC-29	Install upper chamber on lower chamber	10-Jan-19 A	10-Jan-19 A	100%	1	0.00	\$0.00	\$0.00	\$0.00						•   Install upper chamber on lower chamber					
T&SC-29	Attach upper chamber to lifting jacks	10-Jan-19 A	10-Jan-19 A	100%	1	0.00	\$0.00	\$0.00	\$0.00						•   Attach upper chamber to lifting jacks					
T&SC-29	Install brake cylinders	11-Jan-19 A	11-Jan-19 A	100%	1	0.00	\$0.00	\$0.00	\$0.00						•   Install brake cylinders					
T&SC-29	Install spider assembly	14-Jan-19 A	17-Jan-19 A	100%	4	0.00	\$0.00	\$0.00	\$0.00						•   Install spider assembly					
T&SC-29	Install main shaft drive	18-Jan-19 A	22-Jan-19 A	100%	2	0.00	\$0.00	\$0.00	\$0.00						•   Install main shaft drive					
T&SC-29	Install central shaft	23-Jan-19 A	24-Jan-19 A	100%	2	0.00	\$0.00	\$0.00	\$0.00						•   Install central shaft					
T&SC-29	Install upper chamber platform	23-Jan-19 A	24-Jan-19 A	100%	2	0.00	\$0.00	\$0.00	\$0.00						•   Install upper chamber platform					
T&SC-29	Install magnetron supports	25-Jan-19 A	28-Jan-19 A	100%	2	0.00	\$0.00	\$0.00	\$0.00						•   Install magnetron supports					
T&SC-29	Install Outer Magnetrons	29-Jan-19 A	30-Jan-19 A	100%	2	0.00	\$0.00	\$0.00	\$0.00						•   Install Outer Magnetrons					
T&SC-29	Install Inner Magnetrons	31-Jan-19 A	01-Feb-19 A	100%	2	0.00	\$0.00	\$0.00	\$0.00						•   Install Inner Magnetrons					
T&SC-29	Water / Gas piping	04-Feb-19 A	07-Feb-19 A	100%	4	0.00	\$0.00	\$0.00	\$0.00						•   Water / Gas piping					
T&SC-29	Lower chamber internal installation	04-Feb-19 A	08-Feb-19 A	100%	5	0.00	\$0.00	\$0.00	\$0.00						•   Lower chamber internal installation					
T&SC-29	Install valves & pumps chamber	11-Jan-19 A	15-Jan-19 A	100%	3	0.00	\$0.00	\$0.00	\$0.00						•   Install valves & pumps chamber					
T&SC-29	Install pumping groups	11-Jan-19 A	15-Jan-19 A	100%	3	0.00	\$0.00	\$0.00	\$0.00						•   Install pumping groups					
T&SC-29	Misc Mechanical Tasks	16-Jan-19 A	29-Jan-19 A	100%	9	0.00	\$0.00	\$0.00	\$0.00						•   Misc Mechanical Tasks					

## LSST May 2019 Month End Forecast

Activity ID	Activity Name	Start	Finish	Physical % Complete	Original Duration	Budgeted Labor Units	Budgeted Labor Cost	Budgeted Material Cost	Budgeted Total Cost no	Total Float	FY2015 2014-10-01	FY2016 2015-10-01	FY2017 2016-10-01	FY2018 2017-10-01	FY2019 2018-10-01	FY2020 2019-10-01	FY2021 2020-10-01	FY2022 2021-10-01
T&SC-29	Install electrical cabinets	23-Jan-19 A	25-Jan-19 A	100%	3	0.00	\$0.00	\$0.00	\$0.00						Install electrical cabinets			
	Install electrical cable trays	04-Feb-19 A	07-Feb-19 A	100%	4	0.00	\$0.00	\$0.00	\$0.00						Install electrical cable trays			
	Cable cabinets to chamber	04-Feb-19 A	08-Feb-19 A	100%	5	0.00	\$0.00	\$0.00	\$0.00						Cable cabinets to chamber			
	Cable cabinets to pumps	16-Jan-19 A	22-Jan-19 A	100%	4	0.00	\$0.00	\$0.00	\$0.00						Cable cabinets to pumps			
	Misc Aux equipment	16-Jan-19 A	22-Jan-19 A	100%	4	0.00	\$0.00	\$0.00	\$0.00						Misc Aux equipment			
	Misc Electrical tasks	23-Jan-19 A	01-Feb-19 A	100%	8	0.00	\$0.00	\$0.00	\$0.00	\$0.00					Misc Electrical tasks			
	Physical Installation complete	11-Feb-19 A		100%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00					Physical Installation complete			
	Open Coater	11-Feb-19 A	11-Feb-19 A	100%	1	0.00	\$0.00	\$0.00	\$0.00	\$0.00					Open Coater			
	I/O Check Chamber System	11-Feb-19 A	06-Mar-19 A	100%	17	0.00	\$0.00	\$0.00	\$0.00	\$0.00					I/O Check Chamber System			
	I/O Check Wash Station	07-Mar-19 A	14-Mar-19 A	100%	6	0.00	\$0.00	\$0.00	\$0.00	\$0.00					I/O Check Wash Station			
	Commission PLC	11-Feb-19 A	21-Mar-19 A	100%	28	0.00	\$0.00	\$0.00	\$0.00	\$0.00					Commission PLC			
	Commission HMI	11-Feb-19 A	21-Mar-19 A	100%	28	0.00	\$0.00	\$0.00	\$0.00	\$0.00					Commission HMI			
	Adjustment Vacuum Gauges	11-Feb-19 A	12-Feb-19 A	100%	2	0.00	\$0.00	\$0.00	\$0.00	\$0.00					Adjustment Vacuum Gauges			
	Commission Water system Internal Coater	13-Feb-19 A	15-Feb-19 A	100%	3	0.00	\$0.00	\$0.00	\$0.00	\$0.00					Commission Water system Internal Coater			
	Compressed Air System tests	18-Feb-19 A	18-Feb-19 A	100%	1	0.00	\$0.00	\$0.00	\$0.00	\$0.00					Compressed Air System tests			
	Alignment Chamber and Hollow Shaft	19-Feb-19 A	19-Feb-19 A	100%	1	0.00	\$0.00	\$0.00	\$0.00	\$0.00					Alignment Chamber and Hollow Shaft			
	Alignment Magnetrons	20-Feb-19 A	21-Feb-19 A	100%	2	0.00	\$0.00	\$0.00	\$0.00	\$0.00					Alignment Magnetrons			
	Commission Shutter system	25-Feb-19 A	25-Feb-19 A	100%	1	0.00	\$0.00	\$0.00	\$0.00	\$0.00					Commission Shutter system			
	Installation of Targets	25-Feb-19 A	26-Feb-19 A	100%	2	0.00	\$0.00	\$0.00	\$0.00	\$0.00					Installation of Targets			
	Alignment Sputter Surrounding	25-Feb-19 A	26-Feb-19 A	100%	2	0.00	\$0.00	\$0.00	\$0.00	\$0.00					Alignment Sputter Surrounding			
	Commission Vacuum System	27-Feb-19 A	01-Mar-19 A	100%	3	0.00	\$0.00	\$0.00	\$0.00	\$0.00					Commission Vacuum System			
	Leak Check	04-Mar-19 A	06-Mar-19 A	100%	3	0.00	\$0.00	\$0.00	\$0.00	\$0.00					Leak Check			
	Commision Process Gas System	04-Mar-19 A	05-Mar-19 A	100%	2	0.00	\$0.00	\$0.00	\$0.00	\$0.00					Commision Process Gas System			
	Commission Power Generators	06-Mar-19 A	06-Mar-19 A	100%	1	0.00	\$0.00	\$0.00	\$0.00	\$0.00					Commission Power Generators			
	Commission Magnetrons	07-Mar-19 A	08-Mar-19 A	100%	2	0.00	\$0.00	\$0.00	\$0.00	\$0.00					Commission Magnetrons			
	Pump Down	05-Mar-19 A	06-Mar-19 A	100%	2	0.00	\$0.00	\$0.00	\$0.00	\$0.00					Pump Down			
	Base Pressure Test	07-Mar-19 A	08-Mar-19 A	100%	2	0.00	\$0.00	\$0.00	\$0.00	\$0.00					Base Pressure Test			
	Vacuum FAT	11-Mar-19 A	12-Apr-19 A	100%	3	0.00	\$0.00	\$0.00	\$0.00	\$0.00					Vacuum FAT			
	Open Coater & Sample preparation	11-Feb-19 A	12-Feb-19 A	100%	2	0.00	\$0.00	\$0.00	\$0.00	\$0.00					Open Coater & Sample preparation			
	Pump down	13-Feb-19 A	14-Feb-19 A	100%	2	0.00	\$0.00	\$0.00	\$0.00	\$0.00					Pump down			
	Adjustment single layers	15-Feb-19 A	15-Mar-19 A	100%	20	0.00	\$0.00	\$0.00	\$0.00	\$0.00					Adjustment single layers			
	Adjustment layer stacks	18-Mar-19 A	12-Apr-19 A	100%	17	0.00	\$0.00	\$0.00	\$0.00	\$0.00					Adjustment layer stacks			
	Prepare coater for FAT	10-Apr-19 A	30-Apr-19 A	100%	2	0.00	\$0.00	\$0.00	\$0.00	\$0.00					Prepare coater for FAT			
	FAT	20-May-19 A	24-May-19 A	100%	4	0.00	\$0.00	\$0.00	\$0.00	\$0.00					FAT			
	Analysis FAT data	05-May-19 A	10-May-19 A	100%	2	0.00	\$0.00	\$0.00	\$0.00	\$0.00					Analysis FAT data			
	Coater complete	24-May-19 A		100%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00					Coater complete			
	Mechanical Installation	11-Feb-19 A	26-Feb-19 A	100%	11	0.00	\$0.00	\$0.00	\$0.00	\$0.00					Mechanical Installation			
	Electrical Installation	11-Feb-19 A	26-Feb-19 A	100%	11	0.00	\$0.00	\$0.00	\$0.00	\$0.00					Electrical Installation			
	Technical Commissioning	27-Feb-19 A	01-Mar-19 A	100%	3	0.00	\$0.00	\$0.00	\$0.00	\$0.00					Technical Commissioning			
	Process commissioning	04-Mar-19 A	11-Mar-19 A	100%	6	0.00	\$0.00	\$0.00	\$0.00	\$0.00					Process commissioning			
	Wash Station FAT	12-Mar-19 A	12-Apr-19 A	100%	2	0.00	\$0.00	\$0.00	\$0.00	\$0.00					Wash Station FAT			
	Procure and Ship Coating Chamber Chiller	28-Feb-18 A	01-Aug-18 A	100%	55	0.00	\$0.00	\$75,000.00	\$75,000.00	\$75,000.00					Procure and Ship Coating Chamber Chiller			
	Coating Chamber Chiller Installation and Test contra	01-Mar-18 A	31-Jan-19 A	100%	66	0.00	\$0.00	\$75,000.00	\$75,000.00	\$75,000.00					Coating Chamber Chiller Installation and Test contracted support			
	Coating Chamber Chiller procurement, Installation a	01-Mar-18 A	31-Jan-19 A	100%	100	630.00	\$51,985.80	\$0.00	\$51,985.80	\$51,985.80					Coating Chamber Chiller procurement, Installation and test before coating plant arrival			
	Procure additional reservoir tanks and extamtion tan	20-May-19 A	30-May-19 A	100%	1	0.00	\$0.00	\$26,198.00	\$26,198.00	\$26,198.00					Procure additional reservoir tanks and extamtion tanks for cooling re-circulation system			
Implement chiller remote monitoring	22-Jan-20	22-Jan-20	0%	1	0.00	\$0.00	\$14,971.00	\$14,971.00	\$14,971.00	120				Implement chiller remote monitoring				
LSST ME 19-05.04C.09.03 Mirror Cleaning System	31-May-19 A	30-Dec-19		25	0.00	\$0.00	\$254,566.49	\$254,566.49	\$254,566.49	702								
T&SC-30i	On-Telescope Mirror Cleaning System Planning Pac	31-May-19 A	30-Dec-19	10%	25	0.00	\$0.00	\$254,566.49	\$254,566.49	702					On-Telescope Mirror Cleaning System Planning Package			
LSST ME 19-05.04C.10 Observatory Control System																		
LSST ME 19-05.04C.10.01 Management and Engineering																		
T&SC-69i	Software and Control Subsys Mgmt - FY 1 - Labor	01-Sep-14 A	28-Oct-14 A	100%	40	150.00	\$14,101.50	\$0.00	\$14,101.50					Software and Control Subsys Mgmt - FY 1 - Labor				
T&SC-69i	Software and Control Subsys Mgmt - FY 2 - Labor	01-Dec-14 A	30-Sep-15 A	100%	199	1440.00	\$142,329.60	\$0.00	\$142,329.60					Software and Control Subsys Mgmt - FY 2 - Labor				
T&SC-69i	Software and Control Subsys Mgmt - FY 3 - Labor	01-Oct-15 A	30-Sep-16 A	100%	248	1980.00	\$202,554.00	\$0.00	\$202,554.00					Software and Control Subsys Mgmt - FY 3 - Labor				
T&SC-69i	Software and Control Subsys Mgmt - FY 4 - Labor	03-Oct-16 A	29-Sep-17 A	100%	245	2160.00	\$228,700.80	\$0.00	\$228,700.80					Software and Control Subsys Mgmt - FY 4 - Labor				
T&SC-69i	Software and Control Subsys Mgmt - FY 5 - Labor	02-Oct-17 A	28-Sep-18 A	100%	244	1575.00	\$172,588.50	\$0.00	\$172,588.50					Software and Control Subsys Mgmt - FY 5 - Labor				
T&SC-69i	Software and Control Subsys Mgmt - FY 6 - Labor	01-Oct-18 A	31-Dec-18 A	100%	59	450.00	\$51,039.00	\$0.00	\$51,039.00					Software and Control Subsys Mgmt - FY 6 - Labor				
T&SC-69i	Schedule planning	01-Oct-14 A	28-Oct-14 A	100%	20	160.00	\$15,814.40	\$0.00	\$15,814.40					Schedule planning				
T&SC-69i	Interfaces Workshop at SLAC	10-Nov-14 A	17-Nov-14 A	100%	10	80.00	\$7,907.20	\$0.00	\$7,907.20					Interfaces Workshop at SLAC				
T&SC-69i	Software development planning	14-Nov-14 A	20-Mar-15 A	100%	15	120.00	\$11,860.80	\$0.00	\$11,860.80					Software development planning				
T&SC-69i	Software Quality Assurance - FY 1 - Labor	01-Sep-14 A	30-Sep-14 A	100%	40	150.00	\$10,135.50	\$0.00	\$10,135.50					Software Quality Assurance - FY 1 - Labor				
T&SC-69i	Software Quality Assurance - FY 2 - Labor	01-Dec-14 A	30-Sep-15 A	100%	199	1440.00	\$102,686.40	\$0.00	\$102,686.40					Software Quality Assurance - FY 2 - Labor				
T&SC-69i	Software Quality Assurance - FY 3 - Labor	01-Oct-15 A	30-Sep-16 A	100%	248	550.00	\$40,595.50	\$0.00	\$40,595.50					Software Quality Assurance - FY 3 - Labor				
T&SC-69i	Software Quality Assurance - FY 2 - Labor	01-Oct-14 A	30-Nov-14 A	100%	45	506.97	\$36,152.12	\$0.00	\$36,152.12					Software Quality Assurance - FY 2 - Labor				
T&SC-69i	Software Development Planning	03-Nov-14 A	07-Nov-14 A	100%	15	120.00	\$8,557.20	\$0.00	\$8,557.20					Software Development Planning				
T&SC-69i	OCS/CCS/DMCS Workshop	10-Nov-14 A	17-Nov-14 A	100%	5	40.00	\$2,852.40	\$0.00	\$2,852.40					OCS/CCS/DMCS Workshop				
T&SC-69i	OCS Subsys Mgmt - FY 2 - Labor	01-Jun-15 A	30-Sep-15 A	100%	110	1352.00	\$128,331.84	\$0.00	\$128,331.84					OCS Subsys Mgmt - FY 2 - Labor				
T&SC-69i	Software and Control Subsys Mgmt NonLabor	01-Nov-14 A	31-Dec-18 A	100%	1080	0.00	\$0.00	\$108,584.65	\$108,584.65					Software and Control Subsys Mgmt NonLabor				
T&SC-69i	Software Quality Assurance NonLabor	01-Nov-14 A	31-Dec-18 A	100%	1080	0.00	\$0.00	\$67,511.07	\$67,511.07					Software Quality Assurance NonLabor				
T&SC-69i	OCS Subsys Mgmt NonLabor	01-Jul-15 A	31-Dec-18 A	100%	906	0.00	\$0.00	\$51,015.50	\$51,015.50					OCS Subsys Mgmt NonLabor				
T&SC-70i	OCS Scheduler NonLabor	01-Aug-14 A	29-Sep-17 A	100%	778	0.00	\$0.00	\$68,986.84	\$68,986.84					OCS Scheduler NonLabor				
T&SC-72i	OCS Communications Middleware NonLabor	01-Aug-14 A	31-Jan-17 A	100%	620	0.00	\$0.00	\$7,263.44	\$7,263.44					OCS Communications Middleware NonLabor				
T&SC-76i	OTS Application NonLabor	01-Jun-16 A	28-Sep-18 A	100%	593	0.00	\$0.00	\$29,816.92	\$29,816.92					OTS Application NonLabor				

## LSST May 2019 Month End Forecast

Activity ID	Activity Name	Start	Finish	Physical % Complete	Original Duration	Budgeted Labor Units	Budgeted Labor Cost	Budgeted Material Cost	Budgeted Total Cost no	Total Float	FY2015 2014-10-01	FY2016 2015-10-01	FY2017 2016-10-01	FY2018 2017-10-01	FY2019 2018-10-01	FY2020 2019-10-01	FY2021 2020-10-01	FY2022 2021-10-01	
	T&SC-77i Monitor - NonLabor	01-Jun-16 A	31-Dec-18 A	100%	627	0.00	\$0.00	\$2,590.90	\$2,590.90										
	T&SC-77i ROS Subsys Mgmt NonLabor	01-Jun-16 A	31-Dec-18 A	100%	631	0.00	\$0.00	\$43,075.28	\$43,075.28										
	T&SC-77i OCS Training	01-Jun-17 A	09-Jun-17 A	100%	27	216.00	\$16,500.24	\$0.00	\$16,500.24										
	T&SC-77i Newhire Andrés Anania start	01-Jun-17 A		100%	0	0.00	\$0.00	\$0.00	\$0.00										
	T&SC-77i Close out 1.04C.10.##		28-Feb-19 A	100%	0	0.00	\$0.00	\$0.00	\$0.00										
	TSS-105i Scheduler QA - Phase 2	13-Nov-17 A	15-Nov-17 A	100%	40	120.00	\$10,346.40	\$0.00	\$10,346.40										
	TSS-411 OCS plan and accounts management 2016-I	29-Feb-16 A	29-Feb-16 A	100%	40	120.00	\$12,705.60	\$0.00	\$12,705.60										
	TSS-474 Test SAL v3.0	04-May-16 A	17-May-16 A	100%	40	120.00	\$10,346.40	\$0.00	\$10,346.40										
	TSS-632 Workshops 2016	13-Jul-16 A	02-Sep-16 A	100%	32	68.30	\$7,231.60	\$0.00	\$7,231.60										
	TSS-802 Training 2016	02-Sep-16 A	04-Oct-16 A	100%	32	68.30	\$7,231.60	\$0.00	\$7,231.60										
	TSS-834 OCS Software Internal Review 2016	20-Oct-16 A	01-Nov-16 A	100%	40	40.00	\$4,235.20	\$0.00	\$4,235.20										
	TSS-926 Scheduler v1 QA	29-Nov-16 A	10-Jan-17 A	100%	32	68.30	\$7,231.60	\$0.00	\$7,231.60										
	TSS-933 EFD v3 QA	21-Jul-17 A	21-Jul-17 A	100%	40	120.00	\$10,346.40	\$0.00	\$10,346.40										
	TSS-940 Generate SAL JAVA automated tests	01-Aug-16 A	08-Dec-17 A	100%	40	120.00	\$10,346.40	\$0.00	\$10,346.40										
	TSS-941 SAL LabVIEW Automated Tests	29-Dec-16 A	30-Dec-16 A	100%	79	203.14	\$15,518.08	\$0.00	\$15,518.08										
	TSS-942 Generate SAL automated tests - Phase 2	17-Jan-17 A	20-Dec-17 A	100%	40	190.00	\$15,693.70	\$0.00	\$15,693.70										
	LSST ME 19-05.04C.10.02 Scheduler																		
	T&SC-70i OCS Scheduler - FY 1 - Labor	01-Sep-14 A	30-Sep-14 A	100%	40	450.00	\$42,304.50	\$0.00	\$42,304.50										
	T&SC-70i OCS Scheduler - FY 2 - Labor	01-Dec-14 A	30-Sep-15 A	100%	204	1480.00	\$146,283.20	\$0.00	\$146,283.20										
	T&SC-70i Design & Document Scheduler Interfaces	02-Feb-15 A	20-Feb-15 A	100%	15	120.00	\$11,860.80	\$0.00	\$11,860.80										
	T&SC-70i Design & Document OpSim V4 Composition	01-Feb-15 A	12-Feb-15 A	100%	10	80.00	\$7,907.20	\$0.00	\$7,907.20										
	T&SC-70i Internal Review of 1 & 2	09-Feb-15 A	19-Feb-15 A	100%	10	80.00	\$7,907.20	\$0.00	\$7,907.20										
	T&SC-70i Introductory training for SW-simulations new hire	02-Feb-15 A	06-Feb-15 A	100%	5	40.00	\$3,953.60	\$0.00	\$3,953.60										
	T&SC-72i LTS-237 OCS Commanding and Scripting document updates.	01-Oct-14 A	23-Oct-14 A	100%	18	144.00	\$13,668.48	\$0.00	\$13,668.48										
	T&SC-72i OCS Schedule Planning	01-Nov-14 A	01-Dec-14 A	100%	20	120.00	\$11,390.40	\$0.00	\$11,390.40										
	T&SC-72i OCS/CCS/DMCS Workshop	10-Nov-14 A	14-Nov-14 A	100%	5	40.00	\$3,796.80	\$0.00	\$3,796.80										
	T&SC-72i LTS-209 OCS Design document updates	01-Jun-15 A	24-Jun-15 A	100%	18	144.00	\$13,668.48	\$0.00	\$13,668.48										
	TSS-103 Implement Scheduler structure with interface	30-Sep-15 A	19-Oct-15 A	100%	13	78.00	\$7,979.40	\$0.00	\$7,979.40										
	TSS-104 Implement Scheduler time handling	19-Oct-15 A	23-Oct-15 A	100%	13	78.00	\$7,979.40	\$0.00	\$7,979.40										
	TSS-105 Refactor and integrate Scheduler observatory model	19-Nov-15 A	30-Nov-15 A	100%	13	78.00	\$7,979.40	\$0.00	\$7,979.40										
	TSS-106 Implement Scheduler Scripted Proposal	21-Dec-15 A	23-Dec-15 A	100%	13	78.00	\$7,979.40	\$0.00	\$7,979.40										
	TSS-107 Integrate with SOCS v0.2	23-Dec-15 A	28-Dec-15 A	100%	19	118.00	\$12,071.40	\$0.00	\$12,071.40										
	TSS-1136 Prepare Schedule package for OpSim4	01-Mar-17 A	17-Apr-17 A	100%	85	151.00	\$15,987.88	\$0.00	\$15,987.88										
	TSS-166 Refactor and integrate Astronomical Sky	23-Mar-16 A	30-Mar-16 A	100%	12	74.00	\$7,570.20	\$0.00	\$7,570.20										
	TSS-167 Integrate Observatory Model slew time estimations	27-Jan-16 A	29-Feb-16 A	100%	18	111.00	\$11,355.30	\$0.00	\$11,355.30										
	TSS-168 Implement Survey Conductor with slew time cost	18-Mar-16 A	30-Apr-16 A	100%	24	148.00	\$15,140.40	\$0.00	\$15,140.40										
	TSS-169 Refactor and integrate Area Distribution Science Pro	25-Apr-16 A	12-May-16 A	100%	24	148.00	\$15,140.40	\$0.00	\$15,140.40										
	TSS-170 Integrate and benchmark performance with SOCS v	14-Jan-16 A	31-May-16 A	100%	24	148.00	\$15,140.40	\$0.00	\$15,140.40										
	TSS-171 Refactor and integrate Time Distribution Science Pro	09-Dec-16 A	01-Mar-17 A	100%	48	166.00	\$16,981.80	\$0.00	\$16,981.80										
	TSS-172 Incorporate filter swaps during new moon	26-Sep-16 A	28-Sep-16 A	100%	12	74.00	\$7,570.20	\$0.00	\$7,570.20										
	TSS-173 Handle downtime	12-Oct-16 A	12-Oct-16 A	100%	6	37.00	\$3,785.10	\$0.00	\$3,785.10										
	TSS-174 Handle dynamic configuration	12-Aug-16 A	12-Aug-16 A	100%	6	37.00	\$3,785.10	\$0.00	\$3,785.10										
	TSS-175 Implement inter-proposal self balancing priority	26-Aug-16 A	02-Sep-16 A	100%	12	70.00	\$7,161.00	\$0.00	\$7,161.00										
	TSS-176 Incorporate weather telemetry handling	14-Oct-16 A	14-Oct-16 A	100%	12	70.00	\$7,161.00	\$0.00	\$7,161.00										
	TSS-177 Integrate with SOCS v1.0	11-Nov-16 A	01-Mar-17 A	100%	24	189.00	\$19,653.32	\$0.00	\$19,653.32										
	TSS-2010 Scheduler Release v1.2 Extension	01-Oct-17 A	31-Jan-18 A	100%	84	400.00	\$31,628.00	\$0.00	\$31,628.00										
	TSS-2011 Scheduler Release v1.3	15-Feb-18 A	31-Oct-18 A	100%	79	872.00	\$98,338.44	\$0.00	\$98,338.44										
	TSS-2011 Scheduler Release v1.3 Extension	15-Feb-18 A	31-Oct-18 A	100%	85	0.00	\$0.00	\$0.00	\$0.00										
	TSS-2012 Scheduler Release v1.4	05-Nov-18 A	30-Nov-18 A	100%	107	907.85	\$72,322.03	\$0.00	\$72,322.03										
	TSS-367 Integrate fields tessellation	28-Jun-16 A	26-Oct-16 A	100%	85	300.00	\$30,742.73	\$0.00	\$30,742.73										
	TSS-629 SPIE 2016 Scheduler	14-Jun-16 A	18-Jul-16 A	100%	20	0.00	\$0.00	\$0.00	\$0.00										
	TSSPP-1 Scheduler Release v0.1	23-Apr-15 A	31-Jul-15 A	100%	71	0.00	\$0.00	\$0.00	\$0.00										
	TSSPP-2 Scheduler Release v0.2	03-Aug-15 A	02-Dec-15 A	100%	85	0.00	\$0.00	\$0.00	\$0.00										
	TSSPP-25 Scheduler Release v0.3	03-Dec-15 A	31-May-16 A	100%	100	0.00	\$0.00	\$0.00	\$0.00										
	TSSPP-26 Scheduler Release v1.0	01-Aug-16 A	02-Jan-17 A	100%	120	8.00	\$820.55	\$0.00	\$820.55										
	TSSPP-28 Scheduler Release v1.1	01-Apr-17 A	30-Sep-17 A	100%	61	155.48	\$15,809.41	\$0.00	\$15,809.41										
	TSSPP-2i Scheduler Release Extended activities for 1.0 Compl	03-Jan-17 A	31-Mar-17 A	100%	34	509.28	\$69,361.42	\$0.00	\$69,361.42										
	TSSPP-29 Scheduler Release v1.2	01-Oct-17 A	31-Oct-17 A	100%	85	1491.00	\$183,084.88	\$0.00	\$183,084.88										
	LSST ME 19-05.04C.10.03 Application																		
	T&SC-72i OCS Communications Middleware - FY 1 - Labor	01-Aug-14 A	29-Aug-14 A	100%	21	140.50	\$12,635.17	\$0.00	\$12,635.17										
	T&SC-72i OCS Communications Middleware - FY 2 - Labor	01-Dec-14 A	30-Sep-15 A	100%	212	800.00	\$75,936.00	\$0.00	\$75,936.00										
	T&SC-72i OCS Comm Mdl Ware App - Acquisition	01-Aug-14 A	31-Dec-14 A	100%	22	65.00	\$5,860.41	\$0.00	\$5,860.41										
	T&SC-72i OCS Comm Mdl Ware Deployment / Developmnet	01-Dec-14 A	01-Jun-15 A	100%	99	702.59	\$66,689.84	\$0.00	\$66,689.84										
	T&SC-72i Middleware release preparation	01-Oct-14 A	31-Oct-14 A	100%	15	120.00	\$11,390.40	\$0.00	\$11,390.40										
	T&SC-72i Middleware deployment/installation at SLAC	10-Nov-14 A	13-Nov-14 A	100%	5	40.00	\$3,796.80	\$0.00	\$3,796.80										
	T&SC-72i Middleware updates: commands, labview interface	01-Dec-14 A	03-Aug-15 A	100%	20	160.00	\$15,187.20	\$0.00	\$15,187.20										
	TSS-125 Develop class framework for application central comp	21-Jul-17 A	21-Jul-17 A	100%	56	80.00	\$7,859.20	\$0.00	\$7,859.20										
	TSS-126 Instantiate class for known component	01-Jul-17 A	21-Jul-17 A	100%	13	80.00	\$7,859.20	\$0.00	\$7,859.20										
	TSS-127 Subscribe to event and telemetry for business logic	01-Jul-17 A	21-Jul-17 A	100%	13	70.00	\$6,876.80	\$0.00	\$6,876.80										
	TSS-128 Generate events associated with operations mode	01-Jul-17 A	21-Jul-17 A	100%	25	60.00	\$5,894.40	\$0.00	\$5,894.40										
	TSS-129 Develop Application GUI	01-Sep-17 A	10-Nov-17 A	100%	22	70.00	\$6,876.80	\$0.00	\$6,876.80										
	TSS-1884 Pathfinder Exercise 5a	01-Oct-17 A	19-Apr-18 A	100%	40	496.70	\$48,907.25	\$0.00	\$48,907.25										



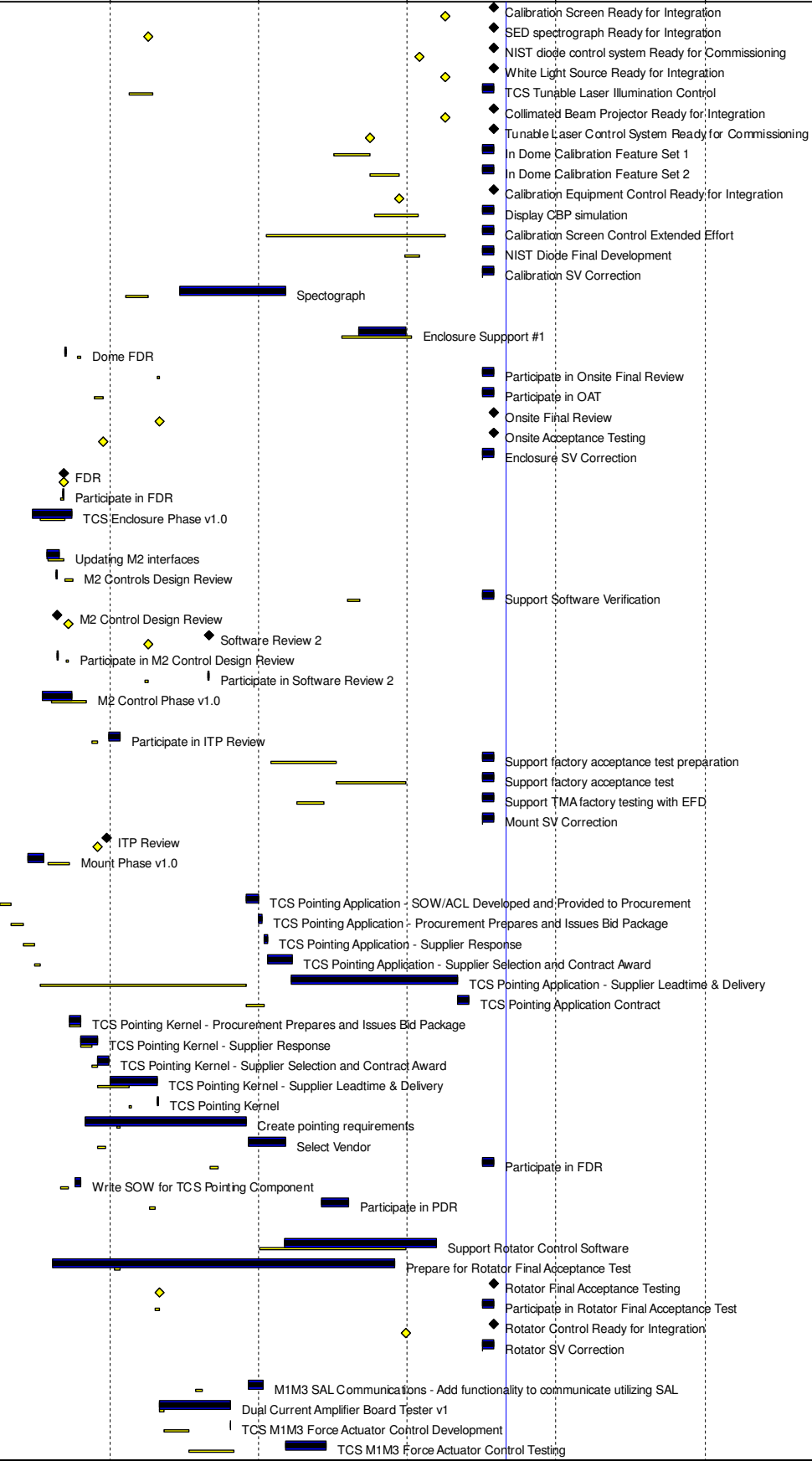
LSST May 2019 Month End Forecast

Activity ID	Activity Name	Start	Finish	Physical % Complete	Original Duration	Budgeted Labor Units	Budgeted Labor Cost	Budgeted Material Cost	Budgeted Total Cost no	Total Float	FY2015 2014-10-01	FY2016 2015-10-01	FY2017 2016-10-01	FY2018 2017-10-01	FY2019 2018-10-01	FY2020 2019-10-01	FY2021 2020-10-01	FY2022 2021-10-01
TSS-2301	Pathfinder: OCS Aux/Tel Visit + Images (Control Only)	06-Feb-18 A	08-Jun-18 A	100%	20	37.00	\$2,925.59	\$0.00	\$2,925.59									
TSS-364	Application documentation update	29-Apr-16 A	29-Apr-16 A	100%	70	40.00	\$3,929.60	\$0.00	\$3,929.60									
TSS-651	SPIE 2016 - 04C.10.03	13-Jun-16 A	13-Jul-16 A	100%	13	40.00	\$3,929.60	\$0.00	\$3,929.60									
TSS-652	LSST Workshop - 04C.10.03	17-Jun-16 A	17-Jun-16 A	100%	10	56.69	\$5,569.34	\$0.00	\$5,569.34									
TSS-922	OCS Application Design phase 2	05-Dec-16 A	21-Jul-17 A	100%	112	40.00	\$4,067.20	\$0.00	\$4,067.20									
TSS-923	Define and document main states	21-Nov-16 A	05-Dec-16 A	100%	84	40.00	\$3,970.55	\$0.00	\$3,970.55									
TSS-SV1	OCS Application SV Correction	02-Apr-19 A	30-Apr-19 A	100%	1	-440.75	(\$36,066.74)	\$0.00	(\$36,066.74)									
TSS-SV1	OCS Application Ready for Integration		30-Apr-19 A	100%	0	0.00	\$0.00	\$0.00	\$0.00									
TSS-SV1	OCS Application phase 3 development	02-Apr-19 A	30-Apr-19 A	100%	143	1542.90	\$162,374.80	\$0.00	\$162,374.80									
TSS-SV1	OCS Application 2.3	02-Apr-19 A	30-Apr-19 A	100%	3	20.00	\$1,581.40	\$0.00	\$1,581.40									
TSS-SV1	OCS Application 2.5	02-Apr-19 A	30-Apr-19 A	100%	48	20.00	\$1,581.40	\$0.00	\$1,581.40									
TSS-SV1	OCS Application 3.0	02-Apr-19 A	30-Apr-19 A	100%	34	257.60	\$21,072.16	\$0.00	\$21,072.16									
TSSPP-1	Application Release 2.0	01-Oct-17 A	31-Oct-17 A	100%	92	0.00	\$0.00	\$0.00	\$0.00									
TSSPP-5	Release V2.4	31-Aug-15 A	18-Dec-15 A	100%	15	0.00	\$0.00	\$0.00	\$0.00									
TSSPP-6	Release V2.5	22-Sep-15 A	18-Dec-15 A	100%	65	0.00	\$0.00	\$0.00	\$0.00									
TSSPP-92	Application Release 0.1	01-Feb-16 A	24-May-16 A	100%	82	40.00	\$3,929.60	\$0.00	\$3,929.60									
TSSPP-99	Application Release 1.2	17-Jan-17 A	09-Nov-17 A	100%	94	265.00	\$26,945.20	\$0.00	\$26,945.20									
LSST ME 19-05.04C.10.04 Sequencer					05-Oct-15 A	30-Apr-19 A	914	1819.17	\$165,406.53	\$0.00	\$165,406.53							
TSS-117	Develop class framework for commandable entity	05-Oct-15 A	20-Oct-15 A	100%	37	88.00	\$8,645.12	\$0.00	\$8,645.12									
TSS-118	Instantiate class for known entity	23-Nov-15 A	23-Nov-15 A	100%	13	70.00	\$6,876.80	\$0.00	\$6,876.80									
TSS-119	Test event reception within instantiated class	25-Oct-16 A	25-Oct-16 A	100%	25	159.00	\$15,620.16	\$0.00	\$15,620.16									
TSS-120	Develop Console GUI	18-Dec-15 A	19-Mar-16 A	100%	25	159.00	\$15,620.16	\$0.00	\$15,620.16									
TSS-121	Develop class framework for sequencer central compo	01-Dec-16 A	17-Jan-17 A	100%	87	239.00	\$23,479.36	\$0.00	\$23,479.36									
TSS-122	Instantiate class for known entity	02-Mar-17 A	02-Mar-17 A	100%	49	80.00	\$7,859.20	\$0.00	\$7,859.20									
TSS-123	Test event reception within instantiated class	01-Oct-16 A	31-Oct-16 A	100%	61	160.00	\$15,718.40	\$0.00	\$15,718.40									
TSS-124	Develop Sequencer GUI	30-Jan-17 A	28-Feb-17 A	100%	61	60.00	\$5,894.40	\$0.00	\$5,894.40									
TSS-365	Sequencer documentation update																	

## LSST May 2019 Month End Forecast

Activity ID	Activity Name	Start	Finish	Physical % Complete	Original Duration	Budgeted Labor Units	Budgeted Labor Cost	Budgeted Material Cost	Budgeted Total Cost no	Total Float	FY2015 2014-10-01	FY2016 2015-10-01	FY2017 2016-10-01	FY2018 2017-10-01	FY2019 2018-10-01	FY2020 2019-10-01	FY2021 2020-10-01	FY2022 2021-10-01
	TSS-137	update simulators dome mount rotator/hexapod m1r	01-Sep-16 A	01-Sep-16 A	100%	20	80.00	\$7,859.20	\$0.00	\$7,859.20								
	TSS-139	software summit	08-May-17 A	08-May-17 A	100%	7	32.00	\$3,143.68	\$0.00	\$3,143.68								
	TSS-140	scheduler	20-Sep-17 A	20-Sep-17 A	100%	23	32.00	\$3,143.68	\$0.00	\$3,143.68								
	TSS-142	integrate simulator set into SDK	18-Sep-17 A	18-Sep-17 A	100%	7	32.00	\$3,143.68	\$0.00	\$3,143.68								
	TSS-151	LSST 2016	22-Aug-16 A	22-Aug-16 A	100%	7	32.00	\$3,143.68	\$0.00	\$3,143.68								
	TSS-SV1	Interfaces and Simulators	02-Apr-19 A	30-Apr-19 A	100%	56	40.00	\$3,929.60	\$0.00	\$3,929.60								
	TSS-SV1	SAL Release V4.0	02-Apr-19 A	30-Apr-19 A	100%	96	248.00	\$24,585.69	\$0.00	\$24,585.69								
	TSS-SV1	OCS interfaces	02-Apr-19 A	30-Apr-19 A	100%	20	39.69	\$3,994.62	\$0.00	\$3,994.62								
	TSS-SV1	Update interfaces	02-Apr-19 A	30-Apr-19 A	100%	20	80.00	\$7,859.20	\$0.00	\$7,859.20								
	TSS-SV1	Add whitelister support	02-Apr-19 A	30-Apr-19 A	100%	20	80.00	\$7,859.20	\$0.00	\$7,859.20								
	TSS-SV1	Add heartbeat support	02-Apr-19 A	30-Apr-19 A	100%	20	40.00	\$3,929.60	\$0.00	\$3,929.60								
	TSS-SV1	wavefront interfaces	02-Apr-19 A	30-Apr-19 A	100%	7	32.00	\$3,143.68	\$0.00	\$3,143.68								
	TSS-SV1	implement OCS interfaces	02-Apr-19 A	30-Apr-19 A	100%	17	32.00	\$3,143.68	\$0.00	\$3,143.68								
	TSS-SV1	Telemetry Ready for Integration		30-Apr-19 A	100%	0	0.00	\$0.00	\$0.00	\$0.00								
	TSS-SV4	Telemetry SV Correction	02-Apr-19 A	30-Apr-19 A	100%	1	-545.85	(\$44,667.00)	\$0.00	(\$44,667.00)								
	TSSPP-65	Update Simulators & Docs	01-Oct-17 A	31-Oct-17 A	100%	20	40.00	\$4,067.20	\$0.00	\$4,067.20								
	LSST ME 19-05.04C.10.11 Engineering and Facility Database					28-Oct-15 A	30-Apr-19 A		508	833.38	\$72,209.81	\$0.00	\$72,209.81					
	TSS-134	Update definitions and documentation	18-Jul-17 A	18-Jul-17 A	100%	12	76.00	\$7,466.24	\$0.00	\$7,466.24								
	TSS-145	EFD prototype	28-Oct-15 A	18-Dec-15 A	100%	29	40.00	\$3,929.60	\$0.00	\$3,929.60								
	TSS-2075	Develop test suite with EFD data	23-Oct-17 A	30-May-18 A	100%	63	504.00	\$39,851.28	\$0.00	\$39,851.28								
	TSS-534	Install hw & sw & configure 2 clusters	01-Jun-17 A	31-Jul-17 A	100%	16	113.38	\$11,138.69	\$0.00	\$11,138.69								
	TSS-SV1	EFD Ready for Integration		30-Apr-19 A	100%	0	0.00	\$0.00	\$0.00	\$0.00								
	TSSPP-63	EFD Prototype	15-Dec-15 A	31-Jul-17 A	100%	47	80.00	\$7,859.20	\$0.00	\$7,859.20								
	TSSPP-9	EFD Development for SAL V3.0	01-Jun-16 A	30-Jun-16 A	100%	12	20.00	\$1,964.80	\$0.00	\$1,964.80								
	LSST ME 19-05.04C.10.12 Computer Hardware					02-Apr-19 A	30-Apr-19 A		991	0.00	\$0.00	\$112,983.11	\$112,983.11					
	T&SC-73i	OCS Computer Hardware	02-Apr-19 A	30-Apr-19 A	100%	775	0.00	\$0.00	\$47,903.75	\$47,903.75								
	T&SC-77i	ROS Computer Hardware	02-Apr-19 A	08-Apr-19 A	100%	40	0.00	\$0.00	\$174,626.85	\$174,626.85								
	TSS-2026	OCS Computer Hardware Ready for Integration		30-Apr-19 A	100%	0	0.00	\$0.00	\$0.00									

LSST May 2019 Month End Forecast																		
Activity ID	Activity Name	Start	Finish	Physical % Complete	Original Duration	Budgeted Labor Units	Budgeted Labor Cost	Budgeted Material Cost	Budgeted Total Cost no	Total Float	FY2015 2014-10-01	FY2016 2015-10-01	FY2017 2016-10-01	FY2018 2017-10-01	FY2019 2018-10-01	FY2020 2019-10-01	FY2021 2020-10-01	FY2022 2021-10-01
TSS-SV1	Calibration Screen Ready for Integration		30-Apr-19 A	100%	0	0.00	\$0.00	\$0.00	\$0.00						◆	◆	◆	◆ Calibration Screen Ready for Integration
	SED spectrograph Ready for Integration		30-Apr-19 A	100%	0	0.00	\$0.00	\$0.00	\$0.00						◆	◆	◆	◆ SED spectrograph Ready for Integration
	NIST diode control system Ready for Commissioning		30-Apr-19 A	100%	0	0.00	\$0.00	\$0.00	\$0.00			◆					◆	◆ NIST diode control system Ready for Commissioning
	White Light Source Ready for Integration		30-Apr-19 A	100%	0	0.00	\$0.00	\$0.00	\$0.00					◆			◆	◆ White Light Source Ready for Integration
	TCS Tunable Laser Illumination Control	02-Apr-19 A	30-Apr-19 A	100%	40	120.00	\$9,166.80	\$0.00	\$9,166.80			—					■	■ TCS Tunable Laser Illumination Control
	Collimated Beam Projector Ready for Integration		30-Apr-19 A	100%	0	0.00	\$0.00	\$0.00	\$0.00						◆		◆	◆ Collimated Beam Projector Ready for Integration
	Tunable Laser Control System Ready for Commissioning		30-Apr-19 A	100%	0	0.00	\$0.00	\$0.00	\$0.00						◆		◆	◆ Tunable Laser Control System Ready for Commissioning
	In Dome Calibration Feature Set 1	02-Apr-19 A	30-Apr-19 A	100%	64	90.00	\$7,116.30	\$0.00	\$7,116.30					—			■	■ In Dome Calibration Feature Set 1
	In Dome Calibration Feature Set 2	02-Apr-19 A	30-Apr-19 A	100%	50	20.00	\$1,581.40	\$0.00	\$1,581.40					—			■	■ In Dome Calibration Feature Set 2
	Calibration Equipment Control Ready for Integration		30-Apr-19 A	100%	0	0.00	\$0.00	\$0.00	\$0.00						◆		◆	◆ Calibration Equipment Control Ready for Integration
TSS-SV1	Display CBP simulation	02-Apr-19 A	30-Apr-19 A	100%	76	100.00	\$7,982.44	\$0.00	\$7,982.44						—		■	■ Display CBP simulation
TSS-SV1	Calibration Screen Control Extended Effort	02-Apr-19 A	30-Apr-19 A	100%	305	0.00	\$0.00	\$0.00	\$0.00					—			■	■ Calibration Screen Control Extended Effort
TSS-SV1	NIST Diode Final Development	02-Apr-19 A	30-Apr-19 A	100%	26	15.00	\$1,222.81	\$0.00	\$1,222.81								■	■ NIST Diode Final Development
TSS-SV6	Calibration SV Correction	02-Apr-19 A	30-Apr-19 A	100%	1	-608.16	(\$49,765.38)	\$0.00	(\$49,765.38)								■	■ Calibration SV Correction
TSSPP-1	Spectograph	21-Mar-17 A	06-Dec-17 A	100%	38	120.00	\$9,166.80	\$0.00	\$9,166.80			—	—	—				
LSST ME 19-05.04C.11.04 TCS Enclosure Control		25-Mar-16 A	30-Apr-19 A		755	580.38	\$47,355.84	\$0.00	\$47,355.84									
TCSENC1	Enclosure Support #1	04-Jun-18 A	28-Sep-18 A	100%	122	90.00	\$9,498.75	\$0.00	\$9,498.75					—	—			
TSS-587	Dome FDR	14-Jun-16 A	14-Jun-16 A	100%	6	0.00	\$0.00	\$0.00	\$0.00			■						
TSS-SV1	Participate in Onsite Final Review	02-Apr-19 A	30-Apr-19 A	100%	5	75.43	\$5,762.25	\$0.00	\$5,762.25								■	■ Participate in Onsite Final Review
TSS-SV1	Participate in OAT	02-Apr-19 A	30-Apr-19 A	100%	15	80.00	\$5,904.80	\$0.00	\$5,904.80			—					■	■ Participate in OAT
TSS-SV1	Onsite Final Review		30-Apr-19 A	100%	0	0.00	\$0.00	\$0.00	\$0.00				◆				◆	◆ Onsite Final Review
TSS-SV1	Onsite Acceptance Testing		30-Apr-19 A	100%	0	0.00	\$0.00	\$0.00	\$0.00				◆				◆	◆ Onsite Acceptance Testing
TSS-SV7	Enclosure SV Correction	02-Apr-19 A	30-Apr-19 A	100%	1	182.95	\$14,970.92	\$0.00	\$14,970.92								■	■ Enclosure SV Correction
TSSPP-1	FDR		10-Jun-16 A	100%	0	0.00	\$0.00	\$0.00	\$0.00									
TSSPP-1	Participate in FDR	06-Jun-16 A	10-Jun-16 A	100%	8	60.00	\$4,428.60	\$0.00	\$4,428.60			■						
TSSPP-76	TCS Enclosure Phase v1.0	25-Mar-16 A	30-Jun-16 A	100%	44	92.00	\$6,790.52	\$0.00	\$6,790.52			■						
LSST ME 19-05.04C.11.05 TCS M2		19-Apr-16 A	30-Apr-19 A		534	467.95	\$35,541.32	\$0.00	\$35,541.32									
TSS-414	Updating M2 interfaces	29-Apr-16 A	29-May-16 A	100%	30	50.00	\$3,690.50	\$0.00	\$3,690.50			■						
TSS-497	M2 Controls Design Review	23-May-16 A	23-May-16 A	100%	15	50.00	\$3,690.50	\$0.00	\$3,690.50			■						
TSS-SV1	Support Software Verification	02-Apr-19 A	30-Apr-19 A	100%	22	150.00	\$11,860.50	\$0.00	\$11,860.50					—			■	■ Support Software Verification
TSSPP-1	M2 Control Design Review		24-May-16 A	100%	0	0.00	\$0.00	\$0.00	\$0.00									
TSSPP-1	Software Review 2		31-May-17 A	100%	0	0.00	\$0.00	\$0.00	\$0.00									
TSSPP-1	Participate in M2 Control Design Review	24-May-16 A	27-May-16 A	100%	5	65.43	\$4,829.54	\$0.00	\$4,829.54				◆					
TSSPP-1	Participate in Software Review 2	30-May-17 A	31-May-17 A	100%	6	82.52	\$6,303.58	\$0.00	\$6,303.58				■					
TSSPP-73	M2 Control Phase v1.0	19-Apr-16 A	30-Jun-16 A	100%	59	70.00	\$5,166.70	\$0.00	\$5,166.70			■						
LSST ME 19-05.04C.11.06 TCS Mount		14-Mar-16 A	30-Apr-19 A		742	557.19	\$51,201.00	\$0.00	\$51,201.00									
TSS-696	Participate in ITP Review	29-Sep-16 A	26-Oct-16 A	100%	10	80.00	\$5,904.80	\$0.00	\$5,904.80				■					
TSS-SV1	Support factory acceptance test preparation	02-Apr-19 A	30-Apr-19 A	100%	108	525.70	\$45,204.73	\$0.00	\$45,204.73								■	■ Support factory acceptance test preparation
TSS-SV1	Support factory acceptance test	02-Apr-19 A	30-Apr-19 A	100%	122	541.12	\$49,988.18	\$0.00	\$49,988.18								■	■ Support factory acceptance test
TSS-SV1	Support TMA factory testing with EFD	02-Apr-19 A	30-Apr-19 A	100%	45	190.00	\$15,023.30	\$0.00	\$15,023.30					—			■	■ Support TMA factory testing with EFD
TSS-SV8	Mount SV Correction	02-Apr-19 A	30-Apr-19 A	100%	1	-919.63	(\$75,253.41)	\$0.00	(\$75,253.41)								■	■ Mount SV Correction
TSSPP-1	ITP Review		23-Sep-16 A	100%	0	0.00	\$0.00	\$0.00	\$0.00									
TSSPP-79	Mount Phase v1.0	14-Mar-16 A	20-Apr-16 A	100%	40	140.00	\$10,333.40	\$0.00	\$10,333.40			■						
LSST ME 19-05.04C.11.07 TCS Pointing		23-Jun-16 A	30-Apr-19 A		455	220.00	\$16,496.20	\$457,084.78	\$473,580.98									
T&SC-70	TCS Pointing Application - SOW/ACL Developed and	01-Sep-17 A	01-Oct-17 A	100%	20	0.00	\$0.00	\$0.00	\$0.00									
T&SC-70	TCS Pointing Application - Procurement Prepares ar	01-Oct-17 A	08-Oct-17 A	100%	20	0.00	\$0.00	\$0.00	\$0.00									
T&SC-70	TCS Pointing Application - Supplier Response	15-Oct-17 A	22-Oct-17 A	100%	20	0.00	\$0.00	\$0.00	\$0.00									
T&SC-70	TCS Pointing Application - Supplier Selection and Co	23-Oct-17 A	21-Dec-17 A	100%	10	0.00	\$0.00	\$0.00	\$0.00									
T&SC-70	TCS Pointing Application - Supplier Leadtime & Deliv	21-Dec-17 A	31-Jan-19 A	100%	355	0.00	\$0.00	\$0.00	\$0.00									
T&SC-70	TCS Pointing Application Contract	01-Feb-19 A	28-Feb-19 A	100%	28	0.00	\$0.00	\$322,345.24	\$322,345.24									
T&SC-75	TCS Pointing Kernel - Procurement Prepares and Is	23-Jun-16 A	21-Jul-16 A	100%	20	0.00	\$0.00	\$0.00	\$0.00									
T&SC-75	TCS Pointing Kernel - Supplier Response	21-Jul-16 A	31-Aug-16 A	100%	20	0.00	\$0.00	\$0.00	\$0.00									
T&SC-75	TCS Pointing Kernel - Supplier Selection and Contra	01-Sep-16 A	29-Sep-16 A	100%	10	0.00	\$0.00	\$0.00	\$0.00									
T&SC-75	TCS Pointing Kernel - Supplier Leadtime & Delivery	01-Oct-16 A	26-Jan-17 A	100%	54	0.00	\$0.00	\$0.00	\$0.00									
T&SC-75	TCS Pointing Kernel	24-Jan-17 A	27-Jan-17 A	100%	3	0.00	\$0.00	\$134,739.54	\$134,739.54									
TSS-685	Create pointing requirements	01-Aug-16 A	31-Aug-17 A	100%	8	0.00	\$0.00	\$0.00	\$0.00									
TSS-688	Select Vendor	05-Sep-17 A	07-Dec-17 A	100%	11	60.00	\$4,428.60	\$0.00	\$4,428.60									
TSS-SV1	Participate in FDR	02-Apr-19 A	30-Apr-19 A	100%	14	50.00	\$3,819.50	\$0.00	\$3,819.50									
TSSPP-1	Write SOW for TCS Pointing Component	08-Jul-16 A	22-Jul-16 A	100%	16	60.00	\$4,428.60	\$0.00	\$4,428.60									
TSSPP-1	Participate in PDR	05-Mar-18 A	09-May-18 A	100%	10	50.00	\$3,819.50	\$0.00	\$3,819.50									
LSST ME 19-05.04C.11.08 TCS Rotator		13-May-16 A	30-Apr-19 A		626	300.89	\$27,271.93	\$0.00	\$27,271.93									
TSS-1950	Support Rotator Control Software	04-Dec-17 A	11-Dec-18 A	100%	250	359.00	\$32,808.86	\$0.00	\$32,808.86									
TSS-509	Prepare for Rotator Final Acceptance Test	13-May-16 A	31-Aug-18 A	100%	10	70.86	\$5,413.30	\$0.00	\$5,413.30									
TSS-SV1	Rotator Final Acceptance Testing		30-Apr-19 A	100%	0	0.00	\$0.00	\$0.00	\$0.00									
TSS-SV1	Participate in Rotator Final Acceptance Test	02-Apr-19 A	30-Apr-19 A	100%	9	72.92	\$5,570.00	\$0.00	\$5,570.00									
TSS-SV1	Rotator Control Ready for Integration		30-Apr-19 A	100%	0	0.00	\$0.00	\$0.00	\$0.00									
TSS-SV9	Rotator SV Correction	02-Apr-19 A	30-Apr-19 A	100%	1	-201.88	(\$16,520.23)	\$0.00	(\$16,520.23)									
LSST ME 19-05.04C.11.09 TCS M1M3		30-Mar-16 A	30-Apr-19 A		765	6239.94	\$473,797.15	\$0.00	\$473,797.15									
TSS-1002	M1M3 SAL Communications - Add functionality to co	05-Sep-17 A	12-Oct-17 A	100%	12	200.00	\$15,278.00	\$0.00	\$15,278.00									
TSS-1121	Dual Current Amplifier Board Tester v1	01-Feb-17 A	24-Jul-17 A	100%	8	122.08	\$9,326.00	\$0.00	\$9,326.00									
TSS-1197	TCS M1M3 Force Actuator Control Development	24-Jul-17 A	24-Jul-17 A	100%	42	120.00	\$9,166.80	\$0.00	\$9,166.80									
TSS-1254	TCS M1M3 Force Actuator Control Testing	07-Dec-17 A	14-Mar-18 A	100%	80	39.43	\$3,011.70	\$0.00	\$3,011.70									





## LSST May 2019 Month End Forecast




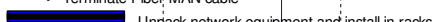



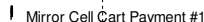
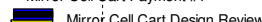
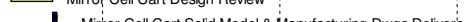
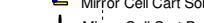


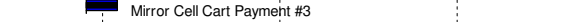


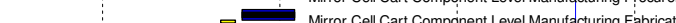











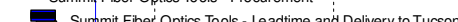
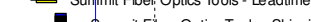


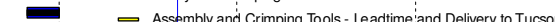
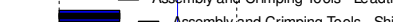






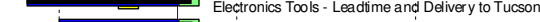


Activity ID		Activity Name	Start	Finish	Physical % Complete	Original Duration	Budgeted Labor Units	Budgeted Labor Cost	Budgeted Material Cost	Budgeted Total Cost no	Total Float	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022	
												2014-10-01	2015-10-01	2016-10-01	2017-10-01	2018-10-01	2019-10-01	2020-10-01	2021-10-01	2022-10-01
	TSS-1268	TCS M1M3 Support System Development	28-Feb-17 A	18-Mar-18 A	100%	198	1000.00	\$77,012.63	\$0.00	\$77,012.63										
	TSS-1269	TCS M1M3 Support System Testing	21-Dec-17 A	10-Dec-18 A	100%	176	400.00	\$30,891.00	\$0.00	\$30,891.00										
	TSS-1304	TCS M1M3 Force Actuator Test Stand	24-Jul-17 A	24-Jul-17 A	100%	107	250.00	\$19,097.50	\$0.00	\$19,097.50										
	TSS-1870	Develop M1M3 support system simulator	18-Sep-17 A	27-Nov-17 A	100%	63	827.00	\$65,390.89	\$0.00	\$65,390.89										
	TSS-1871	Develop hard point actuator test software	05-Sep-17 A	25-Sep-17 A	100%	31	238.00	\$18,818.66	\$0.00	\$18,818.66										
	TSS-2346	EUI Development for M1M3 Control Software Phase 1	07-Feb-18 A	30-Mar-18 A	100%	51	450.00	\$35,581.50	\$0.00	\$35,581.50										
	TSS-451	Pneumatic actuator closed loop	26-May-16 A	19-Dec-16 A	100%	15	106.30	\$7,845.71	\$0.00	\$7,845.71										
	TSS-463	Perform Step Response	19-Dec-16 A	19-Dec-16 A	100%	15	106.30	\$7,845.71	\$0.00	\$7,845.71										
	TSS-487	Analyze LBTSW	17-Oct-16 A	19-Dec-16 A	100%	15	40.00	\$2,952.40	\$0.00	\$2,952.40										
	TSS-493	M1M3 Structural Model	01-Aug-16 A	01-Aug-16 A	100%	14	99.21	\$7,322.66	\$0.00	\$7,322.66										
	TSS-498	Read Calibration Load Cells	08-Jul-16 A	19-Dec-16 A	100%	15	106.30	\$7,845.71	\$0.00	\$7,845.71										
	TSS-698	Control M1M3 position	29-Sep-16 A	29-Sep-16 A	100%	17	120.47	\$9,202.61	\$0.00	\$9,202.61										
	TSS-699	Report M1M3 measured position	13-Jul-16 A	10-Jan-17 A	100%	10	70.86	\$5,413.30	\$0.00	\$5,413.30										
	TSS-702	Implement M1M3 position compensator	14-Jul-16 A	30-Jun-17 A	100%	15	106.30	\$8,119.95	\$0.00	\$8,119.95										
	TSS-703	Calculate M1M3 position	01-Oct-17 A	31-Oct-17 A	100%	10	70.86	\$5,413.30	\$0.00	\$5,413.30										
	TSS-717	Control M1M3 Pneumatic Actuator Set	02-Nov-17 A	16-Nov-17 A	100%	20	140.00	\$10,694.60	\$0.00	\$10,694.60										
	TSS-718	Control M1M3 Actuator	13-Sep-17 A	29-Sep-17 A	100%	10	70.86	\$5,413.30	\$0.00	\$5,413.30										
	TSS-719	Implement M1M3 Actuator Compensator	07-Aug-17 A	07-Aug-17 A	100%	15	106.30	\$8,119.95	\$0.00	\$8,119.95										
	TSS-735	Create Modified ILC Modbus protocol proof of conce	01-Aug-16 A	01-Aug-16 A	100%	7	49.60	\$3,789.31	\$0.00	\$3,789.31										
	TSS-783	Create and perform tests for the FAMT application	11-Nov-16 A	11-Nov-16 A	100%	10	70.86	\$5,413.30	\$0.00	\$5,413.30										
	TSS-891	M1M3 Hard Point Actuator Requirements	17-Oct-16 A	17-Oct-16 A	100%	7	49.60	\$3,789.31	\$0.00	\$3,789.31										
	TSS-892	M1M3 Force Actuator Communication - Implement c	29-Sep-16 A	27-Jul-17 A	100%	19	80.00	\$6,111.20	\$0.00	\$6,111.20										
	TSS-894	M1M3 Thermal Control Requirements	29-Sep-16 A	29-Sep-16 A	100%	18	49.60	\$3,789.31	\$0.00	\$3,789.31										
	TSS-947	Test epic	01-Aug-17 A	02-Aug-17 A	100%	15	96.00	\$7,590.72	\$0.00	\$7,590.72										
	TSS-954	M1M3 ILC Communications - Design and implement	02-Mar-17 A	16-Aug-17 A	100%	14	80.00	\$6,111.20												

LSST May 2019 Month End Forecast																			
Activity ID	Activity Name	Start	Finish	Physical % Complete	Original Duration	Budgeted Labor Units	Budgeted Labor Cost	Budgeted Material Cost	Budgeted Total Cost no	Total Float	FY2015 2014-10-01	FY2016 2015-10-01	FY2017 2016-10-01	FY2018 2017-10-01	FY2019 2018-10-01	FY2020 2019-10-01	FY2021 2020-10-01	FY2022 2021-10-01	
	T&SC-74i AuxIns Training	01-Jun-17 A	09-Jun-17 A	100%	4	32.00	\$2,444.48	\$0.00	\$2,444.48				AuxIns Training						
	TSS-SV13 Aux Instruments SV Correction	02-Apr-19 A	30-Apr-19 A	100%	1	-787.09	(\$64,407.43)	\$0.00	(\$64,407.43)						Aux Instruments SV Correction				
	TSS-SV1i All sky camera control Ready for Integration		30-Apr-19 A	100%	0	0.00	\$0.00	\$0.00	\$0.00						All sky camera control Ready for Integration				
	TSS-SV1i Weather Station Control	02-Apr-19 A	30-Apr-19 A	100%	35	228.00	\$17,416.92	\$0.00	\$17,416.92						Weather Station Control				
	TSS-SV1i Visible All Sky Camera Control	02-Apr-19 A	30-Apr-19 A	100%	46	199.00	\$15,201.61	\$0.00	\$15,201.61						Visible All Sky Camera Control				
	TSS-SV1i IR All Sky Camera Control	02-Apr-19 A	30-Apr-19 A	100%	33	410.65	\$30,673.36	\$0.00	\$30,673.36						IR All Sky Camera Control				
	TSS-SV1i Anemometer Monitor	02-Apr-19 A	30-Apr-19 A	100%	21	100.00	\$7,639.00	\$0.00	\$7,639.00						Anemometer Monitor				
	LSST ME 19-05.04C.11.14 TCS Facility		01-Jun-17 A	30-Apr-19 A		465	38.57	\$11,322.53	\$0.00	\$11,322.53									
	T&SC-74i Facility Training	01-Jun-17 A	09-Jun-17 A	100%	6	48.00	\$3,666.72	\$0.00	\$3,666.72				Facility Training						
	TSS-SV14 Facility SV Correcion	02-Apr-19 A	30-Apr-19 A	100%	1	-369.43	(\$30,230.59)	\$0.00	(\$30,230.59)						Facility SV Correcion				
	TSS-SV1i Summit Facility Feature Set 1	02-Apr-19 A	30-Apr-19 A	100%	51	360.00	\$37,886.40	\$0.00	\$37,886.40						Summit Facility Feature Set 1				
	TSS-SV1i Facility control Ready for Integration		30-Apr-19 A	100%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00					Facility control Ready for Integration				
	LSST ME 19-05.04C.11.15 TCS Hexapod		02-Jun-16 A	30-Apr-19 A		580	750.98	\$62,395.18	\$0.00	\$62,395.18									
	TSS-1949 Support Hexapod Control Software	12-Sep-17 A	30-Apr-18 A	100%	250	337.20	\$30,786.71	\$0.00	\$30,786.71						Support Hexapod Control Software				
	TSS-608 Hs&R Controls FDR	02-Jun-16 A	02-Jun-16 A	100%	1	0.00	\$0.00	\$0.00	\$0.00	\$0.00			Hs&R Controls FDR						
	TSS-694 Participate in Hexapod Final Acceptance Test	24-Sep-18 A	27-Sep-18 A	100%	9	413.78	\$31,608.47	\$0.00	\$31,608.47						Participate in Hexapod Final Acceptance Test				
	TSS-SV1i Hexapod Final Acceptance Testing		30-Apr-19 A	100%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00					Hexapod Final Acceptance Testing				
	TSS-SV1i Hexapod Control Ready for Integration		30-Apr-19 A	100%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00					Hexapod Control Ready for Integration				
	LSST ME 19-05.04C.11.16 TCS Application		06-Oct-17 A	30-Apr-19 A		274	284.31	\$22,232.28	\$0.00	\$22,232.28									
	TSS-2071 Application Phase v2.0	02-Apr-18 A	31-May-18 A	100%	50	253.00	\$20,004.71	\$0.00	\$20,004.71						Application Phase v2.0				
	TSS-SV15 Application SV Correcion	02-Apr-19 A	30-Apr-19 A	100%	1	-188.69	(\$15,440.65)	\$0.00	(\$15,440.65)						Application SV Correcion				
	TSS-SV1i TCS Initial Scription Capability		30-Apr-19 A	100%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00					TCS Initial Scription Capability				
	TSS-SV2i TCS Collection Release 1	02-Apr-19 A	30-Apr-19 A	100%	104	220.00	\$17,668.22	\$0.00	\$17,668.22						TCS Collection Release 1				
	TSSPP-90 Application Phase v1.0	06-Oct-17 A	10-Nov-17 A	100%	26	0.00	\$0.00	\$0.00	\$0.00	\$0.00					Application Phase v1.0				
	LSST ME 19-05.04C.11.17 TCS Guiding System		29-Feb-16 A	30-Apr-19 A		742	459.70	\$31,801.18	\$0.00	\$31,801.18									
	TSS-415 Design Interfaces for Guider	29-Feb-16 A	11-Aug-17 A	100%	5	35.43	\$2,615.24	\$0.00	\$2,615.24						Design Interfaces for Guider				
	TSS-436 Test the Guider DAQ Interface	13-Feb-18 A	16-Feb-18 A	100%	5	35.43	\$2,615.24	\$0.00	\$2,615.24						Test the Guider DAQ Interface				
	TSS-620 Camera Workshop	17-Jun-16 A	17-Jun-16 A	100%	3	0.00	\$0.00	\$0.00	\$0.00	\$0.00			Camera Workshop						
	TSS-SV16 Guiding SV Correcion	02-Apr-19 A	30-Apr-19 A	100%	1	-662.97	(\$54,250.84)	\$0.00	(\$54,250.84)						Guiding SV Correcion				
	TSS-SV2i Guiding System Phase v1.0	02-Apr-19 A	30-Apr-19 A	100%	116	600.00	\$45,834.00	\$0.00	\$45,834.00						Guiding System Phase v1.0				
	TSS-SV2i Guiding coding Ready for Integration		30-Apr-19 A	100%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00					Guiding coding Ready for Integration				
	TSS-SV2i Guiding development with DAQ	02-Apr-19 A	30-Apr-19 A	100%	44	311.80	\$24,654.15	\$0.00	\$24,654.15						Guiding development with DAQ				
	TSSPP-1i Guiding System Conceptual Design	01-Apr-16 A	16-Apr-18 A	100%	108	140.00	\$10,333.40	\$0.00	\$10,333.40						Guiding System Conceptual Design				
	LSST ME 19-05.04C.11.18 TCS Hardware		02-Apr-19 A	30-Apr-19 A		518	-108.19	(\$8,853.16)	\$32,945.89	\$24,092.73									
	TSS-SV17 Hardware SV Correcion	02-Apr-19 A	30-Apr-19 A	100%	1	-108.19	(\$8,853.16)	\$0.00	(\$8,853.16)						Hardware SV Correcion				
	TSS-SV2i TCS Hardware - Acquisition	02-Apr-19 A	30-Apr-19 A	100%	115	0.00	\$0.00	\$32,945.89	\$32,945.89						TCS Hardware - Acquisition				
	TSS-SV2i TCS Computer Hardware Ready for Integration		30-Apr-19 A	100%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00					TCS Computer Hardware Ready for Integration				
	TSS-SV2i TCS Hardware - Leadtime and Delivery	02-Apr-19 A	30-Apr-19 A	100%	149	0.00	\$0.00	\$0.00	\$0.00	\$0.00					TCS Hardware - Leadtime and Delivery				
	LSST ME 19-05.04C.11.19 TCS Software Architecture		01-Mar-16 A	02-Nov-17 A		531	170.00	\$12,547.70	\$0.00	\$12,547.70									
	TSS-2044 TCS Architecture Ready for Integration		02-Nov-17 A	100%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00					TCS Architecture Ready for Integration				
	TSS-499 HMI Design Guidelines	02-Nov-17 A	02-Nov-17 A	100%	44	60.00	\$4,428.60	\$0.00	\$4,428.60						HMI Design Guidelines				
	TSSPP-1i Architectural Documentation Phase v1.0	01-Mar-16 A	29-Apr-16 A	100%	43	60.00	\$4,428.60	\$0.00	\$4,428.60						Architectural Documentation Phase v1.0				
	TSSPP-1i Architectural Documentation Phase v2.0	01-Sep-16 A	30-Jun-17 A	100%	32	50.00	\$3,690.50	\$0.00	\$3,690.50						Architectural Documentation Phase v2.0				
	LSST ME 19-05.04C.11.20 TCS ILC		01-May-16 A	19-Jan-17 A		206	145.00	\$10,702.45	\$0.00	\$10,702.45									
	TSS-2045 ILC Ready for Integration		19-Jan-17 A	100%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00					ILC Ready for Integration				
	TSS-479 ILC Calibrator Test Stand	01-Jun-16 A	01-Jun-16 A	100%	20	35.00	\$2,583.35	\$0.00	\$2,583.35						ILC Calibrator Test Stand				
	TSS-480 Modbus ILC Protocol	19-Jan-17 A	19-Jan-17 A	100%	22	40.00	\$2,952.40	\$0.00	\$2,952.40						Modbus ILC Protocol				
	TSS-619 Test ILC Calibration software	13-Jul-16 A	15-Jul-16 A	100%	5	0.00	\$0.00	\$0.00	\$0.00	\$0.00					Test ILC Calibration software				
	TSSPP-1i ILC Acceptance	01-May-16 A	12-Jan-17 A	100%	44	70.00	\$5,166.70	\$0.00	\$5,166.70						ILC Acceptance				
	LSST ME 19-05.04C.11.21 WFS/AOS Software Pipeline		30-Nov-15 A	30-Apr-19 A		866	-1357.97	(\$141,499.19)	\$267,947.16	\$126,447.97									
T&SC-20i DAQ Test Stand Materials	03-Sep-18 A	28-Sep-18 A	100%	29	0.00	\$0.00	\$75,000.00	\$75,000.00						DAQ Test Stand Materials					
TSS-1042 Wavefront estimation pipeline - UseCases & Structural Model	01-Feb-17 A	02-Aug-17 A	100%	8	160.00	\$12,222.40	\$0.00	\$12,222.40						Wavefront estimation pipeline - UseCases & Structural Model					
TSS-1043 Shack Hartmann Wavefront Analysis	30-Oct-17 A	31-Oct-18 A	100%	19	120.00	\$9,488.40	\$0.00	\$9,488.40						Shack Hartmann Wavefront Analysis					
TSS-114 Simulate DAQ for Wavefront Sensor Data	01-Jun-17 A	30-Jun-17 A	100%	22	176.00	\$12,990.56	\$0.00	\$12,990.56						Simulate DAQ for Wavefront Sensor Data					
TSS-115 DDS Communication with prototype AOCS	01-Jun-17 A	30-Jun-17 A	100%	18	144.00	\$10,628.64	\$0.00	\$10,628.64						DDS Communication with prototype AOCS					
TSS-111																			

LSST May 2019 Month End Forecast																		
Activity ID	Activity Name	Start	Finish	Physical % Complete	Original Duration	Budgeted Labor Units	Budgeted Labor Cost	Budgeted Material Cost	Budgeted Total Cost no	Total Float	FY2015 2014-10-01	FY2016 2015-10-01	FY2017 2016-10-01	FY2018 2017-10-01	FY2019 2018-10-01	FY2020 2019-10-01	FY2021 2020-10-01	FY2022 2021-10-01
TSS-SV18	WFS/AOS SV Correction	02-Apr-19 A	30-Apr-19 A	100%	1	-8088.94	(\$661,918.28)	\$0.00	(\$661,918.28)						■ WFS/AOS SV Correction			
	TSS-SV21 DM & T&S PSF Meeting		30-Apr-19 A	100%	0	0.00	\$0.00	\$0.00	\$0.00					◆ DM & T&S PSF Meeting				
	TSS-SV21 WFS SME analysis contract support FY17	02-Apr-19 A	30-Apr-19 A	100%	5	0.00	\$0.00	\$41,986.96	\$41,986.96					◆ WFS SME analysis contract support FY17				
	TSS-SV21 Verify Instrumentation Signature Removal	02-Apr-19 A	30-Apr-19 A	100%	39	200.00	\$15,372.79	\$0.00	\$15,372.79					■ Verify Instrumentation Signature Removal				
	TSS-SV2 Source Selector	02-Apr-19 A	30-Apr-19 A	100%	49	200.00	\$15,650.26	\$0.00	\$15,650.26					■ Source Selector				
	TSS-SV2 Additional AOS Development	02-Apr-19 A	30-Apr-19 A	100%	40	215.00	\$17,000.05	\$0.00	\$17,000.05					■ Additional AOS Development				
	TSS-SV2 Source Processor	02-Apr-19 A	30-Apr-19 A	100%	30	120.00	\$9,488.40	\$0.00	\$9,488.40					■ Source Processor				
	TSS-SV2 Verify Source Selector	02-Apr-19 A	30-Apr-19 A	100%	46	195.00	\$15,418.65	\$0.00	\$15,418.65					■ Verify Source Selector				
	TSS-SV2 Switch to SH Sensor	02-Apr-19 A	30-Apr-19 A	100%	40	72.00	\$5,693.04	\$0.00	\$5,693.04					■ Switch to SH Sensor				
	TSS-SV2 Verify Switch to SH Sensor	02-Apr-19 A	30-Apr-19 A	100%	34	85.00	\$6,720.95	\$0.00	\$6,720.95					■ Verify Switch to SH Sensor				
	TSS-SV2 Verify Source Processor	02-Apr-19 A	30-Apr-19 A	100%	29	195.00	\$15,418.65	\$0.00	\$15,418.65					■ Verify Source Processor				
	TSS-SV2 High Speed CMOS Camera WEP Specific Component	02-Apr-19 A	30-Apr-19 A	100%	29	120.00	\$9,488.40	\$0.00	\$9,488.40					■ High Speed CMOS Camera WEP Specific Component				
	TSS-SV2 Verify Shack Hartmann Wavefront Analysis	02-Apr-19 A	30-Apr-19 A	100%	39	195.00	\$15,418.65	\$0.00	\$15,418.65					■ Verify Shack Hartmann Wavefront Analysis				
	TSS-SV2 ComCam WEP Specific Component	02-Apr-19 A	30-Apr-19 A	100%	31	100.00	\$7,907.00	\$0.00	\$7,907.00					■ ComCam WEP Specific Component				
	TSS-SV2 High Speed CMOS Camera WEP Specific Component	02-Apr-19 A	30-Apr-19 A	100%	20	100.00	\$7,907.00	\$0.00	\$7,907.00					■ High Speed CMOS Camera WEP Specific Component				
	TSS-SV2 Verify ComCam WEP Software	02-Apr-19 A	30-Apr-19 A	100%	20	121.00	\$9,567.47	\$0.00	\$9,567.47					■ Verify ComCam WEP Software				
	TSS-SV2 Scientific Camera WEP Specific Component	02-Apr-19 A	30-Apr-19 A	100%	30	100.00	\$7,907.00	\$0.00	\$7,907.00					■ Scientific Camera WEP Specific Component				
	TSS-SV2 Verify Scientific Camera WEP Software	02-Apr-19 A	30-Apr-19 A	100%	29	195.00	\$15,418.65	\$0.00	\$15,418.65					■ Verify Scientific Camera WEP Software				
	TSS-SV2 Curvature WEP Specific Component	02-Apr-19 A	30-Apr-19 A	100%	29	100.00	\$7,907.00	\$0.00	\$7,907.00					■ Curvature WEP Specific Component				
	TSS-SV2 Verify WEP Curvature software	02-Apr-19 A	30-Apr-19 A	100%	29	195.00	\$15,418.65	\$0.00	\$15,418.65					■ Verify WEP Curvature software				
	TSS-SV2 WFS SME analysis contract support FY18	02-Apr-19 A	30-Apr-19 A	100%	18	0.00	\$0.00	\$125,960.20	\$125,960.20					■ WFS SME analysis contract support FY18				
	TSS-SV2 WEP coding Ready for Integration		30-Apr-19 A	100%	0	0.00	\$0.00	\$0.00	\$0.00					◆ WEP coding Ready for Integration				
	TSS-SV2 Deblending Algorithm Coded		30-Apr-19 A	100%	0	0.00	\$0.00	\$0.00	\$0.00					◆ Deblending Algorithm Coded				
	TSS-SV2 Source Selection Coded		30-Apr-19 A	100%	0	0.00	\$0.00	\$0.00	\$0.00					◆ Source Selection Coded				
	TSS-SV2 Validation of the Deblending Algorithm and Source S		30-Apr-19 A	100%	0	0.00	\$0.00	\$0.00	\$0.00					◆ Validation of the Deblending Algorithm and Source Selector				
	TSS-SV2 Deblending Algorithm Coded	02-Apr-19 A	30-Apr-19 A	100%	42	420.00	\$33,209.40	\$0.00	\$33,209.40					■ Deblending Algorithm Coded				
	TSS-SV2 Source Selection Coded	02-Apr-19 A	30-Apr-19 A	100%	19	120.00	\$9,488.40	\$0.00	\$9,488.40					■ Source Selection Coded				
	TSS-SV2 Validation of the Deblending Algorithm and Source S	02-Apr-19 A	30-Apr-19 A	100%	67	450.00	\$35,970.78	\$0.00	\$35,970.78					■ Validation of the Deblending Algorithm and Source Selector				
	TSSPP-1 AOS/WEP Review Spring 2017		12-Dec-16 A	100%	0	0.00	\$0.00	\$0.00	\$0.00					◆ AOS/WEP Review Spring 2017				
	TSSPP-38 Release V1.1	22-Jul-16 A	01-Mar-17 A	100%	64	400.00	\$29,524.00	\$0.00	\$29,524.00					■ Release V1.1				
LSST ME 19-05.04C.11.22 TAS Telescope Alignment System		01-Feb-17 A	30-Apr-19 A		621	-357.17	(\$20,909.75)	\$178,629.99	\$157,720.25									
T&SC-631	Laser Tracker Procurement	01-Feb-17 A	30-Jun-17 A	100%	20	0.00	\$0.00	\$178,629.99	\$178,629.99					■ Laser Tracker Procurement				
TSS-751	Elicit Alignment System Requirements	01-Jun-17 A	30-Jun-17 A	100%	22	150.00	\$11,458.50	\$0.00	\$11,458.50					■ Elicit Alignment System Requirements				
TSS-752	Write Alignment System ICD	01-Aug-17 A	31-Aug-17 A	100%	22	150.00	\$11,458.50	\$0.00	\$11,458.50					■ Write Alignment System ICD				
TSS-SV19	TAS SV Correction	02-Apr-19 A	30-Apr-19 A	100%	1	-1657.16	(\$135,605.05)	\$0.00	(\$135,605.05)					■ TAS SV Correction				
TSS-SV2	Alignment Feature Set	02-Apr-19 A	30-Apr-19 A	100%	75	300.00	\$23,721.00	\$0.00	\$23,721.00					■ Alignment Feature Set				
TSS-SV2	TAS Ready for Integration with TMA		30-Apr-19 A	100%	0	0.00	\$0.00	\$0.00	\$0.00					◆ TAS Ready for Integration with TMA				
TSS-SV2	Develop laser tracker - TCS interface phase 1	02-Apr-19 A	30-Apr-19 A	100%	78	399.99	\$36,485.30	\$0.00	\$36,485.30					■ Develop laser tracker - TCS interface phase 1				
TSS-SV2	Release X	02-Apr-19 A	30-Apr-19 A	100%	106	300.00	\$31,572.00	\$0.00	\$31,572.00					■ Release X				
LSST ME 19-05.04C.11.23 TCS Common		20-Apr-17 A	04-Jun-18 A		426	197.73	\$15,104.44	\$0.00	\$15,104.44									
T&SC-741	TCS Comm Training	01-Jun-17 A	09-Jun-17 A	100%	7	56.00	\$4,277.84	\$0.00	\$4,277.84					■ TCS Comm Training				
TSS-2048	TCS Common Ready for Integration		04-Jun-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00					◆ TCS Common Ready for Integration				
TSS-755	Customize Component Template	20-Apr-17 A	22-Nov-17 A	100%	20	141.73	\$10,826.60	\$0.00	\$10,826.60					■ Customize Component Template				
LSST ME 19-05.04C.12 Utilities and Support Equipment		01-Sep-14 A	12-Jan-21		1633	20681.97	\$1,469,190.37	\$11,822,328.07	\$13,291,518.44	696								
LSST ME 19-05.04C.12.01 Utilities and Equipment Mgmt and I		01-Sep-14 A	30-Sep-19		1305	9592.46	\$819,444.34	\$326,352.90	\$1,145,797.23	279								
T&SC-221	Observatory Monitoring System - Mgmt - FY 1 - Lab	01-Sep-14 A	30-Sep-14 A	100%	42	150.00	\$13,489.50	\$0.00	\$13,489.50		■ Observatory Monitoring System - Mgmt - FY 1 - Labor							
T&SC-221	Observatory Monitoring System - Mgmt - FY 2 - Lab	01-Oct-14 A	30-Sep-15 A	100%	252	1800.00	\$170,856.00	\$0.00	\$170,856.00		■ Observatory Monitoring System - Mgmt - FY 2 - Labor							
T&SC-221	Observatory Monitoring System - Mgmt - FY 3 - Lab	01-Oct-15 A	30-Sep-16 A	100%	254	1353.46	\$132,964.38	\$0.00	\$132,964.38		■ Observatory Monitoring System - Mgmt - FY 3 - Labor							
T&SC-221	Observatory Monitoring System - Mgmt - FY 4 - Lab	01-Oct-16 A	31-Jan-17 A	100%	84	333.00	\$33,859.44	\$0.00	\$33,859.44		■ Observatory Monitoring System - Mgmt - FY 4 - Labor							
T&SC-221	Observatory Monitoring System - Mgmt - FY 4 - Lab	01-Feb-17 A	31-Mar-17 A	100%	42	81.00	\$8,236.08	\$0.00	\$8,236.08		■ Observatory Monitoring System - Mgmt - FY 4 - Labor							
T&SC-221	Observatory Monitoring System - Mgmt - FY 5 - Lab	02-Oct-17 A	28-Sep-18 A	100%	253	1172.00	\$123,341.28	\$0.00	\$123,341.28		■ Observatory Monitoring System - Mgmt - FY 5 - Labor							
T&SC-221	Observatory Monitoring System - Mgmt - FY 6 - Lab	01-Oct-18 A	30-Sep-19	67%	250	1345.00	\$146,497.40	\$0.00	\$146,497.40	279	■ Observatory Monitoring System - Mgmt - FY 6 - Labor							
T&SC-221	Observatory Monitoring System - MGMT NonLabor	01-Nov-14 A	24-Sep-19	94%	1304	0.00	\$0.00	\$123,610.91	\$123,610.91	283	■ Observatory Monitoring System - MGMT NonLabor							
T&SC-221	Custom-made optical fiber cables procurement 1	07-Nov-16 A	15-Dec-16 A	100%	10	0.00	\$0.00	\$50,000.00	\$50,000.00									
T&SC-221	Custom-made optical fiber cables procurement 2	03-Jun-19	03-Jun-19	0%	1	0.00	\$0.00	\$52,633.76	\$52,633.76	280	■ Custom-made optical fiber cables procurement 1							
T&SC-241	Equipment Development Labor FY17	05-Apr-17 A	29-Sep-17 A	100%	126	900.00	\$41,904.00	\$0.00	\$41,904.00		■ Equipment Development Labor FY17							
T&SC-241	Equipment Development Labor FY18	02-Oct-17 A	28-Sep-18 A	100%	253	750.00	\$36,142.50	\$0.00	\$36,142.50		■ Equipment Development Labor FY18							
T&SC-241	Equipment Development Labor FY19	01-Oct-18 A	30-Apr-19 A	100%	147	528.00	\$26,331.36	\$0.00	\$26,331.36		■ Equipment Development Labor FY19							
T&SC-311	Equipment and Support Subsystems - MGMT - FY 5 - Labor	02-Oct-17 A	28-Sep-18 A	100%	253	780.00	\$56,066.40	\$0.00	\$56,066.40		■ Equipment and Support Subsystems - MGMT - FY 5 - Labor							
T&SC-311	Equipment and Support Subsystems - MGMT - FY 6 - Labor	01-Oct-18 A	30-Sep-19	67%	250	400.00	\$29,756.00	\$0.00	\$29,756.00	279	■ Equipment and Support Subsystems - MGMT - FY 6 - Labor							
T&SC-311	Equipment and Support Subsystems - MGMT - Non	02-Oct-17 A	30-Sep-19	83%	503	0.00	\$0.00	\$100,108.22	\$100,108.22	279	■ Equipment and Support Subsystems - MGMT - NonLabor							
LSST ME 19-05.04C.12.02 Safety Systems		15-May-16 A	18-Mar-20		744	0.00	\$0.00	\$797,280.74	\$797,280.74	159								
T&SC-121	Safety Interlock Kick Off	15-May-16 A	16-May-16 A	100%	1	0.00	\$0.00	\$105,000.00	\$105,000.00		■ Safety Interlock Kick Off							
T&SC-121	Safety Interlock Document Revisions	16-May-17 A	15-Jun-17 A	100%	66	0.00	\$0.00	\$0.00	\$0.00		■ Safety Interlock Document Revisions							
T&SC-121	Interlock System Operation Description	15-Jun-17 A	01-Aug-17 A	100%	12	0.00	\$0.00	\$122,500.00	\$122,500.00		■ Interlock System Operation Description							
T&SC-121	Interlock System Hardware Design	15-Jul-17 A	31-Oct-17 A	100%	12	0.00	\$0.00	\$0.00	\$0.00		■ Interlock System Hardware Design							
T&SC-121	Interlock System Subsystem hardwired and communic	15-Jul-17 A	31-Oct-17 A	100%	12	0.00	\$0.00	\$0.00	\$0.00		■ Interlock System Subsystem hardwired and communicated signal							
T&SC-121	Interlock System ICD for each subsystem	05-Jul-17 A	31-Oct-17 A	100%	12	0.00	\$0.00	\$0.00	\$0.00		■ Interlock System ICD for each subsystem							
T&SC-121	Interlock System Final Phase Program Plan	05-Aug-17 A	31-Oct-17 A	100%	12	0.00	\$0.00	\$0.00	\$0.00		■ Interlock System Final Phase Program Plan							
T&SC-121	Interlock System Verification Matrix	05-Aug-17 A	31-Oct-17 A	100%	12	0.00	\$0.00	\$0.00	\$0.00		■ Interlock System Verification Matrix							
T&SC-121	Interlock System Final Design Review	05-Aug-17 A	31-Oct-17 A	100%	1	0.00	\$0.00	\$87,500.00	\$87,500.00		■ Interlock System Final Design Review							
T&SC-121	Interlock System Phase 1 Closure	05-Nov-17 A	05-Nov-17 A	100%	10	0.00	\$0.00	\$35,000.00	\$35,000.00		■ Interlock System Phase 1 Closure							



LSST May 2019 Month End Forecast																		
Activity ID	Activity Name	Start	Finish	Physical % Complete	Original Duration	Budgeted Labor Units	Budgeted Labor Cost	Budgeted Material Cost	Budgeted Total Cost no	Total Float	FY2015 2014-10-01	FY2016 2015-10-01	FY2017 2016-10-01	FY2018 2017-10-01	FY2019 2018-10-01	FY2020 2019-10-01	FY2021 2020-10-01	FY2022 2021-10-01
T&SC-12	Phase II Kick Off Meeting Complete		08-Jan-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00					◆ Phase II Kick Off Meeting Complete				
	Milestone Payment 1 30%	01-Feb-18 A	02-Feb-18 A	100%	1	0.00	\$0.00	\$133,578.22	\$133,578.22					┆ Milestone Payment 1 30%				
	GIS HW development	15-Feb-18 A	31-Mar-19 A	100%	88	0.00	\$0.00	\$0.00	\$0.00					█ GIS HW development				
	GIS SW development	03-Mar-18 A	21-Feb-19 A	100%	122	0.00	\$0.00	\$0.00	\$0.00					█ GIS SW development				
	Milestone Payment 2 20%	03-Mar-17 A	30-Jun-17 A	100%	1	0.00	\$0.00	\$90,062.15	\$90,062.15					┆ Milestone Payment 2 20%				
	Development of the GIS testing system	03-Mar-18 A	15-Oct-18 A	100%	66	0.00	\$0.00	\$0.00	\$0.00					█ Development of the GIS testing system				
	Testing the GIS at TEKNKER shop	03-Mar-18 A	04-Oct-19	50%	88	0.00	\$0.00	\$0.00	\$0.00	159				█ Testing the GIS at TEKNKER shop				
	GIS Packing	07-Oct-19	05-Nov-19	0%	22	0.00	\$0.00	\$0.00	\$0.00	159				█ GIS Packing				
	Milestone Payment 3 20%	03-Mar-18 A	03-Jun-19	90%	1	0.00	\$0.00	\$90,062.15	\$90,062.15	355				█ Milestone Payment 3 20%				
	GIS equipment at Site, available for installation		05-Nov-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	159				◆ GIS equipment at Site, available for installation				
	GIS Installation, integration of subsystems and testing	06-Nov-19	13-Feb-20	0%	66	0.00	\$0.00	\$0.00	\$0.00	159				█ GIS Installation, integration of subsystems and testing at site				
	Milestone Payment 4 20%	14-Feb-20	14-Feb-20	0%	1	0.00	\$0.00	\$89,052.15	\$89,052.15	180				┆ Milestone Payment 4 20%				
	Final Phase Closeout	14-Feb-20	17-Mar-20	0%	22	0.00	\$0.00	\$0.00	\$0.00	159				█ Final Phase Closeout				
	Milestone Payment 5 10%	18-Mar-20	18-Mar-20	0%	1	0.00	\$0.00	\$44,526.07	\$44,526.07	159				┆ Milestone Payment 5 10%				
	Telescope Global Safety Interlocks System Complete		18-Mar-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	159				◆ Telescope Global Safety Interlocks System Complete				
	LSST ME 19-05.04C.12.03 Monitoring Systems	09-May-17 A	15-Jul-17 A		100	40.00	\$4,383.20	\$27,400.03	\$31,783.23									
	Telescope Pier Seismic Accelerometers. - SOW / support documents Developed and Provided to Procurement	09-May-17 A	23-May-17 A	100%	10	40.00	\$4,383.20	\$0.00	\$4,383.20					█ Telescope Pier Seismic Accelerometers. - SOW / support documents Developed and Provided to Procurement				
	Telescope Pier Seismic Accelerometers. - Procurement Prepares and Issues Bid Package	23-May-17 A	25-May-17 A	100%	10	0.00	\$0.00	\$0.00	\$0.00					█ Telescope Pier Seismic Accelerometers. - Procurement Prepares and Issues Bid Package				
	Telescope Pier Seismic Accelerometers. - Supplier Response	25-May-17 A	25-May-17 A	100%	10	0.00	\$0.00	\$0.00	\$0.00					█ Telescope Pier Seismic Accelerometers. - Supplier Response				
	Telescope Pier Seismic Accelerometers. - Supplier Selection and Contract Award	25-May-17 A	26-May-17 A	100%	5	0.00	\$0.00	\$0.00	\$0.00					█ Telescope Pier Seismic Accelerometers. - Supplier Selection and Contract Award				
	Telescope Pier Seismic Accelerometers. - Supplier Leadtime and Delivery	26-May-17 A	07-Jun-17 A	100%	60	0.00	\$0.00	\$0.00	\$0.00					█ Telescope Pier Seismic Accelerometers. - Supplier Leadtime and Delivery				
	Telescope Pier Seismic Accelerometers. - Delivery Acceptance	07-Jun-17 A	15-Jul-17 A	100%	5	0.00	\$0.00	\$27,400.03	\$27,400.03					█ Telescope Pier Seismic Accelerometers. - Delivery Acceptance				
	LSST ME 19-05.04C.12.04 Facility Systems	03-Oct-16 A	31-Aug-20		755	0.00	\$0.00	\$148,991.89	\$148,991.89	41								
	Maintenance Software System	03-Oct-16 A	31-Aug-20	81%	755	0.00	\$0.00	\$148,991.89	\$148,991.89	41					█ Maintenance Software System			
	LSST ME 19-05.04C.12.05 Summit Network System	01-Jun-16 A	05-Nov-20		1127	7084.49	\$347,171.92	\$814,588.80	\$1,161,760.72	483								
	Install M2 mirror control servers	03-Jun-19	14-Jun-19	0%	10	16.00	\$797.92	\$0.00	\$797.92	239					█ Install M2 mirror control servers			
	Install M1M3 mirror control servers	26-Jul-19	08-Aug-19	0%	10	16.00	\$797.92	\$0.00	\$797.92	211					█ Install M1M3 mirror control servers			
	Install Hexapod Rotator control servers	01-Oct-19	14-Oct-19	0%	10	16.00	\$825.92	\$0.00	\$825.92	186					█ Install Hexapod Rotator control servers			
	Install GIS SAL/DDS control servers and inter-cabinet network	14-Feb-20	27-Feb-20	0%	10	16.00	\$825.92	\$0.00	\$825.92	172					█ Install GIS SAL/DDS control servers and inter-cabinet network			
	Cable Core switches	31-May-18 A	12-Oct-18 A	100%	4	40.00	\$1,927.60	\$0.00	\$1,927.60					█ Cable Core switches				
	Configure core network	01-Aug-18 A	27-Sep-19	57.14%	9	40.00	\$1,927.60	\$0.00	\$1,927.60	198				█ Configure core network				
	Connect Core Network to AURA DWDM	12-Oct-18 A	14-Nov-18 A	100%	5	20.00	\$963.80	\$0.00	\$963.80					█ Connect Core Network to AURA DWDM				
	Configure WAN from Summit to Base	12-Oct-18 A	31-Oct-18 A	100%	4	10.00	\$481.90	\$0.00	\$481.90					█ Configure WAN from Summit to Base				
	Build General Services Servers - Network (GSSN)	31-May-18 A	14-Mar-19 A	100%	10	80.00	\$3,855.20	\$0.00	\$3,855.20					█ Build General Services Servers - Network (GSSN)				
	Install bulk cabling to offices, general spaces, control room, camera rooms	11-Jun-18 A	27-Sep-19	91.79%	29	450.00	\$21,196.50	\$0.00	\$21,196.50	198				█ Install bulk cabling to offices, general spaces, control room, camera rooms				
	Install access switches in Summit Facility	01-Jan-19 A	04-Jun-19	11.1%	2	20.00	\$963.80	\$0.00	\$963.80	254				█ Install access switches in Summit Facility				
	Place and cable VOIP and video	12-Oct-18 A	31-Oct-18 A	100%	19	50.00	\$2,409.50	\$0.00	\$2,409.50					█ Place and cable VOIP and video				
	Place and cable wifi APs	12-Oct-18 A	27-Jun-19	97.62%	19	55.00	\$2,650.45	\$0.00	\$2,650.45	259				█ Place and cable wifi APs				
	Run fibres from AUX to Computer room	12-Oct-18 A	31-May-19 A	100%	1	30.00	\$1,445.70	\$0.00	\$1,445.70					█ Run fibres from AUX to Computer room				
	Install equipment in AUX dome	01-Feb-19 A	21-Jun-19	12.9%	15	90.00	\$4,337.10	\$0.00	\$4,337.10	188				█ Install equipment in AUX dome				
	Install Camera fibers, cables, racks	01-Jan-19 A	20-Aug-19	85.25%	56	194.00	\$9,348.87	\$0.00	\$9,348.87	225				█ Install Camera fibers, cables, racks				
	Install network in Telescope Dome	12-Oct-18 A	26-Aug-19	56.24%	60	95.00	\$4,578.05	\$0.00	\$4,578.05	221				█ Install network in Telescope Dome				
	Install network in Telescope Pier	12-Oct-18 A	21-Jun-19	68.35%	15	106.00	\$5,108.14	\$0.00	\$5,108.14	88				█ Install network in Telescope Pier				
	Install EFD, MW, Phase 1 ECS servers in computer room	05-Jul-18 A	29-Mar-19 A	100%	74	70.00	\$3,373.30	\$0.00	\$3,373.30					█ Install EFD, MW, Phase 1 ECS servers in computer room				
	Install TCS Dome Control, HVAC servers in computer room	03-Jun-19	13-Jun-19	0%	9	57.00	\$2,842.59	\$0.00	\$2,842.59	88				█ Install TCS Dome Control, HVAC servers in computer room				
	Install AUX Tel TCS, OCS Control (AUX), Integration Cluster, Phase 2 ECS Control, A	06-Aug-19	12-Aug-19	0%	5	31.50	\$1,570.91	\$0.00	\$1,570.91	88				█ Install AUX Tel TCS, OCS Control (AUX), Integration Cluster, Phase 2 ECS Control, A				
	Install TCS Mount Control servers in computer room	24-Oct-19	06-Nov-19	0%	10	64.00	\$3,303.68	\$0.00	\$3,303.68	88				█ Install TCS Mount Control servers in computer room				
	Install Aux Archiver servers in computer room	06-Aug-19	12-Aug-19	0%	5	38.93	\$4,354.10	\$0.00	\$4,354.10	139				█ Install Aux Archiver servers in computer room				
	Define and Implement Monitoring System	13-Jul-18 A	25-Jan-19 A	100%	41	58.00	\$2,795.02	\$0.00	\$2,795.02					█ Define and Implement Monitoring System				
	Order camera fibers	03-Jun-19	03-Jun-19	0%	1	30.00	\$1,496.10	\$0.00	\$1,496.10	280				█ Order camera fibers				
	Install and configure Firewall/ISE in summit computer room	03-Jun-19	04-Jun-19	0%	2	46.00	\$2,294.02	\$0.00	\$2,294.02	279				█ Install and configure Firewall/ISE in summit computer room				
	Configure AUX to Computer room	05-Jun-19	10-Jul-19	0%	25	480.00	\$23,937.62	\$0.00	\$23,937.62	254				█ Configure AUX to Computer room				
	Configure Wireless network	01-Mar-19 A	05-Jun-19	0.25%	3	5.00	\$240.95	\$0.00	\$240.95	278				█ Configure Wireless network				
	Configure VOIP network	28-Jun-19	02-Jul-19	0%	3	5.00	\$249.35	\$0.00	\$249.35	259				█ Configure VOIP network				
	Install Base Router	28-Jun-19	10-Jul-19	0%	8	10.00	\$498.70	\$0.00	\$498.70	292				█ Install Base Router				
	Summit Network System Installation and Test Support FY19	01-Oct-18 A	27-Sep-19	58%	245	811.12	\$40,450.64	\$0.00	\$40,450.64	190				█ Summit Network System Installation and Test Support FY19				
	Summit Network System Installation and Test FY20	07-Nov-19	05-Nov-20	0%	245	1582.94	\$81,991.98	\$0.00	\$81,991.98	472					█ Summit Network System Installation and Test FY20			
	Begin Summit Network	01-Jun-16 A		100%	0	0.00	\$0.00	\$0.00	\$0.00					◆ Begin Summit Network				
	Produce document and submit for review	01-Jun-16 A	30-Sep-16 A	100%	85	450.00	\$19,440.00	\$0.00	\$19,440.00					█ Produce document and submit for review				
	Finalize Data Centre network topology	03-Oct-16 A	30-Nov-16 A	100%	58	105.00	\$4,694.55	\$0.00	\$4,694.55					█ Finalize Data Centre network topology				
	Grandmaster clock with GPS Received and Accepted	22-Nov-16 A	22-Nov-16 A	100%	10	0.00	\$0.00	\$10,000.00	\$10,000.00					┆ Grandmaster clock with GPS Received and Accepted				
	Finalize Duct and cable trays planning	03-Oct-16 A	28-Apr-17 A	100%	134	244.00	\$10,909.24	\$0.00	\$10,909.24					█ Finalize Duct and cable trays planning				
	Finalize Electrical and cooling design	03-Oct-16 A	12-Jun-17 A	100%	135	245.00	\$10,953.95	\$0.00	\$10,953.95					█ Finalize Electrical and cooling design				
	Finalize Equipment placement planning	03-Oct-16 A	28-Apr-17 A	100%	133	242.00	\$10,819.82	\$0.00	\$10,819.82					█ Finalize Equipment placement planning				
	Order and procure network equipment	01-Nov-16 A	30-Aug-17 A	100%	82	149.00	\$6,661.79	\$0.00	\$6,661.79					█ Order and procure network equipment				
	Network equipment Received and Accepted	31-Aug-17 A	31-Aug-17 A	100%	1	0.00	\$0.00	\$804,588.80	\$804,588.80					┆ Network equipment Received and Accepted				
	Order fiber cabling and connectors	01-Mar-17 A	28-Apr-17 A	100%	20	36.00	\$1,609.56	\$0.00	\$1,609.56					█ Order fiber cabling and connectors				
	Beneficial occupancy of the Summit Facility		01-Feb-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00					◆ Beneficial occupancy of the Summit Facility				
	Nominal Beneficial Occupancy for Summit Network	01-Feb-18 A		100%	0	0.00	\$0.00	\$0.00	\$0.00					◆ Nominal Beneficial Occupancy for Summit Network				
	Order fiber ducts	20-Oct-17 A	16-Feb-18 A	100%	30	0.00	\$0.00	\$0.00	\$0.00					█ Order fiber ducts				
	Receive fiber ducts	16-Feb-18 A	19-Feb-18 A	100%	22	390.00	\$18,794.09	\$0.00	\$18,794.09					█ Receive fiber ducts				
	Install fiber ducts in telescope and computer room	20-Feb-18 A	23-Feb-18 A	100%	22	160.00	\$7,710.40	\$0.00	\$7,710.40					█ Install fiber ducts in telescope and computer room				

LSST May 2019 Month End Forecast																			
Activity ID	Activity Name	Start	Finish	Physical % Complete	Original Duration	Budgeted Labor Units	Budgeted Labor Cost	Budgeted Material Cost	Budgeted Total Cost no	Total Float	FY2015 2014-10-01	FY2016 2015-10-01	FY2017 2016-10-01	FY2018 2017-10-01	FY2019 2018-10-01	FY2020 2019-10-01	FY2021 2020-10-01	FY2022 2021-10-01	
	T&SC-26i	Full Occupancy - Computer Room Ready for Summ		16-Apr-18 A	100%	0	0.00	\$0.00	\$0.00										
	T&SC-26i	Place racks and power cables	23-Oct-17 A	02-Mar-18 A	100%	14	90.00	\$4,337.10	\$0.00	\$4,337.10									
	T&SC-26i	Terminate Fiber MAN cable	05-Jan-18 A	12-Jan-18 A	100%	1	10.00	\$481.90	\$0.00	\$481.90									
	T&SC-26i	Unpack network equipment and install in racks	13-Nov-17 A	11-Jul-18 A	100%	6	30.00	\$1,445.70	\$0.00	\$1,445.70									
	T&SC-26i	Initial Network Ready (Summit)		27-Sep-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	198								
T&SC-26i	Finalize networking for normal Base Center operatio	30-Sep-19	26-Nov-19	0%	40	300.00	\$15,472.97	\$0.00	\$15,472.97	190									
LSST ME 19-05.04C.12.06 M1M3 Cell Cart and Tools and Equi																			
T&SC-12i	Mirror Cell Cart Contract Ammended & Signed	28-Mar-16 A	29-Mar-16 A	100%	1	0.00	\$0.00	\$0.00	\$0.00										
T&SC-12i	Mirror Cell Cart Payment #1	28-Mar-16 A	31-Mar-16 A	100%	1	0.00	\$0.00	\$76,911.50	\$76,911.50										
T&SC-12i	Mirror Cell Cart Design Review	01-Apr-16 A	22-Jun-16 A	100%	63	0.00	\$0.00	\$0.00	\$0.00										
T&SC-12i	Mirror Cell Cart Solid Model & Manufacturing Dwgs I	22-Jun-16 A	30-Jun-16 A	100%	21	0.00	\$0.00	\$0.00	\$0.00										
T&SC-12i	Mirror Cell Cart Payment #2	04-Jul-16 A	08-Jul-16 A	100%	1	0.00	\$0.00	\$88,088.50	\$88,088.50										
T&SC-12i	Mirror Cell Cart Long Lead Procurement Complete	11-Jul-16 A	28-Oct-16 A	100%	25	0.00	\$0.00	\$0.00	\$0.00										
T&SC-12i	Mirror Cell Cart Payment #3	29-Aug-16 A	31-Oct-16 A	100%	1	0.00	\$0.00	\$146,131.85	\$146,131.85										
T&SC-12i	Mirror Cell Cart Fabrication & Machining	24-Nov-16 A	01-Nov-17 A	100%	48	0.00	\$0.00	\$0.00	\$0.00										
T&SC-12i	Mirror Cell Cart Component Level Manufacturing Pr	01-Jul-17 A	01-Nov-17 A	100%	20	0.00	\$0.00	\$0.00	\$0.00										
T&SC-12i	Mirror Cell Cart Component Level Manufacturing Fa	15-Jul-17 A	01-Nov-17 A	100%	22	0.00	\$0.00	\$0.00	\$0.00										
T&SC-12i	Mirror Cell Cart Component Level Manufacturing Me	15-May-17 A	31-Oct-17 A	100%	4	0.00	\$0.00	\$228,000.00	\$228,000.00										
T&SC-12i	Mirror Cell Cart Assembly	20-Dec-17 A	25-Jan-18 A	100%	17	0.00	\$0.00	\$0.00	\$0.00										
T&SC-12i	Mirror Cell Cart Hydraulics Assembly	26-Jan-18 A	20-Mar-18 A	100%	10	0.00	\$0.00	\$0.00	\$0.00										
T&SC-12i	Mirror Cell Cart Electrical Assembly	20-Oct-17 A	15-Aug-18 A	100%	11	0.00	\$0.00	\$0.00	\$0.00										
T&SC-12i	Mirror Cell Cart Controls Assembly	20-Oct-17 A	30-Sep-18 A	100%	11	0.00	\$0.00	\$0.00	\$0.00										
T&SC-12i	Mirror Cart Ready for Factory Testing	15-Sep-18 A	30-Sep-18 A	100%	1	0.00	\$0.00	\$125,000.00	\$125,000.00										
T&SC-12i	Mirror Cell Cart Factory Acceptance Testing	15-Sep-18 A	30-Sep-18 A	100%	1	0.00	\$0.00	\$100,000.00	\$100,000.00										
T&SC-12i	Mirror Cell Cart LSST Validation Matrix Complete	15-Sep-18 A	15-Jan-19 A	100%	27	0.00	\$0.00	\$90,172.15	\$90,172.15										
T&SC-12i	Procurement and acceptance of Spare Parts for M1M	15-Sep-17 A	31-Oct-17 A	100%	1	0.00	\$0.00	\$118,032.88	\$118,032.88										
T&SC-12i	Mirror Cell Cart Packaging for Marine Transport Cor	10-Oct-18 A	01-Feb-19 A	100%	12	0.00	\$0.00	\$0.00	\$0.00										
LSST ME 19-05.04C.12.06.01 Summit Fiber Optics Tools																			
T&SC-	Summit Fiber Optics Tools - Identification	01-Jan-19 A	10-Jan-19 A	100%	20	0.00	\$0.00	\$0.00	\$0.00										
T&SC-	Summit Fiber Optics Tools - Procurement	11-Jan-19 A	20-Jan-19 A	100%	10	0.00	\$0.00	\$0.00	\$0.00										
T&SC-	Summit Fiber Optics Tools - Leadtime and Delivery t	20-Jan-19 A	10-Mar-19 A	100%	30	0.00	\$0.00	\$0.00	\$0.00										
T&SC-	Summit Fiber Optics Tools - Shipping to Chile	10-Mar-19 A	31-Mar-19 A	100%	30	0.00	\$0.00	\$0.00	\$0.00										
LSST ME 19-05.04C.12.06.02 Summit Electrical/Electronics																			
LSST ME 19-05.04C.12.06.02.01 Assembly and Crimping																			
T&E	Assembly and Crimping Tools - Identification	16-Jun-18 A	01-Oct-18 A	100%	5	0.00	\$0.00	\$0.00	\$0.00										
T&E	Assembly and Crimping Tools - Procurement	25-Jul-18 A	01-Oct-18 A	100%	10	0.00	\$0.00	\$0.00	\$0.00										
T&E	Assembly and Crimping Tools - Leadtime and Delive	25-Jul-18 A	01-Oct-18 A	100%	30	0.00	\$0.00	\$39,261.97	\$39,261.97										
T&E	Assembly and Crimping Tools - Shipping to Chile	01-Oct-18 A	31-Jan-19 A	100%	30	0.00	\$0.00	\$0.00	\$0.00										
LSST ME 19-05.04C.12.06.02.02 Electrical Test Tools																			
T&E	Electrical Test Tools - Identification	02-Jun-18 A	01-Oct-18 A	100%	5	0.00	\$0.00	\$0.00	\$0.00										
T&E	Electrical Test Tools - Procurement	16-Jun-18 A	01-Oct-18 A	100%	10	0.00	\$0.00	\$0.00	\$0.00										
T&E	Electrical Test Tools - Leadtime and Delivery to Tucso	25-Jul-18 A	01-Nov-18 A	100%	30	0.00	\$0.00	\$24,544.77	\$24,544.77										
T&E	Electrical Test Tools - Shipping to Chile	01-Oct-18 A	15-Nov-18 A	100%	30	0.00	\$0.00	\$0.00	\$0.00										
LSST ME 19-05.04C.12.06.02.03 Electronics Tools and C																			
T&E	Electronics Tools - Identification	15-Jun-18 A	01-Aug-18 A	100%	5	0.00	\$0.00	\$0.00	\$0.00										
T&E	Electronics Tools - Procurement	02-Aug-18 A	01-Oct-18 A	100%	10	0.00	\$0.00	\$0.00	\$0.00										
T&E	Electronics Tools - Leadtime and Delivery to Tucson	25-Jul-18 A	15-Jul-19	95%	30	0.00	\$0.00	\$110,461.25	\$110,461.25	333									
T&E	Electronics Tools - Shipping to Chile	01-Oct-18 A	15-Jul-19	95%	30	0.00	\$0.00	\$0.00	\$0.00	333									
LSST ME 19-05.04C.12.06.03 Summit Vibration Analysis To																			
T&SC-	Summit Vibration Analysis Tools - Identification	02-Jul-18 A	15-Nov-18 A	100%	5	0.00	\$0.00	\$0.00	\$0.00										
T&SC-	Summit Vibration Analysis Tools - Procurement	02-Jul-18 A	31-Jan-19 A																

## LSST May 2019 Month End Forecast

Activity ID	Activity Name	Start	Finish	Physical % Complete	Original Duration	Budgeted Labor Units	Budgeted Labor Cost	Budgeted Material Cost	Budgeted Total Cost no	Total Float	FY2015 2014-10-01	FY2016 2015-10-01	FY2017 2016-10-01	FY2018 2017-10-01	FY2019 2018-10-01	FY2020 2019-10-01	FY2021 2020-10-01	FY2022 2021-10-01
T&SC-03	Summit Monitoring Earthquake Display Equipment -	07-Mar-18 A	07-Mar-18 A	100%	30	0.00	\$0.00	\$0.00	\$0.00									
	Descope - Summit Monitoring Earthquake Display Equipment -	08-Mar-18 A	08-Mar-18 A	100%	1	0.00	\$0.00	(\$29,434.00)	(\$29,434.00)									
	LSST ME 19-05.04C.12.06.08 Summit Monitoring DIMM Equipment -	20-Apr-15 A	15-Jul-19		522	0.00	\$0.00	\$165,520.80	\$165,520.80	298								
	Summit Monitoring DIMM Equipment - Status of current equipment	20-Apr-15 A	15-Sep-17 A	100%	30	0.00	\$0.00	\$0.00	\$0.00									
	Summit Monitoring DIMM Equipment - Procurement	20-Jun-17 A	31-Dec-17 A	100%	90	0.00	\$0.00	\$0.00	\$0.00									
	Summit Monitoring DIMM Equipment - Material	24-Jan-18 A	10-May-18 A	100%	1	0.00	\$0.00	\$165,520.80	\$165,520.80									
	Summit Monitoring DIMM Equipment - Assembly	25-Apr-18 A	31-Jan-19 A	100%	30	0.00	\$0.00	\$0.00	\$0.00									
	Summit Monitoring DIMM Equipment- Pre Test Period	29-Jun-18 A	30-Apr-19 A	100%	149	0.00	\$0.00	\$0.00	\$0.00									
	Summit Monitoring DIMM Equipment- Test in Chile	03-Jun-19	15-Jul-19	0%	30	0.00	\$0.00	\$0.00	\$0.00	298								
	LSST ME 19-05.04C.12.06.09 Slings and Scales	15-Sep-17 A	20-Oct-18 A		75	0.00	\$0.00	\$24,933.14	\$24,933.14									
	Slings and Scales - Identification	15-Sep-17 A	02-Mar-18 A	100%	5	0.00	\$0.00	\$0.00	\$0.00									
	Slings and Scales - Procurement	30-Nov-17 A	03-Mar-18 A	100%	10	0.00	\$0.00	\$0.00	\$0.00									
	Slings and Scales - Leadtime and Delivery to Tucson	30-Nov-17 A	20-Oct-18 A	100%	30	0.00	\$0.00	\$24,933.14	\$24,933.14									
	Slings and Scales - Shipping to Chile	06-Jan-18 A	20-Oct-18 A	100%	30	0.00	\$0.00	\$0.00	\$0.00									
	LSST ME 19-05.04C.12.06.10 Integration Handling Equipment	15-Mar-17 A	15-Jun-17 A		35	0.00	\$0.00	\$21,010.00	\$21,010.00									
	AT Dome/PFlow Drive Spreader Bar - Design	15-Mar-17 A	10-Apr-17 A	100%	5	0.00	\$0.00	\$0.00	\$0.00									
	AT Dome/PFlow Drive Spreader Bar - Procurement	10-Apr-17 A	20-Apr-17 A	100%	10	0.00	\$0.00	\$0.00	\$0.00									
	AT Dome/PFlow Drive Spreader Bar - Fabrication in Chile	20-Apr-17 A	20-May-17 A	100%	15	0.00	\$0.00	\$21,010.00	\$21,010.00									
	AT Dome/PFlow Drive Spreader Bar - Test	21-May-17 A	15-Jun-17 A	100%	5	0.00	\$0.00	\$0.00	\$0.00									
	LSST ME 19-05.04C.12.07 Vehicles and Transportation	03-Nov-14 A	30-Apr-20		1085	0.00	\$0.00	\$502,414.80	\$502,414.80	128								
	T&SC-33 Vehicles and Transportation	03-Nov-14 A	30-Apr-20	77%	1085	0.00	\$0.00	\$502,414.80	\$502,414.80	128								
	LSST ME 19-05.04C.12.08 Shipping and Logistics	15-Sep-16 A	12-Jan-21		1015	0.00	\$0.00	\$4,748,851.91	\$4,748,851.91	439								
	T&SC-04 Transport mirror Cell to CAID	08-Apr-19 A	08-Apr-19 A	100%	1	0.00	\$0.00	\$11,300.00	\$11,300.00									
	T&SC-12 AT Dome Fabrication - Delivery to Mountain	15-Sep-16 A	28-Oct-16 A	100%	24	0.00	\$0.00	\$4,992.04	\$4,992.04									
	T&SC-12 Camera Hexapod/Rotator Shipping Budget	06-Jan-19 A	15-Mar-19 A	100%	41	0.00	\$0.00	\$12,070.86	\$12,070.86									
	T&SC-12 Camera Hexapod/Rotator Shipping to Site	30-Aug-19	28-Oct-19	0%	41	0.00	\$0.00	\$0.00	\$0.00	183								
	T&SC-12 M2 Hexapod Packaging and Shipping to Site	31-May-19 A	30-Jul-19	50%	41	0.00	\$0.00	\$0.00	\$0.00	239								
	T&SC-12 M2 Lifting Fixture Shipping Container	01-Sep-18 A	01-Oct-18 A	100%	10	0.00	\$0.00</											



LSST May 2019 Month End Forecast																				
Activity ID	Activity Name	Start	Finish	Physical % Complete	Original Duration	Budgeted Labor Units	Budgeted Labor Cost	Budgeted Material Cost	Budgeted Total Cost no	Total Float	FY2015 2014-10-01	FY2016 2015-10-01	FY2017 2016-10-01	FY2018 2017-10-01	FY2019 2018-10-01	FY2020 2019-10-01	FY2021 2020-10-01	FY2022 2021-10-01		
T&SC-12	Vaculift Inland Freight from LSST to SOML	20-Sep-18 A	12-Oct-18 A	100%	1	0.00	\$0.00	\$6,000.00	\$6,000.00											
	Primary Cell Inland Freight from CAID to SOML	20-Sep-18 A	12-Oct-18 A	100%	1	0.00	\$0.00	\$10,000.00	\$10,000.00											
	M1M3 Inland Freight from TUS to SOML	18-Oct-18 A	18-Oct-18 A	100%	1	0.00	\$0.00	\$16,000.00	\$16,000.00											
	Auxiliary Telescope Tucson to Valparaiso / San Antonio	20-Mar-18 A	22-Apr-18 A	100%	23	0.00	\$0.00	\$4,100.00	\$4,100.00											
	M1M3 Mirror Inland Freight from SOML to Houston	20-Mar-19 A	31-Mar-19 A	100%	7	0.00	\$0.00	\$181,000.00	\$181,000.00											
	M1M3 Cell with CoverInland Freight from CAID to H	15-May-19 A	30-May-19 A	100%	7	0.00	\$0.00	\$0.00	\$0.00											
	Vaculift Inland Freight from SOML to Houston	26-Mar-19 A	31-Mar-19 A	100%	7	0.00	\$0.00	\$0.00	\$0.00											
	Surrogate Mirror Inland Freight from CAID to Houston	15-May-19 A	30-May-19 A	100%	7	0.00	\$0.00	\$0.00	\$0.00											
	Cell Cart Inland Freight from CAID to Houston	31-Jan-19 A	31-Jan-19 A	100%	7	0.00	\$0.00	\$0.00	\$0.00											
	Cart Rails Inland Freight from Ajax, ON to Local Port	11-Apr-18 A	12-Apr-18 A	100%	7	0.00	\$0.00	\$0.00	\$0.00											
	Hexapod Inland Freight from Golden, CO to Tucson	06-Mar-18 A	14-Mar-18 A	100%	7	0.00	\$0.00	\$0.00	\$0.00											
	M2 Inland Freight from Rochester to US Local Port	05-Nov-18 A	05-Nov-18 A	100%	10	0.00	\$0.00	\$0.00	\$0.00											
	M2 Baffle Inland Freight from Rochester, NY to US Local Port	16-Jun-20	29-Jun-20	0%	10	0.00	\$0.00	\$0.00	\$0.00	1										
	ComCam Cryostat Inland Freight from Menlo Park, CA to Tucson (Haz)	10-Oct-19	18-Oct-19	0%	7	0.00	\$0.00	\$55,177.46	\$55,177.46	162										
	LSST Camera Inland Freight from Menlo Park, CA to Tucson	17-Dec-20	24-Dec-20	0%	6	0.00	\$0.00	\$0.00	\$0.00	93										
	Calibration Instruments Inland Freight from Tucson to Houston	20-Dec-19	30-Dec-19	0%	5	0.00	\$0.00	\$0.00	\$0.00	121										
	Data Network Cabinets Inland Freight from Urbana, IL to Chicago	30-Jul-19	10-Sep-19	0%	30	0.00	\$0.00	\$0.00	\$0.00	231										
	Spectrograph Inland Freight from Tucson to Houston	08-Aug-19	14-Aug-19	0%	5	0.00	\$0.00	\$0.00	\$0.00	45										
	Collimated Beam Projector Inland Freight from Tucson to Houston	12-Jun-19	18-Jun-19	0%	5	0.00	\$0.00	\$0.00	\$0.00	279										
	ComCam Airfreight from Tucson to Santiago	01-Jun-20	05-Jun-20	0%	5	0.00	\$0.00	\$11,000.00	\$11,000.00	-19										
	LSST Camera Airflight from San Jose to Valparaiso	28-Dec-20	04-Jan-21	0%	5	0.00	\$0.00	\$0.00	\$0.00	93										
	Data Network Cabinets Airfreight from Chicago to Valparaiso	11-Sep-19	08-Oct-19	0%	20	0.00	\$0.00	\$0.00	\$0.00	231										
	M1M3 Mirror Ocean Freight from Houston Dock to Coquimbo Dock	01-Apr-19 A	30-Apr-19 A	100%	40	0.00	\$0.00	\$520,000.00	\$520,000.00											
	M1M3 Cell with CoverOcean Freight from Houston Dock to Coquimbo Dock	31-May-19 A	05-Jul-19	50%	40	0.00	\$0.00	\$0.00	\$0.00	128										
	Vaculift Ocean Freight from Houston Dock to Coquimbo Dock	07-May-19 A	11-May-19 A	100%	40	0.00	\$0.00	\$0.00	\$0.00											
	Surrogate Mirror Ocean Freight from Houston to Coquimbo	31-May-19 A	05-Jul-19	50%	50	0.00	\$0.00	\$0.00	\$0.00	128										
	Cell Cart Ocean Freight from Houston to Coquimbo	01-Mar-19 A	29-Mar-19 A	100%	50	0.00	\$0.00	\$0.00	\$0.00											
	Cart Rails Ocean Freight from Canadian port to Valparaiso	12-Apr-18 A	30-May-18 A	100%	20	0.00	\$0.00	\$0.00	\$0.00											
	Coating Plant Ocean Freight from Antwerp to Coquimbo	07-Sep-18 A	23-Oct-18 A	100%	25	0.00	\$0.00	\$0.00	\$0.00											
	TMA Ocean Freight from Aviles to Coquimbo	03-Jun-19	31-Jul-19	0%	42	0.00	\$0.00	\$0.00	\$0.00	-52										
	Hexapod Ocean Freight Ex Houston to Coquimbo	31-May-19 A	22-Jul-19	50%	35	0.00	\$0.00	\$0.00	\$0.00	233										
	M2 Ocean Freight from Rochester, NY to Coquimbo	12-Nov-18 A	07-Dec-18 A	100%	18	0.00	\$0.00	\$0.00	\$0.00											
	M2 Baffle Ocean Freight from Rochester, NY to Coquimbo	30-Jun-20	06-Jul-20	0%	5	0.00	\$0.00	\$0.00	\$0.00	1										
	Calibration Instruments Ocean Freight from Houston to Coquimbo	31-Dec-19	19-Feb-20	0%	35	0.00	\$0.00	\$0.00	\$0.00	121										
	Spectrograph Ocean Freight from Houston to Coquimbo	15-Aug-19	03-Oct-19	0%	35	0.00	\$0.00	\$0.00	\$0.00	45										
	Collimated Beam Projector Ocean Freight from Houston to Coquimbo	19-Jun-19	07-Aug-19	0%	35	0.00	\$0.00	\$0.00	\$0.00	279										
	Design transport frame for upper vessel	15-Aug-18 A	20-Sep-18 A	100%	5	0.00	\$0.00	\$23,967.00	\$23,967.00											
	Procure transport frame for upper vessel	20-Sep-18 A	15-Oct-18 A	100%	29	0.00	\$0.00	\$10,000.00	\$10,000.00											
	Split Coating Chamber by Von Ardenne	23-Oct-18 A	31-Oct-18 A	100%	23	0.00	\$0.00	\$83,257.00	\$83,257.00											
	Removal of signals and lights in Coquimbo and La Serena for Coating Chamber Transportation	10-Oct-18 A	31-Oct-18 A	100%	5	0.00	\$0.00	\$80,000.00	\$80,000.00											
	Auxiliary Telescope Destination Freight from Valparaiso to Summit	24-Apr-18 A	27-Apr-18 A	100%	5	0.00	\$0.00	\$1,980.00	\$1,980.00											
	M1M3 Mirror Destination Freight from Coquimbo to Summit	07-May-19 A	11-May-19 A	100%	5	0.00	\$0.00	\$180,000.00	\$180,000.00											
	M1M3 Cell with Cover Destination Freight from Coquimbo to Summit	08-Jul-19	12-Jul-19	0%	5	0.00	\$0.00	\$85,000.00	\$85,000.00	128										
	Vaculift Destination Freight from Coquimbo to Summit	07-May-19 A	11-May-19 A	100%	5	0.00	\$0.00	\$0.00	\$0.00											
	Surrogate Mirror Destination Freight from Coquimbo to Summit	08-Jul-19	24-Jul-19	0%	13	0.00	\$0.00	\$0.00	\$0.00	128										
	Cell Cart Destination Freight from Coquimbo to Summit	29-Mar-19 A	31-Mar-19 A	100%	13	0.00	\$0.00	\$0.00	\$0.00											
	Cart Rails Destination Freight from Valparaiso to Summit	28-May-18 A	05-Jun-18 A	100%	13	0.00	\$0.00	\$0.00	\$0.00											
	Coating Chamber (2 pieces) Destination Freight from Coquimbo to Summit	29-Oct-18 A	31-Oct-18 A	100%	8	0.00	\$0.00	\$173,415.39	\$173,415.39											
	TMA Destination Freight from Coquimbo to Summit - 20 Pieces	01-Aug-19	05-Sep-19	0%	25	0.00	\$0.00	\$250,769.16	\$250,769.16	-52										
	Hexapod Destination Freight from Coquimbo to Summit	23-Jul-19	08-Aug-19	50%	13	0.00	\$0.00	\$0.00	\$0.00	233										
	M2 Destination Freight from Coquimbo to Summit	08-Dec-18 A	20-Dec-18 A	100%	30	0.00	\$0.00	\$0.00	\$0.00											
	M2 Baffle Destination Freight from Coquimbo to Summit	07-Jul-20	23-Jul-20	0%	13	0.00	\$0.00	\$0.00	\$0.00	1										
ComCam Destination Freight from Santiago to Summit	08-Jun-20	24-Jun-20	0%	13	0.00	\$0.00	\$0.00	\$0.00	-19											
LSST Camera Destination Freight from Valparaiso to Summit	05-Jan-21	11-Jan-21	0%	5	0.00	\$0.00	\$0.00	\$0.00	93											
Calibration Instruments Destination Freight from Coquimbo to Summit	20-Feb-20	10-Mar-20	0%	13	0.00	\$0.00	\$0.00	\$0.00	121											
Data Network Cabinets Destination Freight from Valparaiso to Summit	09-Oct-19	19-Nov-19	0%	30	0.00	\$0.00	\$0.00	\$0.00	231											
Spectrograph Destination Freight from Coquimbo to Summit	04-Oct-19	22-Oct-19	0%	13	0.00	\$0.00	\$0.00	\$0.00	45											
Collimated Beam Projector Destination Freight from Coquimbo to Summit	08-Aug-19	26-Aug-19	0%	13	0.00	\$0.00	\$0.00	\$0.00	279											
M1M3 Mirror - 10 x Containers (Purchase and Shipping)	07-May-19 A	11-May-19 A	100%	1	0.00	\$0.00	\$0.00	\$0.00												
Coating Plant - 30 x Containers	02-Sep-18 A	28-Sep-18 A	100%	1	0.00	\$0.00	\$0.00	\$0.00												
TMA - 30 x Containers	06-Sep-19	06-Sep-19	0%	1	0.00	\$0.00	\$0.00	\$0.00	-52											
Removal of signals/lights/poles/trees + security in Coquimbo and La Serena for M1M3 mirror	07-May-19 A	11-May-19 A	100%	10	0.00	\$0.00	\$46,000.00	\$46,000.00												
Coating Plant Marine Survey & Cargo Inspection	07-Sep-18 A	31-Oct-18 A	100%	1	0.00	\$0.00	\$0.00	\$0.00												
Acquire Permits and Customs processes	07-May-19 A	11-May-19 A	100%	10	0.00	\$0.00	\$25,000.00	\$25,000.00												
Washing Station Ready for Shipment at Port FOB (Milestone) - 1 Piece		12-Jun-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00												
Washing Station Ocean Freight from Antwerp to Coquimbo	15-Jun-18 A	10-Jul-18 A	100%	40	0.00	\$0.00	\$0.00	\$0.00												
Washing Station Destination Freight from Coquimbo to Summit	10-Jul-18 A	15-Jul-18 A	100%	13	0.00	\$0.00	\$82,820.00	\$82,820.00												
Washing Station - 10 x 40' Containers	10-Jul-18 A	15-Jul-18 A	100%	1	0.00	\$0.00	\$0.00	\$0.00												
Auxiliary Telescope Marine Survey & Cargo Inspection	27-Apr-18 A	30-Apr-18 A	100%	6	0.00	\$0.00	\$0.00	\$0.00												
M1M3 Mirror Marine Survey & Cargo Inspection	15-Apr-19 A	15-Apr-19 A	100%																	

## LSST May 2019 Month End Forecast

Activity ID	Activity Name	Start	Finish	Physical % Complete	Original Duration	Budgeted Labor Units	Budgeted Labor Cost	Budgeted Material Cost	Budgeted Total Cost no	Total Float	FY2015 2014-10-01	FY2016 2015-10-01	FY2017 2016-10-01	FY2018 2017-10-01	FY2019 2018-10-01	FY2020 2019-10-01	FY2021 2020-10-01	FY2022 2021-10-01	
LSST ME 19-05.04C.12.09 Camera Support Assembly Cart	T&SC-12i Surrogate Mirror Marine Survey & Cargo Inspection	25-Jul-19	30-Jul-19	0%	4	0.00	\$0.00	\$0.00	\$0.00	128								Surrogate Mirror Marine Survey & Cargo Inspection	
	T&SC-12i Cell Cart Marine Survey & Cargo Inspection	29-Mar-19 A	29-Mar-19 A	100%	4	0.00	\$0.00	\$0.00	\$0.00									Cell Cart Marine Survey & Cargo Inspection	
	T&SC-12i Cart Rails Marine Survey & Cargo Inspection	31-May-18 A	31-May-18 A	100%	4	0.00	\$0.00	\$11,500.00	\$11,500.00									Cart Rails Marine Survey & Cargo Inspection	
	T&SC-12i TMA Marine Survey & Cargo Inspection	09-Sep-19	23-Sep-19	0%	11	0.00	\$0.00	\$873,067.65	\$873,067.65	-52								TMA Marine Survey & Cargo Inspection	
	T&SC-12i Hexapod Marine Survey & Cargo Inspection	09-Aug-19	16-Aug-19	0%	6	0.00	\$0.00	\$0.00	\$0.00	233								Hexapod Marine Survey & Cargo Inspection	
	T&SC-12i M2 Marine Survey & Cargo Inspection	07-Dec-18 A	20-Dec-18 A	100%	6	0.00	\$0.00	\$295,000.00	\$295,000.00									M2 Marine Survey & Cargo Inspection	
	T&SC-12i M2 Baffle Marine Survey & Cargo Inspection	24-Jul-20	29-Jul-20	0%	4	0.00	\$0.00	\$51,000.00	\$51,000.00	1								M2 Baffle Marine Survey & Cargo Inspection	
	T&SC-12i ComCam Cargo Inspection	25-Jun-20	25-Jun-20	0%	1	0.00	\$0.00	\$0.00	\$0.00	-19								ComCam Cargo Inspection	
	T&SC-12i LSST Camera Marine Survey & Cargo Inspection	12-Jan-21	12-Jan-21	0%	1	0.00	\$0.00	\$0.00	\$0.00	93								LSST Camera Marine Survey & Cargo Inspection	
	T&SC-12i Calibration Instruments Marine Survey & Cargo Insp	11-Mar-20	16-Mar-20	0%	4	0.00	\$0.00	\$45,000.00	\$45,000.00	121								Calibration Instruments Marine Survey & Cargo Inspection	
	T&SC-12i Data Network Cabinets Marine Survey & Cargo Insp	20-Nov-19	09-Dec-19	0%	12	0.00	\$0.00	\$415,144.73	\$415,144.73	231								Data Network Cabinets Marine Survey & Cargo Inspection	
	T&SC-12i Spectrograph Marine Survey & Cargo Inspection	23-Oct-19	28-Oct-19	0%	4	0.00	\$0.00	\$47,294.97	\$47,294.97	45								Spectrograph Marine Survey & Cargo Inspection	
	T&SC-12i Collimated Beam Projector Marine Survey & Cargo I	27-Aug-19	30-Aug-19	0%	4	0.00	\$0.00	\$47,295.11	\$47,295.11	279								Collimated Beam Projector Marine Survey & Cargo Inspection	
	T&SC-12i Washing Station Marine Survey & Cargo Inspection	10-Jul-18 A	10-Jul-18 A	100%	8	0.00	\$0.00	\$0.00	\$0.00									Washing Station Marine Survey & Cargo Inspection	
	T&SC-64i ComCam Corrector Optics - Shipping to Tucson	03-Jun-19	14-Jun-19	0%	10	0.00	\$0.00	\$0.00	\$0.00	62								ComCam Corrector Optics - Shipping to Tucson	
	T&SC-64i ComCam Shutter Back in Tucson	17-Jun-19	28-Jun-19	0%	10	0.00	\$0.00	\$0.00	\$0.00	110								ComCam Shutter Back in Tucson	
	LSST ME 19-05.04C.12.09 Camera Support Assembly Cart	23-May-16 A	12-Nov-19		659	60.00	\$6,100.80	\$305,444.00	\$311,544.80	177									
	T&SC-12i Camera Support Assembly Cart - SOW / support do	15-Apr-17 A	20-Jul-17 A	100%	10	60.00	\$6,100.80	\$0.00	\$0.00	\$6,100.80									Camera Support Assembly Cart - SOW / support documents Developed and Provided to Procurement
	T&SC-12i Camera Support Assembly Cart - Procurement Prep	15-Apr-17 A	25-Jul-17 A	100%	10	0.00	\$0.00	\$0.00	\$0.00	\$0.00									Camera Support Assembly Cart - Procurement Prepares and Issues Bid Package
	T&SC-12i Camera Support Assembly Cart - Supplier Respons	15-Apr-17 A	25-Aug-17 A	100%	10	0.00	\$0.00	\$0.00	\$0.00	\$0.00									Camera Support Assembly Cart - Supplier Response
	T&SC-12i Camera Support Assembly Cart - Supplier Selection	15-Apr-17 A	25-Sep-17 A	100%	5	0.00	\$0.00	\$0.00	\$0.00	\$0.00									Camera Support Assembly Cart - Supplier Selection and Contract Award
	T&SC-12i Camera Support Assembly Cart - Supplier Leadtime	25-Sep-17 A	31-Dec-18 A	100%	274	0.00	\$0.00	\$0.00	\$0.00	\$0.00									Camera Support Assembly Cart - Supplier Leadtime and Delivery
	T&SC-12i Camera Support Assembly Cart - Delivery Acceptan	31-Dec-18 A	31-Dec-18 A	100%	5	0.00	\$0.00	\$192,249.00	\$192,249.00										Camera Support Assembly Cart - Delivery Acceptance
	T&SC-12i Camera Support Assembly Cart - Supplier Leadtime	23-May-16 A	01-Sep-18 A	100%	60	0.00	\$0.00	\$0.00	\$0.00	\$0.00									Camera Support Assembly Cart - Supplier Leadtime and Delivery
	T&SC-12i Camera Surrogate assembly cart - Delivery Accepta	23-May-16 A	01-Sep-18 A	100%	5	0.00	\$0.00	\$100,000.00	\$100,000.00										Camera Surrogate assembly cart - Delivery Acceptance
	T&SC-12i Camera and Surrogate Cart design and fabrication f	23-May-16 A	01-Sep-18 A	100%	60	0.00	\$0.00	\$0.00	\$0.00	\$0.00									Camera and Surrogate Cart design and fabrication PCD Approval
	T&SC-12i Camera and Surrogate Cart design and fabrication f	23-May-16 A	01-Sep-18 A	100%	5	0.00	\$0.00	\$6,090.00	\$6,090.00										Camera and Surrogate Cart design and fabrication PCD Approval - Delivery Acceptance
	T&SC-12i Camera and Surrogate Cart design manufactured	23-May-16 A	01-Oct-18 A	100%	95	0.00	\$0.00	\$0.00	\$0.00	\$0.00									Camera and Surrogate Cart design manufactured
	T&SC-12i Camera and Surrogate Cart design and manufactur	23-May-16 A	23-Jul-18 A	100%	5	0.00	\$0.00	\$7,105.00	\$7,105.00										Camera and Surrogate Cart design and manufactured Delivery Acceptance
	T&SC-12i Camera and Surrogate Cart Shipped and Tested	15-Apr-19 A	12-Nov-19	30%	115	0.00	\$0.00	\$0.00	\$0.00	\$0.00	177								Camera and Surrogate Cart Shipped and Tested
	LSST ME 19-05.04C.12.10 M2 Equipment	21-Feb-18 A	15-Jun-20		383	658.00	\$35,545.52	\$99,299.66	\$134,845.18	1									
	LSST ME 19-05.04C.12.10.01 M2 Baffle Temporary Relocati	12-Nov-18 A	22-Oct-19		221	0.00	\$0.00	\$22,529.78	\$22,529.78	163									
	T&SC- M2 Baffle Temporary relocation mount - SOW / supp	14-Nov-18 A	14-Jun-19	30%	10	0.00	\$0.00	\$0.00	\$0.00	\$0.00	163								M2 Baffle Temporary relocation mount - SOW / support documents Developed and Provided to Procurement
	T&SC- M2 Baffle Temporary relocation mount - Procuremer	17-Jun-19	28-Jun-19	0%	10	0.00	\$0.00	\$0.00	\$0.00	\$0.00	163								M2 Baffle Temporary relocation mount - Procurement Prepares and Issues Bid Package
	T&SC- M2 Baffle Temporary relocation mount - Supplier Re	01-Jul-19	15-Jul-19	0%	10	0.00	\$0.00	\$0.00	\$0.00	\$0.00	163								M2 Baffle Temporary relocation mount - Supplier Response
	T&SC- M2 Baffle Temporary relocation mount - Supplier Sel	16-Jul-19	22-Jul-19	0%	5	0.00	\$0.00	\$0.00	\$0.00	\$0.00	163								M2 Baffle Temporary relocation mount - Supplier Selection and Contract Award
	T&SC- M2 Baffle Temporary relocation mount - Supplier Le	23-Jul-19	15-Oct-19	0%	60	0.00	\$0.00	\$0.00	\$0.00	\$0.00	163								M2 Baffle Temporary relocation mount - Supplier Leadtime and Delivery
	T&SC- M2 Baffle Temporary relocation mount - Delivery Acc	16-Oct-19	22-Oct-19	0%	5	0.00	\$0.00	\$22,529.78	\$22,529.78	163									M2 Baffle Temporary relocation mount - Delivery Acceptance
	LSST ME 19-05.04C.12.10.02 M2 Baffle and Fixture	21-Feb-18 A	15-Jun-20		383	658.00	\$35,545.52	\$76,769.88	\$112,315.40	1									
	T&SC- M2 baffle base flange [PF: M2-BFL-101]	03-Dec-18 A	10-Dec-18 A	100%	6	48.00	\$2,299.20	\$0.00	\$2,299.20										M2 baffle base flange [PF: M2-BFL-101]
	T&SC- M2 LS Support Strut [PF: M2-BFL-102]	11-Dec-18 A	12-Dec-18 A	100%	2	16.00	\$766.40	\$0.00	\$766.40										M2 LS Support Strut [PF: M2-BFL-102]
	T&SC- M2 RS Support Strut [PF: M2-BFL-103]	12-Dec-18 A	13-Dec-18 A	100%	2	16.00	\$766.40	\$0.00	\$766.40										M2 RS Support Strut [PF: M2-BFL-103]
	T&SC- M2 Support Strut [PF:M2-BFL-104]	13-Dec-18 A	14-Dec-18 A	100%	2	16.00	\$766.40	\$0.00	\$766.40										M2 Support Strut [PF:M2-BFL-104]
	T&SC- M2 Wide Vane [PF:M2-BFL-105]	18-Dec-18 A	19-Dec-18 A	100%	2	16.00	\$766.40	\$0.00	\$766.40										M2 Wide Vane [PF:M2-BFL-105]
	T&SC- M2 Vanes [PF:M2-BFL-106]	20-Dec-18 A	21-Dec-18 A	100%	2	16.00	\$766.40	\$0.00	\$766.40										M2 Vanes [PF:M2-BFL-106]
	T&SC- M2 Flange Support Plate [PF:M2-BFL-107]	14-Dec-18 A	20-Dec-18 A	100%	2	16.00	\$766.40	\$0.00	\$766.40										M2 Flange Support Plate [PF:M2-BFL-107]
	T&SC- M2 Outside Plate [PF:M2-BFL-108]	14-Dec-18 A	17-Dec-18 A	100%	2	16.00	\$766.40	\$0.00	\$766.40										M2 Outside Plate [PF:M2-BFL-108]
	T&SC- M2 Baffle Segment Assy [SA:M2-BFL-003]	03-Jan-19 A	04-Jan-19 A	100%	2	16.00	\$766.40	\$0.00	\$766.40										M2 Baffle Segment Assy [SA:M2-BFL-003]
	T&SC- Baffle Design Review	07-Jan-19 A	10-Jan-19 A	100%	4	32.00	\$3,485.44	\$0.00	\$3,485.44										Baffle Design Review
	T&SC- M2 Baffle Assy [SA:M2-BFL-002]	07-Jan-19 A	09-Jan-19 A	100%	3	24.00	\$1,149.60	\$0.00	\$1,149.60										M2 Baffle Assy [SA:M2-BFL-002]
	T&SC- Angle Bracket Support ASSY	18-Feb-19 A	05-Jun-19	60%	3	24.00	\$1,149.60	\$0.00	\$1,149.60	34									Angle Bracket Support ASSY
	T&SC- Baffle Support Bar ASSY	18-Feb-19 A	04-Jun-19	60%	2	16.00	\$766.40	\$0.00	\$766.40	35									Baffle Support Bar ASSY
	T&SC- Baffle Support ASSY	18-Feb-19 A	04-Jun-19	60%	2	16.00	\$766.40	\$0.00	\$766.40	35									Baffle Support ASSY
	T&SC- Design Support Review	21-Feb-18 A	05-Jun-19	60%	3	24.00	\$2,614.08	\$0.00	\$2,614.08	11									Design Support Review
	T&SC- Baffle Procurement	15-Jan-19 A	14-Jun-19	40%	10	80.00	\$3,832.00	\$0.00	\$3,832.00	1									Baffle Procurement
	T&SC- Supplier Selection and Contract Award	18-Mar-20	18-Mar-20	0%	1	0.00	\$0.00	\$0.00	\$0.00	34									Supplier Selection and Contract Award
	T&SC- M2 Baffle Removal and Installation fixture - Contract	19-Mar-20	22-Apr-20	0%	25	0.00	\$0.00	\$0.00	\$0.00	34									M2 Baffle Removal and Installation fixture - Contract Management
	T&SC- M2 Baffle Removal and Installation fixture - Delivery	23-Apr-20	29-Apr-20	0%	5	0.00	\$0.00	\$3,979.40	\$3,979.40	34									M2 Baffle Removal and Installation fixture - Delivery Acceptance
	T&SC- Baffle Support Procurement	17-Jun-19	19-Jun-19	0%	3	24.00	\$1,149.60	\$0.00	\$1,149.60	1									Baffle Support Procurement
	T&SC- Baffle Fabrication	17-Jun-19	23-Jul-19	0%	26	80.00	\$3,832.00	\$0.00	\$3,832.00	4									Baffle Fabrication
	T&SC- Baffle Support Fabrication	20-Jun-19	26-Jul-19	0%	26	24.00	\$1,149.60	\$0.00	\$1,149.60	1									Baffle Support Fabrication
	T&SC- QC & Assembly	29-Jul-19	02-Aug-19	0%	5	80.00	\$3,832.00	\$0.00	\$3,832.00	1									QC & Assembly
	T&SC- Lift Testing	05-Aug-19	07-Aug-19	0%	3	24.00	\$1,149.60	\$0.00	\$1,149.60	1									Lift Testing
	T&SC- Disassembly & Packaging	08-Aug-19	14-Aug-19	0%	5	24.00	\$1,149.60	\$0.00	\$1,149.60	211									Disassembly & Packaging
	T&SC- M2 BaffleDelay	08-Aug-19	15-Jun-20	0%	215	0.00	\$0.00	\$0.00	\$0.00	1									M2 BaffleDelay
	T&SC- M2 Baffle - SOW / support documents Developed ar	06-Jun-19	19-Jun-19	0%	10	10.00	\$1,089.20	\$0.00	\$1,089.20	34									M2 Baffle - SOW / support documents Developed and Provided to Procurement
	T&SC- M2 Baffle - Procurement Prepares and Issues Bid P	11-Dec-19	24-Dec-19	0%	10	0.00	\$0.00	\$0.00	\$0.00	34									M2 Baffle - Procurement Prepares and Issues Bid Package
	T&SC- M2 Baffle - Supplier Response	27-Dec-19	10-Jan-20	0%	10	0.00	\$0.00	\$0.00	\$0.00	34									M2 Baffle - Supplier Response
	T&SC- M2 Baffle - Supplier Selection and Contract Award	13-Jan-20	17-Jan-20	0%	5	0.00	\$0.00	\$0.00	\$0.00	34									M2 Baffle - Supplier Selection and Contract Award
	T&SC- M2 Baffle - Delivery Acceptance	24-Jul-19	30-Jul-19	0%	5	0.00	\$0.00	\$72,790.48	\$72,790.48	222									M2 Baffle - Delivery Acceptance
	LSST ME 19-05.04C.12.11 M1M3 Equipment	03-Mar-17 A	14-Feb-20		810	120.00	\$10,421.00	\$320,972.41	\$331,393.41	-8									
	LSST ME 19-05.04C.12.11.02 M1M3 Surrogate Lift Spreader	03-Jun-19	14-Feb-20		177	40.00	\$3,136.40	\$51,760.04	\$54,896.44	-8									



LSST May 2019 Month End Forecast																			
Activity ID	Activity Name	Start	Finish	Physical % Complete	Original Duration	Budgeted Labor Units	Budgeted Labor Cost	Budgeted Material Cost	Budgeted Total Cost no	Total Float		FY2015 2014-10-01	FY2016 2015-10-01	FY2017 2016-10-01	FY2018 2017-10-01	FY2019 2018-10-01	FY2020 2019-10-01	FY2021 2020-10-01	FY2022 2021-10-01
	T&SC- M1M3 mirror and surrogate lift spreader bar - SOW	03-Jun-19	14-Jun-19	0%	10	40.00	\$3,136.40	\$0.00	\$3,136.40	-8									M1M3 mirror and surrogate lift spreader bar - SOW / support documents Developed and Provided to Procurement
	T&SC- M1M3 mirror and surrogate lift spreader bar - Procurement	17-Jun-19	28-Jun-19	0%	10	0.00	\$0.00	\$0.00	\$0.00	-8									M1M3 mirror and surrogate lift spreader bar - Procurement Prepares and Issues Bid Package
	T&SC- M1M3 mirror and surrogate lift spreader bar - Supplier Response	01-Jul-19	15-Jul-19	0%	10	0.00	\$0.00	\$0.00	\$0.00	-8									M1M3 mirror and surrogate lift spreader bar - Supplier Response
	T&SC- M1M3 mirror and surrogate lift spreader bar - Supplier Selection and Contract Award	16-Jul-19	22-Jul-19	0%	5	0.00	\$0.00	\$0.00	\$0.00	-8									M1M3 mirror and surrogate lift spreader bar - Supplier Selection and Contract Award
	T&SC- M1M3 mirror and surrogate lift spreader bar - Supplier Leadtime and Delivery	23-Jul-19	07-Feb-20	0%	137	0.00	\$0.00	\$0.00	\$0.00	-8									M1M3 mirror and surrogate lift spreader bar - Supplier Leadtime and Delivery
	T&SC- M1M3 mirror and surrogate lift spreader bar - Delivery Acceptance	10-Feb-20	14-Feb-20	0%	5	0.00	\$0.00	\$51,760.04	\$51,760.04	-8									M1M3 mirror and surrogate lift spreader bar - Delivery Acceptance
	LSST ME 19-05.04C.12.11.03 M1M3 Maintenance Deployable tent - SOW / support documents Developed and Provided to Procurement	03-Jun-19	22-Oct-19		100	40.00	\$4,356.80	\$16,483.61	\$20,840.41	61									
	T&SC- M1M3 Maintenance Deployable tent - SOW / support documents Developed and Provided to Procurement	03-Jun-19	14-Jun-19	0%	10	40.00	\$4,356.80	\$0.00	\$4,356.80	61									M1M3 Maintenance Deployable tent - SOW / support documents Developed and Provided to Procurement
	T&SC- M1M3 Maintenance Deployable tent - Procurement Prepares and Issues Bid Package	17-Jun-19	28-Jun-19	0%	10	0.00	\$0.00	\$0.00	\$0.00	61									M1M3 Maintenance Deployable tent - Procurement Prepares and Issues Bid Package
	T&SC- M1M3 Maintenance Deployable tent - Supplier Response	01-Jul-19	15-Jul-19	0%	10	0.00	\$0.00	\$0.00	\$0.00	61									M1M3 Maintenance Deployable tent - Supplier Response
	T&SC- M1M3 Maintenance Deployable tent - Supplier Selection and Contract Award	16-Jul-19	22-Jul-19	0%	5	0.00	\$0.00	\$0.00	\$0.00	61									M1M3 Maintenance Deployable tent - Supplier Selection and Contract Award
	T&SC- M1M3 Maintenance Deployable tent - Supplier Leadtime and Delivery	23-Jul-19	15-Oct-19	0%	60	0.00	\$0.00	\$0.00	\$0.00	61									M1M3 Maintenance Deployable tent - Supplier Leadtime and Delivery
	T&SC- M1M3 Maintenance Deployable tent - Delivery Acceptance	16-Oct-19	22-Oct-19	0%	5	0.00	\$0.00	\$16,483.61	\$16,483.61	61									M1M3 Maintenance Deployable tent - Delivery Acceptance
	LSST ME 19-05.04C.12.11.04 M1M3 Cart Rail Sections, Shims & M1M3 Cart Rail transition sections - SOW / Developed and Provided to Procurement	03-Mar-17 A	09-Jul-18 A		340	40.00	\$2,927.80	\$252,728.77	\$255,656.57										
	T&SC- M1M3 Cart Rail Sections and shims & M1M3 Cart Rail transition sections - SOW / Developed and Provided to Procurement	03-Mar-17 A	30-Apr-17 A	100%	10	40.00	\$2,927.80	\$0.00	\$2,927.80										
	T&SC- M1M3 Cart Rail Sections and shims & M1M3 Cart Rail transition sections - Procurement Prepares and Issues Bid Package	31-Mar-17 A	30-Apr-17 A	100%	10	0.00	\$0.00	\$0.00	\$0.00										
	T&SC- M1M3 Cart Rail Sections and shims & M1M3 Cart Rail transition sections - Supplier Response	05-Apr-17 A	30-Apr-17 A	100%	10	0.00	\$0.00	\$0.00	\$0.00										
	T&SC- M1M3 Cart Rail Sections and shims & M1M3 Cart Rail transition sections - Supplier Selection and Contract Award	15-Apr-17 A	30-Apr-17 A	100%	5	0.00	\$0.00	\$0.00	\$0.00										
	T&SC- M1M3 Cart Rail Sections and shims & M1M3 Cart Rail transition sections - Supplier Leadtime and Delivery	20-May-17 A	31-Mar-18 A	100%	259	0.00	\$0.00	\$0.00	\$0.00										
	T&SC- M1M3 Cart Rail Sections and shims & M1M3 Cart Rail transition sections - Pre-Delivery Acceptance	30-Mar-18 A	12-Apr-18 A	100%	41	0.00	\$0.00	\$0.00	\$0.00										
	T&SC- M1M3 Cart Rail Sections and shims & M1M3 Cart Rail transition sections - Delivery Acceptance	15-Nov-17 A	09-Jul-18 A	100%	5	0.00	\$0.00	\$252,728.77	\$252,728.77										
	LSST ME 19-05.04C.12.12 Summit Equipment	02-Jul-17 A	30-May-19 A		536	45.00	\$3,123.80	\$714,440.83	\$717,564.63										
	LSST ME 19-05.04C.12.12.01 Jib Crane in Lower Enclosure	15-Jul-18 A	10-Feb-19 A		95	5.00	\$231.40	\$0.00	\$231.40										
	T&SC- Jib Crane in Lower Enclosure (machine shop area) - SOW / support documents Developed and Provided to Procurement	15-Jul-18 A	15-Oct-18 A	100%	10	5.00	\$231.40	\$0.00	\$231.40										
	T&SC- Jib Crane in Lower Enclosure (machine shop area) - Procurement Prepares and Issues Bid Package	15-Oct-18 A	15-Jan-19 A	100%	10	0.00	\$0.00	\$0.00	\$0.00										
	T&SC- Jib Crane in Lower Enclosure (machine shop area) - Supplier Response	15-Jan-19 A	20-Jan-19 A	100%	10	0.00	\$0.00	\$0.00	\$0.00										
	T&SC- Jib Crane in Lower Enclosure (machine shop area) - Supplier Selection and Contract Award	15-Jan-19 A	20-Jan-19 A	100%	5	0.00	\$0.00	\$0.00	\$0.00										
	T&SC- Jib Crane in Lower Enclosure (machine shop area) - Supplier Leadtime and Delivery	20-Jan-19 A	10-Feb-19 A	100%	60	0.00	\$0.00	\$0.00	\$0.00										
	LSST ME 19-05.04C.12.12.02 Fixed Articulating Man lift in dome - SOW / support documents Developed and Provided to Procurement	15-Dec-18 A	31-Jan-19 A		371	40.00	\$2,892.40	\$99,470.57	\$102,362.97										
	T&SC- Fixed Articulating Man lift in dome - SOW / support documents Developed and Provided to Procurement	15-Dec-18 A	31-Jan-19 A	100%	10	40.00	\$2,892.40	\$0.00	\$2,892.40										
	T&SC- Fixed Articulating Man lift in dome - Procurement Prepares and Issues Bid Package	16-Dec-18 A	31-Jan-19 A	100%	78	0.00	\$0.00	\$0.00	\$0.00										
	T&SC- Fixed Articulating Man lift in dome - Awaiting Supplier Response	17-Dec-18 A	31-Jan-19 A	100%	173	0.00	\$0.00	\$0.00	\$0.00										
	T&SC- Fixed Articulating Man lift in dome - Supplier Response	18-Dec-18 A	31-Jan-19 A	100%	10	0.00	\$0.00	\$0.00	\$0.00										
	T&SC- Fixed Articulating Man lift in dome - Supplier Selection and Contract Award	19-Dec-18 A	31-Jan-19 A	100%	5	0.00	\$0.00	\$0.00	\$0.00										
	T&SC- Fixed Articulating Man lift in dome - Supplier Leadtime and Delivery	20-Dec-18 A	31-Jan-19 A	100%	30	0.00	\$0.00	\$0.00	\$0.00										
	T&SC- Fixed Articulating Man lift in dome - Delivery Acceptance	21-Dec-18 A	31-Jan-19 A	100%	5	0.00	\$0.00	\$99,470.57	\$99,470.57										
	LSST ME 19-05.04C.12.12.03 Forklifts	02-Jul-17 A	15-Dec-17 A		85	0.00	\$0.00	\$94,191.48	\$94,191.48										
	LSST ME 19-05.04C.12.12.03.01 Outdoor/Indoor Forklift	02-Jul-17 A	15-Dec-17 A		85	0.00	\$0.00	\$62,087.49	\$62,087.49										
	T&SC- Outdoor/Indoor Forklift - Identification	02-Jul-17 A	20-Aug-17 A	100%	10	0.00	\$0.00	\$0.00	\$0.00										
	T&SC- Outdoor/Indoor Forklift - Procurement in Chile	21-Aug-17 A	15-Dec-17 A	100%	45	0.00	\$0.00	\$62,087.49	\$62,087.49										
	T&SC- Outdoor/Indoor Forklift - Delivery	04-Sep-17 A	15-Dec-17 A	100%	30	0.00	\$0.00	\$0.00	\$0.00										
	LSST ME 19-05.04C.12.12.03.02 Electric Forklift	02-Jul-17 A	03-Oct-17 A		85	0.00	\$0.00	\$32,103.99	\$32,103.99										
	T&SC- Electric Forklift - Identification	02-Jul-17 A	27-Jul-17 A	100%	10	0.00	\$0.00	\$0.00	\$0.00										
	T&SC- Electric Forklift - Procurement in Chile	22-Aug-17 A	02-Sep-17 A	100%	45	0.00	\$0.00	\$32,103.99	\$32,103.99										
	T&SC- Electric Forklift - Delivery	03-Sep-17 A	03-Oct-17 A	100%	30	0.00	\$0.00	\$0.00	\$0.00										
	LSST ME 19-05.04C.12.12.04 Scissor/Indoor Lifts	15-Jan-18 A	15-Oct-18 A		125	0.00	\$0.00	\$104,298.75	\$104,298.75										
	T&SC- Scissor Lifts and Indoor lift - Identification	15-Jan-18 A	28-Sep-18 A	100%	15	0.00	\$0.00	\$0.00	\$0.00										
	T&SC- Scissor Lifts and Indoor lift - Procurement	15-Mar-18 A	15-Oct-18 A	100%	20	0.00	\$0.00	\$0.00	\$0.00										
	T&SC- Scissor Lifts and Indoor lift- Leadtime and Delivery to Tucson	01-Jun-18 A	15-Oct-18 A	100%	45	0.00	\$0.00	\$104,298.75	\$104,298.75										
	T&SC- Scissor Lifts and Indoor lift- Shipping to Chile	02-Jun-18 A	15-Oct-18 A	100%	45	0.00	\$0.00	\$0.00	\$0.00										
LSST ME 19-05.04C.12.12.05 Outdoor Articulating Boom Lift	15-Jan-18 A	05-Jul-18 A		135	0.00	\$0.00	\$167,750.24	\$167,750.24											
T&SC- Outdoor Articulating Boom Lift - Identification	15-Jan-18 A	25-Feb-18 A	100%	10	0.00	\$0.00	\$0.00	\$0.00											
T&SC- Outdoor Articulating Boom Lift - Procurement	25-Feb-18 A	20-Apr-18 A	100%	20	0.00	\$0.00	\$0.00	\$0.00											
T&SC- Outdoor Articulating Boom Lift - Leadtime and Delivery to Tucson	25-Feb-18 A	29-Jun-18 A	100%	45	0.00	\$0.00	\$167,750.24	\$167,750.24											
T&SC- Outdoor Articulating Boom Lift - Shipping to Chile	29-Jun-18 A	05-Jul-18 A	100%	60	0.00	\$0.00	\$0.00	\$0.00											
LSST ME 19-05.04C.12.12.06 Summit Furniture	03-Jul-17 A	30-Apr-18 A		85	0.00	\$0.00	\$57,960.63	\$57,960.63											
T&SC- Summit Furniture - Identification	03-Jul-17 A	15-Oct-17 A	100%	30	0.00	\$0.00	\$0.00	\$0.00											
T&SC- Summit Furniture - Procurement	16-Oct-17 A	20-Apr-18 A	100%	10	0.00	\$0.00	\$0.00	\$0.00											
T&SC- Summit Furniture - leadtime and delivery to Summit	15-Jan-18 A	30-Apr-18 A	100%	45	0.00	\$0.00	\$57,960.63	\$57,960.63											
LSST ME 19-05.04C.12.12.07 Power Tugs	10-Dec-17 A	28-Feb-19 A		90	0.00	\$0.00	\$40,987.99	\$40,987.99											
T&SC- Power Tug - Identification	21-Oct-18 A	01-Nov-18 A	100%	5	0.00	\$0.00	\$0.00	\$0.00											
T&SC- Power Tug - Procurement	01-Nov-18 A	31-Jan-19 A	100%	10	0.00	\$0.00	\$0.00	\$0.00											
T&SC- Power Tug - Leadtime and Delivery to Tucson	10-Dec-17 A	31-Jan-19 A	100%	45	0.00	\$0.00	\$40,987.99	\$40,987.99											
T&SC- Power Tug - Shipping to Chile	02-Feb-19 A	28-Feb-19 A	100%	30	0.00	\$0.00	\$0.00	\$0.00											
LSST ME 19-05.04C.12.12.09 Ladders	15-Jun-18 A	15-Oct-18 A		75	0.00	\$0.00	\$9,359.06	\$9,359.06											
T&SC- Ladders - Identification	15-Jun-18 A	15-Oct-18 A	100%	5	0.00	\$0.00	\$0.00	\$0.00											
T&SC- Ladders - Procurement	15-Jun-18 A	15-Oct-18 A	100%	10	0.00	\$0.00	\$0.00	\$0.00											
T&SC- Ladders- Leadtime and Delivery to Tucson	15-Jun-18 A	15-Oct-18 A	100%	30	0.00	\$0.00	\$9,359.06	\$9,359.06											
T&SC- Ladders - Shipping to Chile	15-Jun-18 A	15-Oct-18 A	100%	30	0.00	\$0.00	\$0.00	\$0.00											
LSST ME 19-05.04C.12.12.10 Summit Machine Shop Equipment	20-Mar-18 A	30-May-19 A		75	0.00	\$0.00	\$97,100.29	\$97,100.29											
T&SC- Machine Shop Equipment - Identification	20-Mar-18 A	01-Oct-18 A	100%	5	0.00	\$0.00	\$0.00	\$0.00											
T&SC- Machine Shop Equipment - Procurement	01-Oct-18 A	01-Nov-18 A	100%	10	0.00	\$0.00	\$0.00	\$0.00											






























































## LSST May 2019 Month End Forecast

Activity ID	Activity Name	Start	Finish	Physical % Complete	Original Duration	Budgeted Labor Units	Budgeted Labor Cost	Budgeted Material Cost	Budgeted Total Cost no	Total Float	FY2015 2014-10-01	FY2016 2015-10-01	FY2017 2016-10-01	FY2018 2017-10-01	FY2019 2018-10-01	FY2020 2019-10-01	FY2021 2020-10-01	FY2022 2021-10-01	
LSST ME 19-05.04C.12.12.11 Summit Hand Tools	T&SC- Machine Shop Equipment - Leadtime and Delivery to Tucson	15-Oct-18 A	30-May-19 A	100%	30	0.00	\$0.00	\$97,100.29	\$97,100.29										
	T&SC- Machine Shop Equipment - Shipping to Chile	15-Oct-18 A	28-Apr-19 A	100%	30	0.00	\$0.00	\$0.00	\$0.00										
	LSST ME 19-05.04C.12.12.11 Summit Hand Tools	01-May-18 A	31-Mar-19 A		510	0.00	\$0.00	\$43,321.82	\$43,321.82										
	T&SC- Hand Tools	01-May-18 A	28-Sep-18 A	100%	58	0.00	\$0.00	\$10,416.52	\$10,416.52										
	T&SC- Summit Hand Tools - Identification	01-Jun-18 A	01-Oct-18 A	100%	5	0.00	\$0.00	\$0.00	\$0.00										
	T&SC- Summit Hand Tools - Procurement	02-Jun-18 A	01-Oct-18 A	100%	10	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
	T&SC- Summit Hand Tools- Leadtime and Delivery to Tucson	03-Jun-18 A	31-Mar-19 A	100%	30	0.00	\$0.00	\$32,905.30	\$32,905.30										
	T&SC- Summit Hand Tools - Shipping to Chile	04-Jun-18 A	31-Mar-19 A	100%	30	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
	LSST ME 19-05.04C.12.13 Coating Optical Equipment	09-Jan-18 A	31-May-19 A		367	0.00	\$0.00	\$180,136.59	\$180,136.59										
	T&SC-12 Coating Optical Equipment - Identification	07-May-18 A	07-May-18 A	100%	5	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
	T&SC-12 Coating Optical Equipment - Procurement	09-Jan-18 A	12-Feb-18 A	100%	24	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
	T&SC-12 Coating Optical Equipment- Leadtime and Delivery to Tucson	13-Feb-18 A	14-Apr-19 A	100%	30	0.00	\$0.00	\$20,649.29	\$20,649.29										
	T&SC-12 Coating Optical Equipment - Shipping to Chile	30-May-19 A	31-May-19 A	100%	30	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
	T&SC-12 Coating Optical Equipment- Leadtime and Delivery to Tucson	14-Mar-19 A	14-Apr-19 A	100%	128	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
	T&SC-12 Coating Optical Equipment- Leadtime and Delivery to Tucson	14-Mar-19 A	14-Apr-19 A	100%	83	0.00	\$0.00	\$159,487.30	\$159,487.30										
	T&SC-12 Coating Optical Equipment- Leadtime and Delivery to Tucson	14-Mar-19 A	30-May-19 A	100%	64	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
	LSST ME 19-05.04C.12.14 Pointing Test Equipment	06-Jan-18 A	12-Oct-20		612	0.00	\$0.00	\$61,506.15	\$61,506.15	758									
	T&SC-12 Pointing Test Equipment - Identification and Documentation	06-Jan-18 A	08-Oct-19	90%	90	0.00	\$0.00	\$0.00	\$0.00	\$0.00	1014								
	T&SC-12 Pointing Test Equipment - Procurement	20-Oct-18 A	30-Jan-20	20%	166	0.00	\$0.00	\$0.00	\$0.00	\$0.00	-18								
	T&SC-12 Pointing Test Equipment - Leadtime and Delivery	31-Jan-20	05-Jun-20	0%	90	0.00	\$0.00	\$61,506.15	\$61,506.15	\$61,506.15	-18								
	T&SC-12 Pointing Test Equipment - Integration and Test	08-Jun-20	12-Oct-20	0%	90	0.00	\$0.00	\$0.00	\$0.00	\$0.00	-18								
	LSST ME 19-05.04C.12.15 VRCAC and Roof Locks	08-Jan-17 A	28-Feb-19 A		620	0.00	\$0.00	\$96,732.43	\$96,732.43										
	LSST ME 19-05.04C.12.15.01 VRC Auxiliary Control	28-Feb-17 A	27-Dec-17 A		460	0.00	\$0.00	\$25,010.00	\$25,010.00										
	T&SC- Design VRCAC	28-Feb-17 A	23-Jun-17 A	100%	84	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
	T&SC- VRCAC Procurement	15-Apr-17 A	05-Jun-17 A	100%	30	0.00	\$0.00	\$25,010.00	\$25,010.00										
	T&SC- VRCAC Panel Assembly and Wiring	01-Aug-17 A	27-Dec-17 A	100%	10	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
	T&SC- VRCAC Controller Programming	15-Jun-17 A	20-Oct-17 A	100%	20	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
	T&SC- VRCAC Development Testing Tool	28-Jun-17 A	20-Jul-17 A	100%	10	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
	T&SC- VRCAC Controller Testing	04-Jul-17 A	27-Dec-17 A	100%	30	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
	T&SC- VRCAC Shipping to Chile	05-Jul-17 A	04-Aug-17 A	100%	30	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
	LSST ME 19-05.04C.12.15.02 Roof Folding Flap Edge Actuators/Control	02-May-17 A	17-Oct-17 A		524	0.00	\$0.00	\$57,010.00	\$57,010.00										
	T&SC- Design Roof Flap Actuators/Control	02-May-17 A	23-Jun-17 A	100%	74	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
	T&SC- Roof Flap Actuators/Control Procurement and leadtime	12-Jun-17 A	17-Oct-17 A	100%	90	0.00	\$0.00	\$57,010.00	\$57,010.00										
	T&SC- Roof Flap Actuators/Control Testing	23-Jun-17 A	20-Jul-17 A	100%	20	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
	T&SC- Roof Flap Actuators/Control Shipping	21-Jul-17 A	04-Aug-17 A	100%	30	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
	LSST ME 19-05.04C.12.15.03 Roof-Building Locks	08-Jan-17 A	28-Feb-19 A		332	0.00	\$0.00	\$14,712.43	\$14,712.43										
	T&SC- Roof-Building Locks Actuators - Procurement	02-Jul-17 A	28-Jul-17 A	100%	10	0.00	\$0.00	\$14,712.43	\$14,712.43										
	T&SC- Roof-Building Locks Actuators - Leadtime and delivery	28-Jul-17 A	20-Aug-17 A	100%	60	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
	T&SC- Roof-Building Locks - Mechanical Design	01-Dec-17 A	27-Dec-17 A	100%	30	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
	T&SC- Roof-Building Locks - Mechanical Fabrication	08-Jan-17 A	15-Sep-18 A	100%	30	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
	T&SC- Roof Building Locks - Integration and Test	02-Dec-18 A	28-Feb-19 A	100%	5	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
	LSST ME 19-05.04C.12.16 Dynalene Cooling System	25-Apr-17 A	04-Feb-20		390	504.10	\$37,647.92	\$152,251.00	\$152,251.00	\$189,898.92	144								
	T&SC-12 Design	25-Apr-17 A	02-Jul-17 A	100%	30	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
	T&SC-12 SOW/Documentation	06-Jun-17 A	26-Jul-17 A	100%	20	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
	T&SC-12 Procurement	27-Jul-17 A	15-Aug-17 A	100%	20	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
	T&SC-12 Fabrication	01-Oct-17 A	01-Nov-18 A	100%	26	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
	T&SC-12 Acceptance Tests	01-Nov-17 A	30-Nov-17 A	100%	22	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
	T&SC-12 Delivery to Tucson	01-Nov-17 A	30-Nov-17 A	100%	39	0.00	\$0.00	\$152,251.00	\$152,251.00										
	T&SC-12 Final checkout before Shipping to Chile	01-Feb-19 A	05-Mar-19 A	100%	57	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
	T&SC-12 Shipping to Chile	01-Feb-19 A	06-Mar-19 A	100%	40	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
T&SC-12 Dynalene management and oversight	01-Feb-19 A	04-Feb-20	50%	169	504.10	\$37,647.92	\$0.00	\$0.00	\$37,647.92	144									
LSST ME 19-05.04C.12.17 Post Construction	15-Oct-18 A	04-Feb-20		309	1077.92	\$100,393.71	\$371,920.01	\$371,920.01	\$472,313.71	194									
T&SC-12 Post Construction management and oversight	28-Feb-19 A	04-Feb-20	25%	169	1077.92	\$100,393.71	\$0.00	\$0.00	\$100,393.71	194									
T&SC-52i Installation of Personnel Elevator 3 in Lower Enclosure	15-Oct-18 A	28-Feb-19 A	100%	90	0.00	\$0.00	\$53,410.00	\$53,410.00											
T&SC-52i Build Out Clean Room, White Room, Staging to Meet Camera Requirements	20-Oct-18 A	04-Oct-19	75%	88	0.00	\$0.00	\$76,010.00	\$76,010.00		177									
T&SC-52i Build Out Clean Room, White Room, Staging to Meet Camera Requirements	15-Oct-18 A	04-Oct-19	75%	88	0.00	\$0.00	\$50,000.00	\$50,000.00		177									
T&SC-52i Installation of Auxiliary Telescope Conduit	15-Jan-19 A	24-Sep-19	85%	80	0.00	\$0.00	\$20,000.00	\$20,000.00		91									
T&SC-52i Installation of Auxiliary Telescope Ventilation	25-Sep-19	19-Nov-19	0%	40	0.00	\$0.00	\$30,000.00	\$30,000.00		91									
T&SC-52i Verification of Auxiliary Telescope Electrical	15-Feb-19 A	28-Jun-19	50%	20	0.00	\$0.00	\$22,500.00	\$22,500.00		191									
T&SC-52i Additional Summit Road & Platform Work	15-May-19 A	28-Jun-19	10%	20	0.00	\$0.00	\$120,000.00	\$120,000.00		191									
LSST ME 19-05.04C.12.18 Environmental Awareness System	11-Oct-18 A	19-Aug-20		470	1500.00	\$104,958.17	\$175,599.27	\$175,599.27	\$280,557.44	55									
T&SC-52 Begin Environmental Awareness System Sensing Development	11-Oct-18 A		100%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00										
T&SC-52 Support EAS Version 1 (Early Telemetry Acquisition)	11-Oct-18 A	30-Apr-19 A	100%	56	300.00	\$20,609.00	\$0.00	\$0.00	\$20,609.00										
T&SC-52 Support EAS Version 2 (main dome construction support)	01-Jan-19 A	27-Aug-19	30%	61	300.00	\$20,609.00	\$0.00	\$0.00	\$20,609.00	111									
T&SC-52 Support EAS Version 3 (tracking HVAC and down draft performance during construction)	28-Aug-19	27-Nov-19	0%	65	300.00	\$21,076.17	\$0.00	\$0.00	\$21,076.17	111									
T&SC-52 Support EAS Version 4 (AuxTel vent exercise)	02-Dec-19	05-Mar-20	0%	64	300.00	\$21,332.00	\$0.00	\$0.00	\$21,332.00	111									
T&SC-52 Support EAS Version 5 (trending analysis of HVAC and down draft performance during construction)	06-Mar-20	01-Jun-20	0%	62	300.00	\$21,332.00	\$0.00	\$0.00	\$21,332.00	111									
T&SC-52 Procure Equipment for EAS Version 1 (Early Telemetry Acquisition)	11-Oct-18 A	20-Aug-19	10%	56	0.00	\$0.00	\$10,900.00	\$10,900.00		117									
T&SC-52 Procure Equipment for EAS Version 2 (main dome construction support)	21-Aug-19	14-Nov-19	0%	61	0.00	\$0.00	\$17,743.66	\$17,743.66		117									
T&SC-52 Procure Equipment for EAS Version 3 (tracking HVAC and down draft performance during construction)	15-Nov-19	21-Feb-20	0%	65	0.00	\$0.00	\$15,289.48	\$15,289.48		117									
T&SC-52 Procure Equipment for EAS Version 4 (AuxTel vent exercise)	24-Feb-20	22-May-20	0%	64	0.00	\$0.00	\$53,557.00	\$53,557.00		117									
T&SC-52 Shipping and Traven associated with EAS	01-Jan-19 A	19-Aug-20	10%	308	0.00	\$0.00	\$29,099.13	\$29,099.13		55									

## LSST May 2019 Month End Forecast

Activity ID	Activity Name	Start	Finish	Physical % Complete	Original Duration	Budgeted Labor Units	Budgeted Labor Cost	Budgeted Material Cost	Budgeted Total Cost no	Total Float	FY2015 2014-10-01	FY2016 2015-10-01	FY2017 2016-10-01	FY2018 2017-10-01	FY2019 2018-10-01	FY2020 2019-10-01	FY2021 2020-10-01	FY2022 2021-10-01	
LSST ME 19-05.04C.12.19 Special Utilities	T&SC-52 Finish Environmental Awareness System Sensing De	19-Aug-20		0%	0	0.00	\$0.00	\$0.00	\$0.00	55									
	T&SC-52 Award Contract for HVAC under Linux Control	30-Apr-19 A		100%	0	0.00	\$0.00	\$0.00	\$0.00										
	T&SC-52 Migrate the Siemens HVAC control software to Linux	03-Jun-19	29-Jul-19	0%	40	0.00	\$0.00	\$49,010.00	\$49,010.00	323									
	LSST ME 19-05.04C.12.19 Special Utilities	18-Jul-19	23-Apr-20		193	0.00	\$0.00	\$404,568.54	\$404,568.54	56									
	T&SC-39 Begin Special Utilities design and build Phase I	18-Jul-19		0%	0	0.00	\$0.00	\$0.00	\$0.00	56									
	T&SC-39 Design and manufacture Oil supply system (OSS)	18-Jul-19	02-Apr-20	0%	178	0.00	\$0.00	\$0.00	\$0.00	70									
	T&SC-39 Design and manufacture Ethylene Glycol and Water	18-Jul-19	21-Apr-20	0%	191	0.00	\$0.00	\$0.00	\$0.00	56									
	T&SC-39 Design and manufacture Power systems	18-Jul-19	26-Mar-20	0%	173	0.00	\$0.00	\$0.00	\$0.00	75									
	T&SC-39 Availability to begin General system support	18-Jul-19	16-Oct-19	0%	64	0.00	\$0.00	\$0.00	\$0.00	163									
	T&SC-39 Design and manufacture General support systems	17-Oct-19	14-Nov-19	0%	21	0.00	\$0.00	\$0.00	\$0.00	163									
	T&SC-39 Approval of PCD 30%	18-Jul-19	18-Jul-19	0%	1	0.00	\$0.00	\$64,542.30	\$64,542.30	245									
	T&SC-39 Design and manufacture General support systems 4	17-Oct-19	17-Oct-19	0%	1	0.00	\$0.00	\$86,056.40	\$86,056.40	182									
	T&SC-39 Final Issue of documentation 30%	22-Apr-20	22-Apr-20	0%	1	0.00	\$0.00	\$64,542.30	\$64,542.30	56									
	T&SC-39 Finish Special Utilities design and build Phase I		22-Apr-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	56									
	T&SC-39 Specialty Utility Installation Planning Package	23-Apr-20	23-Apr-20	0%	1	0.00	\$0.00	\$189,427.54	\$189,427.54	56									
	LSST ME 19-05.04C.13 Base Facility and Infrastructure	01-Aug-14 A	06-Aug-20			1525	6995.83	\$592,980.05	\$8,565,883.94	\$9,158,863.99	547								
	T&SC-5200- Base Facility construction Delay	03-Sep-19	13-Feb-20	0%	112	0.00	\$0.00	\$0.00	\$0.00	\$0.00	94								
	LSST ME 19-05.04C.13.01 Pre-Construction Specs and A&E C	01-Aug-14 A	16-Feb-15 A		129	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
	T&SC-47i Pre-Construction Specs / A&E Contract Prep	01-Aug-14 A	22-Oct-14 A	100%	56	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
	T&SC-47i Develop Final Requirements Doc.	01-Aug-14 A	29-Sep-14 A	100%	38	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
	T&SC-47i Develop A&E SOW	01-Oct-14 A	27-Oct-14 A	100%	19	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
	T&SC-47i Present To AURA Users Committee		27-Oct-14 A	100%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
	T&SC-47i Prepare / Issue RFPs	27-Oct-14 A	21-Nov-14 A	100%	20	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
	T&SC-47i Bid Reviews	24-Nov-14 A	31-Dec-14 A	100%	18	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
	T&SC-47i Issue Base Facility A&E Contract Award	01-Jan-15 A	16-Feb-15 A	100%	34	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
	LSST ME 19-05.04C.13.02 A&E Construction Documents	17-Feb-15 A	31-May-17 A		471	0.00	\$0.00	\$159,834.39	\$159,834.39										
	T&SC-50i Start Detailed Design	17-Feb-15 A		100%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
	T&SC-50i Complete Documents for RFP	17-Feb-15 A	11-May-15 A	100%	61	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
	T&SC-50i RFP packages sent to invited A&E firms	12-May-15 A	15-May-15 A	100%	4	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
	T&SC-50i Mandatory Site visit	18-May-15 A	22-May-15 A	100%	4	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
	T&SC-50i A&E Proposals due	25-May-15 A	01-Jul-15 A	100%	21	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
	T&SC-50i Select Recommended A&E firm	13-Jul-15 A	31-Jul-15 A	100%	60	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
	T&SC-50i Kick-off A&E Design Services	09-Sep-15 A	11-Sep-15 A	100%	22	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
	T&SC-50i Initiation of Architectural & Engineering Contract for f	14-Sep-15 A	30-Sep-15 A	100%	50	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
	T&SC-50i Preliminary Design Review	11-Jan-16 A	15-Jan-16 A	100%	2	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
	T&SC-50i Buy-in from CTIO/AURA		15-Jan-16 A	100%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
	T&SC-50i AURA/LSST/NOAO written comments and approval	25-Jan-16 A	29-Jan-16 A	100%	11	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
	T&SC-50i Base Facility A&E Construction Documents ATP (Ph	29-Jan-16 A		100%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
	T&SC-50i Design Development (50%) Review	01-Feb-16 A	01-May-16 A	100%	46	0.00	\$0.00	\$159,834.39	\$159,834.39										
	T&SC-50i Design Development (50%) Review	02-May-16 A	04-May-16 A	100%	2	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
	T&SC-50i Design Development (50%) Review Complete		04-May-16 A	100%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
	T&SC-50i Design Development (90%) Review	01-Sep-16 A	31-Oct-16 A	100%	2	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
	T&SC-50i Design Development (90%) Review Complete		31-Oct-16 A	100%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
	T&SC-50i Construction Docs Complete (Phase 2 Complete)	15-Apr-16 A		100%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
	T&SC-50i Preparation of Bid Packages	15-Sep-16 A	15-Nov-16 A	100%	23	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
	T&SC-50i Request for Bids for Construction	16-Nov-16 A	31-May-17 A	100%	83	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
	LSST ME 19-05.04C.13.03 Base Construction Management	01-Jun-15 A	06-Aug-20		1285	5353.38	\$474,214.60	\$90,620.19	\$564,834.80		534								
	T&SC-49i Construction Management - Base Facility - FY 2 - La	01-Jun-15 A	30-Sep-15 A	100%	95	337.00	\$31,988.04	\$0.00	\$31,988.04										
	T&SC-49i Construction Management - Base Facility - FY 3 - La	01-Oct-15 A	30-Sep-16 A	100%	248	900.00	\$88,416.00	\$0.00	\$88,416.00										
	T&SC-49i Construction Management - Base Facility - FY 4 - La	01-Oct-16 A	31-Oct-16 A	100%	19	197.82	\$15,486.58	\$0.00	\$15,486.58										
	T&SC-49i Construction Management - Base Facility - FY 5 - La	02-Oct-17 A	11-Nov-17 A	100%	26	225.00	\$19,120.50	\$0.00	\$19,120.50										
	T&SC-49i Construction Management - Base Facility - FY 5 - La	01-Oct-18 A	27-Sep-19	67%	245	1473.82	\$132,223.99	\$0.00	\$132,223.99		534								
	T&SC-49i Construction Management - Base Facility - FY 5 - La	30-Sep-19	06-Aug-20	0%	209	1800.00	\$144,300.66	\$0.00	\$144,300.66		534								
	T&SC-49i Construction Management - Base Facility NonLabor	17-Jan-18 A	30-Aug-18 A	100%	314	0.00	\$0.00	\$14,104.40	\$14,104.40										
	T&SC-49i A&E Services During Construction - Base Facility	17-Jan-17 A	30-Jun-18 A	100%	314	0.00	\$0.00	\$76,515.79	\$76,515.79										
	T&SC-49i Start of Construction		01-Mar-17 A	100%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
	T&SC-49i Contract Close Out		21-Aug-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00	292								
	T&SC-49i Construction Management - Base Facility - FY 4 - La	02-Nov-16 A	29-Sep-17 A	100%	226	419.74	\$42,678.83	\$0.00	\$42,678.83										
	LSST ME 19-05.04C.13.04 Base Facility Construction Phase 1	06-May-16 A	21-Aug-19		854	1642.45	\$118,765.45	\$1,576,835.63	\$1,695,601.08		305								
	T&SC-49i Construction Management - Base Facility Phase I	01-Nov-16 A	29-Sep-17 A	100%	226	1642.45	\$118,765.45	\$0.00	\$118,765.45										
	T&SC-50i Design Development (90%)	06-May-16 A	01-Aug-16 A	100%	60	0.00	\$0.00	\$115,695.54	\$115,695.54										
	T&SC-50i Final Revisions and Approval of Construction Docum	01-Nov-16 A	11-Nov-16 A	100%	20	0.00	\$0.00	\$22,156.37	\$22,156.37										
	T&SC-51i Base Facility Preliminary Work	02-Jan-17 A	31-Jan-17 A	100%	10	0.00	\$0.00	\$39,594.74	\$39,594.74										
	T&SC-51i Base Facility Contract Indirect	20-Mar-17 A	31-Jul-18 A	100%	316	0.00	\$0.00	\$2,020.00	\$2,020.00										
	T&SC-51i Award Base Facility Contract	20-Mar-17 A		100%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
	T&SC-51i Base Facility Contract Start	20-Mar-17 A		100%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
	T&SC-51i Site Ready for General Construction		20-Mar-17 A	100%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
	T&SC-51i 1 - PRELIMINARY WORK	30-Mar-17 A	15-Jun-17 A	100%	19	0.00	\$0.00	\$16,117.61	\$16,117.61										
	T&SC-51i 2 - Stage 1 CIVIL WORK	15-Apr-17 A	15-Jul-17 A	100%	21	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
	T&SC-51i 2.1 - Stage 1 DEMOLITIONS	15-Apr-17 A	15-Jun-17 A	100%	16	0.00	\$0.00	\$2,509.80	\$2,509.80										
	T&SC-51i 2.5 - Stage 1 METAL STRUCTURE	15-Jun-17 A	15-Jul-17 A	100%	14	0.00	\$0.00	\$588.23	\$588.23										
	T&SC-51i 3 - Stage 1 FINISHES	15-Jun-17 A	15-Jul-17 A	100%	44	0.00	\$0.00	\$0.00	\$0.00	\$0.00									

LSST May 2019 Month End Forecast																			
Activity ID	Activity Name	Start	Finish	Physical % Complete	Original Duration	Budgeted Labor Units	Budgeted Labor Cost	Budgeted Material Cost	Budgeted Total Cost no	Total Float	FY2015 2014-10-01	FY2016 2015-10-01	FY2017 2016-10-01	FY2018 2017-10-01	FY2019 2018-10-01	FY2020 2019-10-01	FY2021 2020-10-01	FY2022 2021-10-01	
T&SC-511	3.1 - Stage 1 PARTITIONS	15-May-17 A	15-Jun-17 A	100%	16	0.00	\$0.00	\$1,411.76	\$1,411.76					3.1 - Stage 1 PARTITIONS					
	3.2 - Stage 1 CEILINGS	15-Jun-17 A	15-Jul-17 A	100%	21	0.00	\$0.00	\$23,686.21	\$23,686.21					3.2 - Stage 1 CEILINGS					
	3.3 - Stage 1 FLOORING	15-Jun-17 A	15-Aug-17 A	100%	13	0.00	\$0.00	\$25,843.07	\$25,843.07					3.3 - Stage 1 FLOORING					
	3.4 - Stage 1 BASE BOARD - MOULDINGS	15-Jun-17 A	15-Aug-17 A	100%	6	0.00	\$0.00	\$2,470.58	\$2,470.58					3.4 - Stage 1 BASE BOARD - MOULDINGS					
	3.5 - Stage 1 INTERIOR WALL COATINGS AND FINISHES	30-Jun-17 A	15-Aug-17 A	100%	19	0.00	\$0.00	\$15,411.73	\$15,411.73					3.5 - Stage 1 INTERIOR WALL COATINGS AND FINISHES					
	3.6 - Stage 1 EXTERIOR COATINGS AND FINISHES	15-Jun-17 A	15-Aug-17 A	100%	30	0.00	\$0.00	\$15,294.08	\$15,294.08					3.6 - Stage 1 EXTERIOR COATINGS AND FINISHES					
	3.10 - Stage 1 MOVABLE WALL PANELS, DOORS, WINDOWS AND HARDWARE	15-Jul-17 A	15-Aug-17 A	100%	10	0.00	\$0.00	\$8,352.92	\$8,352.92					3.10 - Stage 1 MOVABLE WALL PANELS, DOORS, WINDOWS AND HARDWARE					
	3.11 - Stage 1 GLASS AND MIRRORS	15-Jul-17 A	15-Aug-17 A	100%	2	0.00	\$0.00	\$196.08	\$196.08					3.11 - Stage 1 GLASS AND MIRRORS					
	3.12 - Stage 1 FIXTURES AND PLUMBING	30-Jun-17 A	15-Aug-17 A	100%	20	0.00	\$0.00	\$7,686.25	\$7,686.25					3.12 - Stage 1 FIXTURES AND PLUMBING					
	4 - Stage 1 ELECTRICAL PROJECT	15-Apr-17 A	15-Sep-17 A	100%	49	0.00	\$0.00	\$252,822.89	\$252,822.89					4 - Stage 1 ELECTRICAL PROJECT					
	5 - Stage 1 WATER AND SEWER PROJECT	15-Apr-17 A	15-Jun-17 A	100%	22	0.00	\$0.00	\$19,215.64	\$19,215.64					5 - Stage 1 WATER AND SEWER PROJECT					
	6 - Stage 1 HVAC PROJECT	15-Apr-17 A	15-Aug-17 A	100%	56	0.00	\$0.00	\$134,783.97	\$134,783.97					6 - Stage 1 HVAC PROJECT					
	7 - Stage 1 OTHER ITEMS	15-Jun-17 A	15-Aug-17 A	100%	42	0.00	\$0.00	\$8,117.63	\$8,117.63					7 - Stage 1 OTHER ITEMS					
	STAGE 1 Completed	20-Mar-17 A		100%	0	0.00	\$0.00	\$0.00	\$0.00					STAGE 1 Completed					
	2 - Stage 2 CIVIL WORK	15-Aug-17 A	15-Sep-17 A	100%	24	0.00	\$0.00	\$0.00	\$0.00					2 - Stage 2 CIVIL WORK					
	2.1 - Stage 2 DEMOLITIONS	15-Aug-17 A	15-Sep-17 A	100%	24	0.00	\$0.00	\$1,215.68	\$1,215.68					2.1 - Stage 2 DEMOLITIONS					
	3 - Stage 2 FINISHES	15-Aug-17 A	15-Oct-17 A	100%	38	0.00	\$0.00	\$0.00	\$0.00					3 - Stage 2 FINISHES					
	3.2 - Stage 2 CEILINGS	15-Sep-17 A	15-Oct-17 A	100%	29	0.00	\$0.00	\$19,725.44	\$19,725.44					3.2 - Stage 2 CEILINGS					
	3.3 - Stage 2 FLOORING	15-Sep-17 A	15-Oct-17 A	100%	23	0.00	\$0.00	\$22,666.61	\$22,666.61					3.3 - Stage 2 FLOORING					
	3.4 - Stage 2 BASE BOARD - MOULDINGS	15-Sep-17 A	15-Oct-17 A	100%	21	0.00	\$0.00	\$2,274.50	\$2,274.50					3.4 - Stage 2 BASE BOARD - MOULDINGS					
	3.5 - Stage 2 INTERIOR WALL COATINGS AND FINISHES	15-Sep-17 A	15-Oct-17 A	100%	2	0.00	\$0.00	\$8,117.63	\$8,117.63					3.5 - Stage 2 INTERIOR WALL COATINGS AND FINISHES					
	3.6 - Stage 2 EXTERIOR COATINGS AND FINISHES	15-Sep-17 A	15-Oct-17 A	100%	25	0.00	\$0.00	\$11,490.17	\$11,490.17					3.6 - Stage 2 EXTERIOR COATINGS AND FINISHES					
	4 - Stage 2 ELECTRICAL PROJECT	15-Sep-17 A	15-Oct-17 A	100%	32	0.00	\$0.00	\$42,431.26	\$42,431.26					4 - Stage 2 ELECTRICAL PROJECT					
	5 - Stage 2 WATER AND SEWER PROJECT	15-Aug-17 A	15-Sep-17 A	100%	30	0.00	\$0.00	\$8,274.49	\$8,274.49					5 - Stage 2 WATER AND SEWER PROJECT					
	6 - Stage 2 HVAC PROJECT	15-Jun-17 A	15-Oct-17 A	100%	35	0.00	\$0.00	\$73,490.01	\$73,490.01					6 - Stage 2 HVAC PROJECT					
	7 - Stage 2 OTHER ITEMS	15-Aug-17 A	15-Oct-17 A	100%	38	0.00	\$0.00	\$2,392.15	\$2,392.15					7 - Stage 2 OTHER ITEMS					
	STAGE 2 Completed	15-Oct-17 A		100%	0	0.00	\$0.00	\$0.00	\$0.00					STAGE 2 Completed					
	2 - Stage 3 CIVIL WORK	15-Jan-18 A	15-Feb-18 A	100%	25	0.00	\$0.00	\$0.00	\$0.00					2 - Stage 3 CIVIL WORK					
	2.1 - Stage 3 DEMOLITIONS	15-Oct-17 A	15-Nov-17 A	100%	10	0.00	\$0.00	\$4,235.28	\$4,235.28					2.1 - Stage 3 DEMOLITIONS					
	2.5 - Stage 3 METAL STRUCTURE	01-Nov-17 A	15-Dec-17 A	100%	15	0.00	\$0.00	\$392.16	\$392.16					2.5 - Stage 3 METAL STRUCTURE					
	3 - Stage 3 FINISHES	15-Jan-18 A	15-Feb-18 A	100%	45	0.00	\$0.00	\$0.00	\$0.00					3 - Stage 3 FINISHES					
	3.1 - Stage 3 PARTITIONS	15-Jan-18 A	15-Feb-18 A	100%	19	0.00	\$0.00	\$1,333.33	\$1,333.33					3.1 - Stage 3 PARTITIONS					
	3.2 - Stage 3 CEILINGS	30-Oct-17 A	15-Feb-18 A	100%	21	0.00	\$0.00	\$14,705.85	\$14,705.85					3.2 - Stage 3 CEILINGS					
	3.3 - Stage 3 FLOORING	30-Oct-17 A	15-Feb-18 A	100%	36	0.00	\$0.00	\$15,254.86	\$15,254.86					3.3 - Stage 3 FLOORING					
	3.4 - Stage 3 BASE BOARD - MOULDINGS	30-Oct-17 A	15-Feb-18 A	100%	41	0.00	\$0.00	\$1,568.62	\$1,568.62					3.4 - Stage 3 BASE BOARD - MOULDINGS					
	3.5 - Stage 3 INTERIOR WALL COATINGS AND FINISHES	30-Oct-17 A	15-Feb-18 A	100%	42	0.00	\$0.00	\$15,450.94	\$15,450.94					3.5 - Stage 3 INTERIOR WALL COATINGS AND FINISHES					
	3.6 - Stage 3 EXTERIOR COATINGS AND FINISHES	15-Jan-18 A	15-Feb-18 A	100%	25	0.00	\$0.00	\$5,607.83	\$5,607.83					3.6 - Stage 3 EXTERIOR COATINGS AND FINISHES					
	3.10 - Stage 3 MOVABLE WALL PANELS, DOORS, WINDOWS AND HARDWARE	30-Oct-17 A	15-Feb-18 A	100%	35	0.00	\$0.00	\$8,509.78	\$8,509.78					3.10 - Stage 3 MOVABLE WALL PANELS, DOORS, WINDOWS AND HARDWARE					
	3.11 - Stage 3 GLASS AND MIRRORS	01-Mar-18 A	15-Mar-18 A	100%	3	0.00	\$0.00	\$196.08	\$196.08					3.11 - Stage 3 GLASS AND MIRRORS					
	3.12 - Stage 3 FIXTURES AND PLUMBING	01-Mar-18 A	15-Apr-18 A	100%	22	0.00	\$0.00	\$7,529.39	\$7,529.39					3.12 - Stage 3 FIXTURES AND PLUMBING					
	4 - Stage 3 ELECTRICAL PROJECT	30-Oct-17 A	15-Mar-18 A	100%	40	0.00	\$0.00	\$40,627.35	\$40,627.35					4 - Stage 3 ELECTRICAL PROJECT					
	5 - Stage 3 WATER AND SEWER PROJECT	30-Oct-17 A	15-Mar-18 A	100%	31	0.00	\$0.00	\$19,254.85	\$19,254.85					5 - Stage 3 WATER AND SEWER PROJECT					
	6 - Stage 3 HVAC PROJECT	15-Jun-17 A	15-Mar-18 A	100%	39	0.00	\$0.00	\$65,293.95	\$65,293.95					6 - Stage 3 HVAC PROJECT					
	7 - Stage 3 OTHER ITEMS	30-Oct-17 A	15-Mar-18 A	100%	40	0.00	\$0.00	\$21,176.42	\$21,176.42					7 - Stage 3 OTHER ITEMS					
	STAGE 3 Completed	15-Apr-18 A		100%	0	0.00	\$0.00	\$0.00	\$0.00					STAGE 3 Completed					
	Stage 4 CIVIL WORK	15-Feb-18 A	15-Apr-18 A	100%	7	0.00	\$0.00	\$0.00	\$0.00					Stage 4 CIVIL WORK					
	2.1 - Stage 4 DEMOLITIONS	15-Mar-18 A	15-Apr-18 A	100%	7	0.00	\$0.00	\$1,411.76	\$1,411.76					2.1 - Stage 4 DEMOLITIONS					
	2.5 - Stage 4 METAL STRUCTURE	15-Mar-18 A	15-Apr-18 A	100%	4	0.00	\$0.00	\$156.86	\$156.86					2.5 - Stage 4 METAL STRUCTURE					
	3 - Stage 4 FINISHES	01-Jun-18 A	20-Jul-18 A	100%	27	0.00	\$0.00	\$0.00	\$0.00					3 - Stage 4 FINISHES					
	3.1 - Stage 4 PARTITIONS	01-May-18 A	30-Jun-18 A	100%	15	0.00	\$0.00	\$3,607.83	\$3,607.83					3.1 - Stage 4 PARTITIONS					
	3.2 - Stage 4 CEILINGS	01-May-18 A	30-Jun-18 A	100%	12	0.00	\$0.00	\$13,843.10	\$13,843.10					3.2 - Stage 4 CEILINGS					
	3.3 - Stage 4 FLOORING	01-May-18 A	30-Jun-18 A	100%	18	0.00	\$0.00	\$7,725.47	\$7,725.47					3.3 - Stage 4 FLOORING					
	3.4 - Stage 4 BASE BOARD - MOULDINGS	01-May-18 A	20-Jul-18 A	100%	15	0.00	\$0.00	\$1,529.41	\$1,529.41					3.4 - Stage 4 BASE BOARD - MOULDINGS					
	3.5 - Stage 4 INTERIOR WALL COATINGS AND FINISHES	31-Mar-18 A	20-Jul-18 A	100%	10	0.00	\$0.00	\$8,705.86	\$8,705.86					3.5 - Stage 4 INTERIOR WALL COATINGS AND FINISHES					
	3.6 - Stage 4 EXTERIOR COATINGS AND FINISHES	31-Mar-18 A	30-Jun-18 A	100%	24	0.00	\$0.00	\$7,372.53	\$7,372.53					3.6 - Stage 4 EXTERIOR COATINGS AND FINISHES					
	3.10 - Stage 4 MOVABLE WALL PANELS, DOORS, WINDOWS AND HARDWARE	01-May-18 A	20-Jul-18 A	100%	19	0.00	\$0.00	\$1,215.68	\$1,215.68					3.10 - Stage 4 MOVABLE WALL PANELS, DOORS, WINDOWS AND HARDWARE					
	3.11 - Stage 4 GLASS AND MIRRORS	01-Jun-18 A	20-Jul-18 A	100%	1	0.00	\$0.00	\$117.65	\$117.65					3.11 - Stage 4 GLASS AND MIRRORS					
	3.12 - Stage 4 FIXTURES AND PLUMBING	01-Jun-18 A	20-Jul-18 A	100%	10	0.00	\$0.00	\$2,313.72	\$2,313.72					3.12 - Stage 4 FIXTURES AND PLUMBING					
	4 - Stage 4 ELECTRICAL PROJECT	15-Mar-18 A	30-Jun-18 A	100%	34	0.00	\$0.00	\$40,941.07	\$40,941.07					4 - Stage 4 ELECTRICAL PROJECT					



## LSST May 2019 Month End Forecast

Activity ID	Activity Name	Start	Finish	Physical % Complete	Original Duration	Budgeted Labor Units	Budgeted Labor Cost	Budgeted Material Cost	Budgeted Total Cost no	Total Float	FY2015 2014-10-01	FY2016 2015-10-01	FY2017 2016-10-01	FY2018 2017-10-01	FY2019 2018-10-01	FY2020 2019-10-01	FY2021 2020-10-01	FY2022 2021-10-01	
LSST ME 19-05.04C.13.05 La Serena Base Facility Construction	T&SC-511 3.3 - Stage 5 FLOORING	01-Jul-19	10-Jul-19	0%	7	0.00	\$0.00	\$11,921.54	\$11,921.54	329									
	T&SC-511 3.4 - Stage 5 BASE BOARD - MOULDINGS	11-Jul-19	12-Jul-19	0%	2	0.00	\$0.00	\$588.23	\$588.23	329									
	T&SC-511 3.5 - Stage 5 INTERIOR WALL COATINGS AND FINISHES	06-Jun-19	02-Jul-19	0%	19	0.00	\$0.00	\$7,450.96	\$7,450.96	336									
	T&SC-511 3.6 - Stage 5 EXTERIOR COATINGS AND FINISHES	12-Jun-19	25-Jul-19	0%	31	0.00	\$0.00	\$16,548.98	\$16,548.98	320									
	T&SC-511 3.7 - Stage 5 ROOFING	03-Jul-19	01-Aug-19	0%	21	0.00	\$0.00	\$5,529.40	\$5,529.40	316									
	T&SC-511 3.8 - Stage 5 THERMAL INSULATION	01-Jul-19	22-Jul-19	0%	15	0.00	\$0.00	\$705.88	\$705.88	323									
	T&SC-511 3.9 - Stage 5 CARPENTRY	03-Jul-19	18-Jul-19	0%	11	0.00	\$0.00	\$2,549.01	\$2,549.01	316									
	T&SC-511 3.10 - Stage 5 MOVABLE WALL PANELS, DOORS, WINDOWS AND HARDWARE	08-Jul-19	31-Jul-19	0%	18	0.00	\$0.00	\$25,450.92	\$25,450.92	316									
	T&SC-511 4 - Stage 5 ELECTRICAL PROJECT	04-Jun-19	20-Aug-19	0%	55	0.00	\$0.00	\$32,705.80	\$32,705.80	302									
	T&SC-511 6 - Stage 5 HVAC PROJECT	01-May-18 A	19-Aug-19	30%	55	0.00	\$0.00	\$57,842.99	\$57,842.99	303									
	T&SC-511 7 - Stage 5 OTHER ITEMS	04-Jun-19	22-Jul-19	0%	34	0.00	\$0.00	\$9,176.45	\$9,176.45	323									
	T&SC-511 STAGE 5 Completed	21-Aug-19		0%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00	292								
	T&SC-511 ANNEX WORK 1 DISASSEMBLY, RELOCATION AND PARTIAL ASSEMBLY OF THE WAREHOUSE	15-Apr-17 A	15-Aug-17 A	100%	71	0.00	\$0.00	\$57,450.83	\$57,450.83										
	T&SC-511 ANNEX PAINT	15-Jun-17 A	15-Jul-17 A	100%	26	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
	T&SC-511 ANNEX WORK 2 MOTEL DEMOLITION	01-Jul-17 A	31-Jul-17 A	100%	13	0.00	\$0.00	\$8,588.21	\$8,588.21										
	LSST ME 19-05.04C.13.05 La Serena Base Facility Construction	15-Jan-17 A	30-Aug-19		625	0.00	\$0.00	\$6,738,593.73	\$6,738,593.73	\$6,738,593.73	94								
	T&SC-521 General Construction Start - Base Facility	15-Nov-17 A		100%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
	T&SC-521 1.1.1 - Tree removal	15-Nov-17 A	15-Nov-17 A	100%	5	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
	T&SC-521 1.1.2 - Install Construction Facilities	15-Nov-17 A	15-Jan-18 A	100%	22	0.00	\$0.00	\$75,405.71	\$75,405.71										
	T&SC-521 1.1.3 - Surveying	15-Nov-17 A	15-Dec-17 A	100%	9	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
	T&SC-521 1.1.4 - Bulk Excavation	15-Nov-17 A	15-Feb-18 A	100%	10	0.00	\$0.00	\$43,554.22	\$43,554.22										
	T&SC-521 1.2.1.1 - Manual Excavation	15-Nov-17 A	15-Feb-18 A	100%	10	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
	T&SC-521 1.2.1.2 - Lean Concrete Foundation Base	01-Dec-17 A	15-Feb-18 A	100%	15	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
	T&SC-521 1.2.1.3 - Foundations	15-Dec-17 A	15-Mar-18 A	100%	12	0.00	\$0.00	\$11,262.60	\$11,262.60										
	T&SC-521 1.2.1.4 - Columns and Pilasters - 1st Floor	15-Jan-17 A	15-Mar-18 A	100%	16	0.00	\$0.00	\$100,018.03	\$100,018.03										
	T&SC-521 1.2.1.5 - Compacted Fill	15-Jan-18 A	15-Apr-18 A	100%	21	0.00	\$0.00	\$5,429.88	\$5,429.88										
	T&SC-521 1.2.1.6 - Concrete Slabs on Grade	01-Mar-18 A	15-Jul-18 A	100%	3	0.00	\$0.00	\$33,997.21	\$33,997.21										
	T&SC-521 1.2.1.7 - Elevated Slab - 1st Floor	01-Mar-18 A	15-Apr-18 A	100%	29	0.00	\$0.00	\$83,725.52	\$83,725.52										
	T&SC-521 1.2.1.8 - Columns and Pilasters - 2nd Floor	15-Mar-18 A	15-May-18 A	100%	16	0.00	\$0.00	\$100,018.03	\$100,018.03										
	T&SC-521 1.2.1.9 - Elevated Slab - 2nd Floor	15-Mar-18 A	15-May-18 A	100%	22	0.00	\$0.00	\$83,725.52	\$83,725.52										
	T&SC-521 1.2.1.10 - Vertical Steel Structure	15-Dec-18 A	15-Jan-19 A	100%	27	0.00	\$0.00	\$35,995.00	\$35,995.00										
	T&SC-521 1.2.1.11 - Steel Roof Structure	01-Jun-18 A	15-Oct-18 A	100%	25	0.00	\$0.00	\$5,685.60	\$5,685.60										
	T&SC-521 1.2.2.1 - Exterior Siding	01-Aug-18 A	15-Oct-18 A	100%	40	0.00	\$0.00	\$34,785.67	\$34,785.67										
	T&SC-521 1.2.2.2 - Partitions - 1st Floor	01-Jun-18 A	15-Aug-18 A	100%	19	0.00	\$0.00	\$81,607.66	\$81,607.66										
	T&SC-521 1.2.2.3 - Partitions - 2nd Floor	01-Jul-18 A	15-Oct-18 A	100%	25	0.00	\$0.00	\$80,461.44	\$80,461.44										
	T&SC-521 1.2.2.4 - Glass Partitions	01-Sep-18 A	15-Feb-19 A	100%	41	0.00	\$0.00	\$32,727.47	\$32,727.47										
	T&SC-521 1.2.2.5 - Ceilings	15-Aug-18 A	30-Aug-19	99%	64	0.00	\$0.00	\$47,949.76	\$47,949.76		94								
	T&SC-521 1.2.2.6 - Interior Flooring	15-Aug-18 A	31-Jul-19	99%	101	0.00	\$0.00	\$124,643.47	\$124,643.47		116								
	T&SC-521 1.2.2.7 - Interior Wall Finishes	01-Jul-18 A	15-Feb-19 A	100%	90	0.00	\$0.00	\$39,073.03	\$39,073.03										
	T&SC-521 1.2.2.8 - Lighting	15-Nov-18 A	31-Jul-19	99%	72	0.00	\$0.00	\$1,718.30	\$1,718.30		116								
	T&SC-521 1.2.2.9 - Doors	01-Nov-18 A	31-Jul-19	99%	46	0.00	\$0.00	\$169,799.61	\$169,799.61		116								
	T&SC-521 1.2.2.10 - Windows	01-Sep-18 A	31-Jul-19	99%	74	0.00	\$0.00	\$591,329.82	\$591,329.82		116								
	T&SC-521 1.2.2.11 - Painting	01-Sep-18 A	31-Jul-19	99%	121	0.00	\$0.00	\$1,265.47	\$1,265.47		116								
	T&SC-521 1.2.2.12 - Roofing	01-Sep-18 A	31-Jul-19	99%	42	0.00	\$0.00	\$81,493.32	\$81,493.32		116								
	T&SC-521 1.2.2.13 - Patterned Glass Wall	01-Dec-18 A	31-Jul-19	99%	43	0.00	\$0.00	\$53,257.93	\$53,257.93		116								
	T&SC-521 1.2.2.14 - Built-in Furnishings	15-Mar-19 A	31-Jul-19	50%	15	0.00	\$0.00	\$4,672.98	\$4,672.98		116								
	T&SC-521 1.2.3.1 - Elevator	01-Nov-18 A	31-Jul-19	99%	63	0.00	\$0.00	\$56,863.78	\$56,863.78		116								
	T&SC-521 1.2.3.2 - Electrical	01-Mar-18 A	31-Jul-19	99%	204	0.00	\$0.00	\$98,469.80	\$98,469.80		116								
	T&SC-521 1.2.3.3 - HVAC	01-Feb-18 A	31-Jul-19	99%	204	0.00	\$0.00	\$358,485.79	\$358,485.79		116								
	T&SC-521 1.2.3.4 - Plumbing	01-Mar-18 A	31-Jul-19	99%	204	0.00	\$0.00	\$52,323.17	\$52,323.17		116								
T&SC-521 1.3.1.1 - Manual Excavation and Shaping	15-Nov-17 A	01-Mar-18 A	100%	13	0.00	\$0.00	\$21,425.70	\$21,425.70											
T&SC-521 1.3.1.2 - Grounding Mesh	15-Jan-18 A	01-Mar-18 A	100%	5	0.00	\$0.00	\$28,686.17	\$28,686.17											
T&SC-521 1.3.1.3 - Isolated Foundations	15-Feb-18 A	15-Mar-18 A	100%	14	0.00	\$0.00	\$2,049.01	\$2,049.01											
T&SC-521 1.3.1.4 - Linear Foundations	01-Feb-18 A	15-Mar-18 A	100%	6	0.00	\$0.00	\$3,163.43	\$3,163.43											
T&SC-521 1.3.1.5 - Below Ground Walls	09-Feb-18 A	15-Mar-18 A	100%	27	0.00	\$0.00	\$41,733.06	\$41,733.06											
T&SC-521 1.3.1.6 - Sub Grade Compacted Fill	01-Mar-18 A	15-Apr-18 A	100%	51	0.00	\$0.00	\$2,693.63	\$2,693.63											
T&SC-521 1.3.1.7 - Basement Walls	01-Mar-18 A	01-Mar-18 A	100%	11	0.00	\$0.00	\$13,761.99	\$13,761.99											
T&SC-521 1.3.1.8 - Seismic Isolator installation	01-Mar-18 A	15-Apr-18 A	100%	25	0.00	\$0.00	\$57,045.74	\$57,045.74											
T&SC-521 1.3.1.9 - Basement Slab - Data Center	15-Mar-18 A	15-May-18 A	100%	30	0.00	\$0.00	\$22,290.39	\$22,290.39											
T&SC-521 1.3.1.10 - 1st Floor Walls - Data Center	01-May-18 A	15-Jun-18 A	100%	26	0.00	\$0.00	\$128,144.42	\$128,144.42											
T&SC-521 1.3.1.11 - Cap Slab	01-Jun-18 A	30-Jun-18 A	100%	29	0.00	\$0.00	\$22,778.05	\$22,778.05											
T&SC-521 1.3.1.12 - Below Ground Slab - Offices	01-Mar-18 A	15-Apr-18 A	100%	17	0.00	\$0.00	\$0.00	\$0.00	\$0.00										
T&SC-521 1.3.1.13 - Compacted fill - Offices, Elec. Area, etc	01-Mar-18 A	15-Apr-18 A	100%	17	0.00	\$0.00	\$2,693.63	\$2,693.63											
T&SC-521 1.3.1.14 - 1st Floor Slabs on Grade	01-Mar-18 A	15-Apr-18 A	100%	8	0.00	\$0.00	\$13,713.63	\$13,713.63											
T&SC-521 1.3.1.15 - 1st Floor Walls - Offices, Elec. Area, etc	15-Mar-18 A	15-Jun-18 A	100%	28	0.00	\$0.00	\$18,455.46	\$18,455.46											
T&SC-521 1.3.1.16 - 1st Floor Roof Slab - Offices	15-Apr-18 A	15-May-18 A	100%	19	0.00	\$0.00	\$0.00	\$0.00	\$0.00										
T&SC-521 1.3.1.17 - Roof Walls	01-May-18 A	15-Jul-18 A	100%	18	0.00	\$0.00	\$0.00	\$0.00	\$0.00										
T&SC-521 1.3.1.18 - Steel Roof Structure	01-Jun-18 A	15-Jul-18 A	100%	11	0.00	\$0.00	\$40,404.89	\$40,404.89											
T&SC-521 1.3.1.19 - Copper Roofing Support Structure	01-Sep-18 A	15-Oct-18 A	100%	17	0.00	\$0.00	\$0.00	\$0.00	\$0.00										
T&SC-521 1.3.1.20 - Steel structure - Elec. Room	01-Jun-18 A	15-Jul-18 A	100%	8	0.00	\$0.00	\$0.00	\$0.00	\$0.00										
T&SC-521 1.3.2.1 - Exterior Cladding - Various Types	15-Aug-18 A	28-Feb-19 A	100%	49	0.00	\$0.00	\$86,503.57	\$86,503.57											
T&SC-521 1.3.2.2 - Access Floor in Rack Room	01-Sep-18 A	31-Jan-19 A	100%	24	0.00	\$0.00	\$0.00	\$0.00	\$0.00										

## LSST May 2019 Month End Forecast

Activity Name		Start	Finish	Physical % Complete	Original Duration	Budgeted Labor Units	Budgeted Labor Cost	Budgeted Material Cost	Budgeted Total Cost no	Total Float	FY2015 2014-10-01	FY2016 2015-10-01	FY2017 2016-10-01	FY2018 2017-10-01	FY2019 2018-10-01	FY2020 2019-10-01	FY2021 2020-10-01	FY2022 2021-10-01
Activity	T&SC-52i	1.3.2.3 - Interior Partions - Data Center	01-Aug-18 A	15-Oct-18 A	100%	23	0.00	\$0.00	\$6,966.64	\$6,966.64								
	T&SC-52i	1.3.2.4 - Interior Partitions - Offices and Electrical	15-Jun-18 A	15-Jul-18 A	100%	16	0.00	\$0.00	\$4,459.75	\$4,459.75								
	T&SC-52i	1.3.2.5 - Ceilings	01-Aug-18 A	15-Oct-18 A	100%	14	0.00	\$0.00	\$8,011.64	\$8,011.64								
	T&SC-52i	1.3.2.6 - Floor Finishes - Offices	31-Dec-18 A	28-Feb-19 A	100%	10	0.00	\$0.00	\$14,268.91	\$14,268.91								
	T&SC-52i	1.3.2.7 - Interior Wall Finishes	01-Dec-18 A	28-Feb-19 A	100%	17	0.00	\$0.00	\$13,428.82	\$13,428.82								
	T&SC-52i	1.3.2.8 - Lighting	15-Jan-19 A	28-Feb-19 A	100%	28	0.00	\$0.00	\$10,955.66	\$10,955.66								
	T&SC-52i	1.3.2.9 - Doors	15-Dec-18 A	31-Jan-19 A	100%	11	0.00	\$0.00	\$16,594.54	\$16,594.54								
	T&SC-52i	1.3.2.10 - Windows	15-Dec-18 A	31-Jan-19 A	100%	46	0.00	\$0.00	\$8,715.27	\$8,715.27								
	T&SC-52i	1.3.2.11 - Painting	15-Nov-18 A	28-Feb-19 A	100%	63	0.00	\$0.00	\$18,783.71	\$18,783.71								
	T&SC-52i	1.3.2.12 - Roofing	15-Aug-18 A	28-Feb-19 A	100%	20	0.00	\$0.00	\$40,025.41	\$40,025.41								
	T&SC-52i	1.3.2.13 - Copper Cladding	15-Dec-18 A	15-Feb-19 A	100%	73	0.00	\$0.00	\$0.00	\$0.00								
	T&SC-52i	1.3.3.1 - Electrical	01-Feb-18 A	31-Jul-19	99%	210	0.00	\$0.00	\$1,938,170.67	\$1,938,170.67	116							
	T&SC-52i	1.3.3.2 - HVAC	20-Mar-18 A	31-Jul-19	99%	210	0.00	\$0.00	\$848,899.28	\$848,899.28	116							
	T&SC-52i	1.3.3.3 - Plumbing	01-Mar-18 A	31-Jul-19	99%	210	0.00	\$0.00	\$6,406.45	\$6,406.45	116							
	T&SC-52i	1.3.3.4 - Fire Protection	15-Jun-18 A	31-Jul-19	99%	134	0.00	\$0.00	\$293,835.76	\$293,835.76	116							
	T&SC-52i	1.4.1 - Bulk Excavation	30-Nov-17 A	15-Dec-17 A	100%	10	0.00	\$0.00	\$5,915.91	\$5,915.91								
	T&SC-52i	1.4.2 - Foundations	30-Nov-17 A	15-Mar-18 A	100%	7	0.00	\$0.00	\$7,167.04	\$7,167.04								
	T&SC-52i	1.4.3 - Retaining Walls	01-Mar-18 A	15-Apr-18 A	100%	41	0.00	\$0.00	\$46,803.54	\$46,803.54								
	T&SC-52i	1.4.4 - Compacted Fill	15-Mar-18 A	15-Jun-18 A	100%	7	0.00	\$0.00	\$0.00	\$0.00								
	T&SC-52i	1.4.5 - Slabs on Grade	01-Jun-18 A	15-Jul-18 A	100%	4	0.00	\$0.00	\$0.00	\$0.00								
	T&SC-52i	1.4.6 - Steel Structure	01-Nov-18 A	31-Dec-18 A	100%	31	0.00	\$0.00	\$0.00	\$0.00								
	T&SC-52i	1.4.7 - Perimeter Enclosure	15-Mar-19 A	31-Jul-19	85%	3	0.00	\$0.00	\$1,433.08	\$1,433.08	116							
	T&SC-52i	1.4.8 - Generator Installation	01-Aug-18 A	31-Aug-18 A	100%	70	0.00	\$0.00	\$0.00	\$0.00								
	T&SC-52i	1.4.9 - Chiller Installation	15-Jun-18 A	15-Jul-18 A	100%	90	0.00	\$0.00	\$0.00	\$0.00								
	T&SC-52i	1.4.10 - Transformer Installation	01-Nov-18 A	15-Dec-18 A	100%	70	0.00	\$0.00	\$0.00	\$0.00								
	T&SC-52i	1.4.11 - Equipment Certification and Start-up	15-Apr-19 A	31-Jul-19	95%	98	0.00	\$0.00	\$0.00	\$0.00	116							
	T&SC-52i	1.4.12 - Roofing	15-Dec-18 A	15-Jan-19 A	100%	22	0.00	\$0.00	\$30,724.12	\$30,724.12								
	T&SC-52i	1.5.1 - Demolition 50%	30-Nov-17 A	15-Apr-18 A	100%	40	0.00	\$0.00	\$61,440.87	\$61,440.87								
	T&SC-52i	1.5.2 - Plumbing Modifications	01-Mar-18 A	15-Apr-18 A	100%	22	0.00	\$0.00	\$0.00	\$0.00								
	T&SC-52i	1.5.3 - Sidewalks 50%	15-Dec-18 A	31-Jul-19	99%	14	0.00	\$0.00	\$0.00	\$0.00	116							
	T&SC-52i	1.5.4 - Pavement	15-Dec-18 A	31-Jul-19	99%	22	0.00	\$0.00	\$0.00	\$0.00	116							
	T&SC-52i	1.5.5 - Demolition 50%	01-Dec-18 A	31-Dec-18 A	100%	41	0.00	\$0.00	\$61,440.87	\$61,440.87								
	T&SC-52i	1.5.6 - Sidewalks 50%	15-Jan-18 A	30-Apr-19 A	100%	15	0.00	\$0.00	\$0.00	\$0.00								
	T&SC-52i	1.5.7 - Pavement	15-Apr-18 A	15-May-18 A	100%	20	0.00	\$0.00	\$45,455.29	\$45,455.29								
	T&SC-52i	1.5.8 - Striping/Demarkation	15-Mar-19 A	31-Jul-19	50%	22	0.00	\$0.00	\$0.00	\$0.00	116							
	T&SC-52i	1.5.9 - Site Furnishings	15-Mar-19 A	31-Jul-19	75%	14	0.00	\$0.00	\$0.00	\$0.00	116							
	T&SC-52i	1.5.10 - Utility Trench Excavation	15-Nov-17 A	15-Mar-18 A	100%	17	0.00	\$0.00	\$0.00	\$0.00								
	T&SC-52i	1.5.11 - Utility Trench Walls	15-Jan-18 A	15-Mar-18 A	100%	21	0.00	\$0.00	\$10,334.40	\$10,334.40								
	T&SC-52i	1.5.12 - Electrical	01-Aug-18 A	31-Jul-19	99%	126	0.00	\$0.00	\$17,568.85	\$17,568.85	116							
	T&SC-52i	1.5.13 - Plumbing	15-Jun-18 A	31-Jul-19	99%	126	0.00	\$0.00	\$50,498.73	\$50,498.73	116							
	T&SC-52i	1.6.1 - General Testing and Start-up	15-Apr-19 A	31-Jul-19	90%	19	0.00	\$0.00	\$0.00	\$0.00	116							
	T&SC-52i	1.6.2 - Cleanup and Acceptance	15-May-19 A	03-Jun-19	50%	5	0.00	\$0.00	\$0.00	\$0.00	158							
	T&SC-52i	Base Facility Phase II Complete		30-Aug-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	94							
	T&SC-53i	Seismic Isolators Purchase Order placed		31-Mar-17 A	100%	0	0.00	\$0.00	\$0.00	\$0.00								
	T&SC-53i	Purchase Order Payment #1 (30%)	15-May-17 A	15-May-17 A	100%	1	0.00	\$0.00	\$52,500.00	\$52,500.00								
	T&SC-53i	Purchase Order Payment #2 (30%)	15-May-17 A	15-May-17 A	100%	1	0.00	\$0.00	\$52,500.00	\$52,500.00								
	T&SC-53i	Seismic Isolators Approved Drawings	15-Apr-17 A	30-Apr-17 A	100%	10	0.00	\$0.00	\$0.00	\$0.00								
	T&SC-53i	Seismic Isolators Production Begins	15-May-17 A		100%	0	0.00	\$0.00	\$0.00	\$0.00								
	T&SC-53i	Seismic Isolators Production and Prototype testing	15-Aug-17 A	15-Dec-17 A	100%	30	0.00	\$0.00	\$0.00	\$0.00								
	T&SC-53i	Seismic Isolators Completion of Lead-Rubber Bearin	15-Aug-17 A	15-Dec-17 A	100%	15	0.00	\$0.00	\$0.00	\$0.00								
T&SC-53i	Purchase Order Payment #3 (20%)	15-Feb-18 A	15-Feb-18 A	100%	1	0.00	\$0.00	\$35,000.00	\$35,000.00									
T&SC-53i	Seismic Isolators Completion of Cross Linear Bearing	15-Jan-18 A	15-Feb-18 A	100%	25	0.00	\$0.00	\$0.00	\$0.00									
T&SC-53i	Purchase Order Payment #4 (20%)	15-Jan-18 A	15-Feb-18 A	100%	1	0.00	\$0.00	\$35,000.00	\$35,000.00									
T&SC-53i	Seismic Isolators Procurement Complete		15-Feb-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00									
LSST ME 19-05.04C.14 Telescope Integration and Test		13-May-16 A	04-Feb-21		1304	91551.05	\$7,229,080.09	\$2,243,940.26	\$9,473,020.35	680								
LSST ME 19-05.04C.14.01 Telescope Integration Mgmt and Er		01-Sep-16 A	30-Sep-20		1218	19947.74	\$1,563,348.72	\$409,043.36	\$1,972,392.08	509								
T&SC-34i	Integration Engineer	01-Sep-16 A	30-Sep-16 A	100%	199	300.00	\$20,961.00	\$0.00	\$20,961.00									
T&SC-34i	Summit Integration Crew for Mount - FY 3 - Labor	03-Oct-16 A	29-Sep-17 A	100%	245	1760.00	\$127,265.60	\$0.00	\$127,265.60									
T&SC-34i	TS Integration Team FY18	15-Feb-18 A	28-Sep-18 A	100%	154	1000.00	\$74,850.00	\$0.00	\$74,850.00									
T&SC-34i	Integration and System Engineering Management - I	01-Oct-19	22-Oct-19	0%	16	0.00	\$0.00	\$150,000.58	\$150,000.58	263								
T&SC-34i	Integration and System Engineering Management - I	01-Oct-18 A	30-Sep-19	67%	254	0.00	\$0.00	\$259,042.78	\$259,042.78	282								
T&SC-34i	TS Integration Team FY4 - Labor	03-Oct-16 A	29-Sep-17 A	100%	245	900.00	\$95,292.00	\$0.00	\$95,292.00									
T&SC-34i	TS Integration Team FY19	01-Oct-18 A	30-Sep-19	67%	245	5148.61	\$408,401.42	\$0.00	\$408,401.42	254								
T&SC-34i	TS Integration Team FY20	01-Oct-19	30-Sep-20	0%	246	10839.13	\$836,578.70	\$0.00	\$836,578.70	496								
LSST ME 19-05.04C.14.02 Integration Tooling and Equipment		13-May-16 A	09-Jul-20		1065	17015.13	\$1,289,445.57	\$794,224.65	\$2,083,670.22	824								
T&SC-64i	Telescope Testing Hardware Development Start	13-May-16 A		100%	0	0.00	\$0.00	\$0.00	\$0.00									
LSST ME 19-05.04C.14.02.01 ComCam		13-May-16 A	09-Jul-20		1065	8932.13	\$660,544.19	\$293,440.15	\$953,984.34	824								
T&SC-	ComCam Dewar Ready for Acceptance Tests at SL		31-May-19 A	100%	0	0.00	\$0.00	\$0.00	\$0.00									
T&SC-	ComCam Tucson Integration Complete		14-Nov-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	13								
T&SC-	ComCam Ready for Tucson System Tests		15-Nov-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	13								
T&SC-	ComCam Design Requirements Document	13-May-16 A	01-Nov-17 A	100%	127	561.00	\$60,170.87	\$0.00	\$60,170.87									
T&SC-	ComCam ICD Development	12-Jan-17 A	01-Sep-17 A	100%	83	314.96	\$35,233.40	\$0.00	\$35,233.40									





LSST May 2019 Month End Forecast																		
Activity ID	Activity Name	Start	Finish	Physical % Complete	Original Duration	Budgeted Labor Units	Budgeted Labor Cost	Budgeted Material Cost	Budgeted Total Cost no	Total Float	FY2015 2014-10-01	FY2016 2015-10-01	FY2017 2016-10-01	FY2018 2017-10-01	FY2019 2018-10-01	FY2020 2019-10-01	FY2021 2020-10-01	FY2022 2021-10-01
T&SC-	L3 Assembly - Prepare mechanical drawings	30-Jan-18 A	30-Apr-18 A	100%	3	12.00	\$862.56	\$0.00	\$862.56					L3 Assembly - Prepare mechanical drawings				
	L3 Assembly - Send mechanical drawings for bids	30-Apr-18 A	30-Apr-18 A	100%	20	8.00	\$575.04	\$0.00	\$575.04					L3 Assembly - Send mechanical drawings for bids				
	L3 Assembly - Order COTS items	31-Jan-18 A	28-Feb-18 A	100%	15	6.00	\$431.28	\$0.00	\$431.28					L3 Assembly - Order COTS items				
	L3 Assembly - Award machining	30-Apr-18 A	30-Apr-18 A	100%	1	1.00	\$71.88	\$0.00	\$71.88					L3 Assembly - Award machining				
	L3 Assembly - Camera: SLAC performs focal plane r	30-Apr-18 A	15-Mar-19 A	100%	5	0.00	\$0.00	\$0.00	\$0.00					L3 Assembly - Camera: SLAC performs focal plane metrology				
	L3 Assembly - Machine shop fabrication	30-Apr-18 A	01-May-19 A	100%	30	0.00	\$0.00	\$0.00	\$0.00					L3 Assembly - Machine shop fabrication				
	L3 Assembly - Inspect & accept machined parts	01-May-19 A	01-May-19 A	100%	1	6.00	\$431.28	\$0.00	\$431.28					L3 Assembly - Inspect & accept machined parts				
	L3 Assembly - Mechanical assembly	03-Jun-19	07-Jun-19	0%	5	40.00	\$2,445.80	\$0.00	\$2,445.80	239				L3 Assembly - Mechanical assembly				
	L3 Assembly - Ship one assembly to SLAC for Cryos	10-Jun-19	14-Jun-19	0%	5	2.00	\$148.78	\$0.00	\$148.78	245				L3 Assembly - Ship one assembly to SLAC for Cryostat integration				
	L3 Cell Ready for Integration @ SLAC		24-Jun-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	239				L3 Cell Ready for Integration @ SLAC				
	ComCam Corrector Optics - Fabrication	07-Aug-17 A	01-May-18 A	100%	229	0.00	\$0.00	\$0.00	\$0.00					ComCam Corrector Optics - Fabrication				
	ComCam Corrector Optics - Inspect & accept optics	02-Jul-18 A	30-Sep-18 A	100%	5	40.00	\$1,851.20	\$0.00	\$1,851.20					ComCam Corrector Optics - Inspect & accept optics				
	Baffles - Optical design	09-Apr-18 A	13-Apr-18 A	100%	5	40.00	\$4,209.60	\$0.00	\$4,209.60					Baffles - Optical design				
	Baffles - Mechanical design	14-Jan-19 A	14-Jun-19	25%	10	32.00	\$2,300.16	\$0.00	\$2,300.16	194				Baffles - Mechanical design				
	Baffles - Prepare mechanical drawings	17-Jun-19	21-Jun-19	0%	5	20.00	\$1,487.80	\$0.00	\$1,487.80	194				Baffles - Prepare mechanical drawings				
	Baffles - Send mechanical drawings for bids	24-Jun-19	15-Jul-19	0%	15	8.00	\$595.12	\$0.00	\$595.12	194				Baffles - Send mechanical drawings for bids				
	Baffles - Order COTS items	24-Jun-19	15-Jul-19	0%	15	8.00	\$595.12	\$0.00	\$595.12	220				Baffles - Order COTS items				
	Baffles - Award machining	16-Jul-19	16-Jul-19	0%	1	1.00	\$74.39	\$0.00	\$74.39	194				Baffles - Award machining				
	Baffles - Machine shop fabrication	17-Jul-19	13-Aug-19	0%	20	0.00	\$0.00	\$0.00	\$0.00	194				Baffles - Machine shop fabrication				
	Baffles - Inspect & accept machined parts	14-Aug-19	20-Aug-19	0%	5	40.00	\$2,975.60	\$0.00	\$2,975.60	194				Baffles - Inspect & accept machined parts				
	Baffles - Mechanical assembly	21-Aug-19	04-Sep-19	0%	10	40.00	\$2,975.60	\$0.00	\$2,975.60	194				Baffles - Mechanical assembly				
	ComCam Filter - Substrate coating	14-Nov-17 A	01-Feb-19 A	100%	73	0.00	\$0.00	\$0.00	\$0.00					ComCam Filter - Substrate coating				
	Filter acceptance	01-Feb-18 A	01-Feb-19 A	100%	5	0.00	\$0.00	\$145,000.00	\$145,000.00					Filter acceptance				
	Filter inspection	01-Feb-18 A	07-Jun-19	99%	5	30.00	\$1,388.40	\$0.00	\$1,388.40	250				Filter inspection				
	Install filters in cells for filter changer	10-Jun-19	14-Jun-19	0%	5	10.00	\$479.00	\$0.00	\$479.00	250				Install filters in cells for filter changer				
	Develop test plan	03-Oct-17 A	31-Oct-17 A	100%	21	80.00	\$3,702.40	\$0.00	\$3,702.40					Develop test plan				
	Review test plan	11-Dec-17 A	11-Dec-17 A	100%	1	8.00	\$370.24	\$0.00	\$370.24					Review test plan				
	Identify or design test fixtures for L1-L2 cell L3 asse	01-Nov-17 A	08-Nov-17 A	100%	6	40.00	\$1,851.20	\$0.00	\$1,851.20					Identify or design test fixtures for L1-L2 cell L3 assembly and test mirror				
	Fabricate / purchase test fixtures	01-Nov-17 A	30-Nov-17 A	100%	22	80.00	\$3,702.40	\$0.00	\$3,702.40					Fabricate / purchase test fixtures				
	Perform L1-L2 optical test	12-Jun-19	18-Jun-19	0%	5	40.00	\$1,916.00	\$0.00	\$1,916.00	243				Perform L1-L2 optical test				
	Perform L1-L2-L3 optical test	25-Jun-19	01-Jul-19	0%	5	40.00	\$1,916.00	\$0.00	\$1,916.00	239				Perform L1-L2-L3 optical test				
	Sled Assembly - Mechanical design	09-Apr-18 A	28-Feb-19 A	100%	36	160.00	\$11,500.80	\$0.00	\$11,500.80					Sled Assembly - Mechanical design				
	Sled Assembly - Prepare mechanical drawings	01-Mar-19 A	15-Mar-19 A	100%	10	40.00	\$2,875.20	\$0.00	\$2,875.20					Sled Assembly - Prepare mechanical drawings				
	Sled Assembly - Send mechanical drawings for bids	15-Mar-19 A	16-Mar-19 A	100%	20	8.00	\$575.04	\$0.00	\$575.04					Sled Assembly - Send mechanical drawings for bids				
	Sled Assembly - Order COTS items	15-Mar-19 A	29-Mar-19 A	100%	15	6.00	\$431.28	\$0.00	\$431.28					Sled Assembly - Order COTS items				
	Sled Assembly - Award machining	16-Mar-19 A	29-Mar-19 A	100%	1	4.00	\$287.52	\$0.00	\$287.52					Sled Assembly - Award machining				
	Sled Assembly - Machine shop fabrication	29-Mar-19 A	01-May-19 A	100%	60	0.00	\$0.00	\$0.00	\$0.00					Sled Assembly - Machine shop fabrication				
	Sled Assembly - Inspect & accept machined parts	01-May-19 A	01-May-19 A	100%	1	6.00	\$446.34	\$0.00	\$446.34					Sled Assembly - Inspect & accept machined parts				
	Sled Assembly - Mechanical assembly	10-May-19 A	15-May-19 A	100%	5	20.00	\$1,487.80	\$0.00	\$1,487.80					Sled Assembly - Mechanical assembly				
	Camera: Cryostat design	01-May-17 A	19-Sep-17 A	100%	100	0.00	\$0.00	\$0.00	\$0.00					Camera: Cryostat design				
	Camera: Cryostat Stage Assy/L3/ComCam Integrati	01-May-17 A	04-May-17 A	100%	4	0.00	\$0.00	\$0.00	\$0.00					Camera: Cryostat Stage Assy/L3/ComCam Integrating Structure ICD				
	Camera: Cryostat / L3 Integration	13-Dec-17 A	03-Jun-19	30%	259	0.00	\$0.00	\$0.00	\$0.00	250				Camera: Cryostat / L3 Integration				
	Camera: Cryostat testing	01-Dec-18 A	30-May-19 A	100%	12	0.00	\$0.00	\$0.00	\$0.00					Camera: Cryostat testing				
	Camera: Cryostat & Utility Box & support equipemen	30-May-19 A	30-May-19 A	100%	2	0.00	\$0.00	\$0.00	\$0.00					Camera: Cryostat & Utility Box & support equipment preship review				
	Camera: Cryostat ready for shipping to Tucson		30-May-19 A	100%	0	0.00	\$0.00	\$0.00	\$0.00					Camera: Cryostat ready for shipping to Tucson				
	Camera: Ship cryostat & equipment to Tucson	03-Jun-19	21-Jun-19	0%	15	0.00	\$0.00	\$0.00	\$0.00	115				Camera: Ship cryostat & equipment to Tucson				
	Camera: Utility Box - Identification of requirements	01-May-17 A	23-Jun-17 A	100%	40	0.00	\$0.00	\$0.00	\$0.00					Camera: Utility Box - Identification of requirements				
	Camera: Utility Box - Conceptual design	26-Jun-17 A	30-Nov-17 A	100%	120	0.00	\$0.00	\$0.00	\$0.00					Camera: Utility Box - Conceptual design				
	Camera: Utility Box - Build or buy determination	13-Dec-17 A	12-Jan-18 A	100%	20	0.00	\$0.00	\$0.00	\$0.00					Camera: Utility Box - Build or buy determination				
	Camera: Utility Box - Utility Box / ComCam Integratir	01-Dec-17 A	20-Jan-18 A	100%	20	0.00	\$0.00	\$0.00	\$0.00					Camera: Utility Box - Utility Box / ComCam Integrating Structure ICD				
	Camera: Utility Box - Build	13-Feb-18 A	28-Feb-19 A	100%	120	0.00	\$0.00	\$0.00	\$0.00					Camera: Utility Box - Build				
	Camera: Utility Box - Assemble	01-Nov-18 A	30-May-19 A	100%	88	0.00	\$0.00	\$0.00	\$0.00					Camera: Utility Box - Assemble				
	Camera: Utility Box - Test	30-May-19 A	15-Jul-19	10%	30	0.00	\$0.00	\$0.00	\$0.00	93				Camera: Utility Box - Test				
	Camera: Utility Box - Ship to Tucson	16-Jul-19	24-Jul-19	0%	7	0.00	\$0.00	\$0.00	\$0.00	93				Camera: Utility Box - Ship to Tucson				
	Procure Lab	01-Dec-17 A	15-Jan-18 A	100%	30	0.00	\$0.00	\$0.00	\$0.00					Procure Lab				
	Procure space in computer room	15-Aug-18 A	15-Mar-19 A	100%	30	0.00	\$0.00	\$0.00	\$0.00					Procure space in computer room				
	Procure required utilities (comms power glycol)	22-Aug-18 A	15-Mar-19 A	100%	66	0.00	\$0.00	\$0.00	\$0.00					Procure required utilities (comms power glycol)				
	Camera: Install DAQ in Tucson computer room	03-Jun-19	19-Jun-19	0%	13	0.00	\$0.00	\$0.00	\$0.00	103				Camera: Install DAQ in Tucson computer room				
	Camera: Install CCS in Tucson computer room	03-Jun-19	19-Jun-19	0%	13	0.00	\$0.00	\$0.00	\$0.00	103				Camera: Install CCS in Tucson computer room				
	Develop handling plan	01-Dec-18 A	02-Jul-19	90%	22	16.00	\$1,150.08	\$0.00	\$1,150.08	237				Develop handling plan				
	Develop power and grounding plan	01-Apr-18 A	04-Sep-19	90%	66	480.00	\$50,515.20	\$0.00	\$50,515.20	193				Develop power and grounding plan				
	Develop safety plan	01-Apr-18 A	04-Sep-19	90%	66	0.00	\$0.00	\$0.00	\$0.00	193				Develop safety plan				
	Review safety, handling, power and ground plans	05-Sep-19	05-Sep-19	0%	1	0.00	\$0.00	\$0.00	\$0.00	193				Review safety, handling, power and ground plans				
	Test utilities	01-Jan-19 A	11-Jun-19	66%	7	0.00	\$0.00	\$0.00	\$0.00	116				Test utilities				
	Handling Fixtures - Mechanical design	01-Nov-18 A	24-Sep-19	60%	80	448.00	\$33,326.72	\$0.00	\$33,326.72	1024				Handling Fixtures - Mechanical design				
	Handling Fixtures - Prepare mechanical drawings	01-May-19 A	20-Jun-19	50%	14	112.00	\$8,331.68	\$0.00	\$8,331.68	13				Handling Fixtures - Prepare mechanical drawings				
	Handling Fixtures - Send mechanical drawings for bi	21-Jun-19	02-Aug-19	0%	30	240.00	\$17,853.60	\$0.00	\$17,853.60	13				Handling Fixtures - Send mechanical drawings for bids				
	Handling Fixtures - Order COTS items	21-Jun-19	02-Aug-19	0%	30	240.00	\$17,853.60	\$0.00	\$17,853.60	72				Handling Fixtures - Order COTS items				
	Handling Fixtures - Award fabrication	05-Aug-19	13-Aug-19	0%	7	56.00	\$4,165.84	\$0.00	\$4,165.84	13				Handling Fixtures - Award fabrication				
	Handling Fixtures - Fabricate	28-Aug-19	25-Oct-19	0%	42	96.00	\$6,178.18	\$0.00	\$6,178.18	13				Handling Fixtures - Fabricate				
	Handling Fixtures - Mechanical assembly	28-Oct-19	05-Nov-19	0%	7	72.00	\$5,330.08	\$0.00	\$5,330.08	13				Handling Fixtures - Mechanical assembly				
	Tucson Lab readiness review	06-Nov-19	06-Nov-19	0%	1	0.00	\$0.00	\$0.00	\$0.00	13				Tucson Lab readiness review				

LSST May 2019 Month End Forecast																		
Activity ID	Activity Name	Start	Finish	Physical % Complete	Original Duration	Budgeted Labor Units	Budgeted Labor Cost	Budgeted Material Cost	Budgeted Total Cost no	Total Float	FY2015 2014-10-01	FY2016 2015-10-01	FY2017 2016-10-01	FY2018 2017-10-01	FY2019 2018-10-01	FY2020 2019-10-01	FY2021 2020-10-01	FY2022 2021-10-01
T&SC-	Develop integration plan	15-Aug-18 A	26-Aug-19	80%	60	0.00	\$0.00	\$0.00	\$0.00	200								
	Develop functional test plan	15-Aug-18 A	26-Aug-19	80%	60	0.00	\$0.00	\$0.00	\$0.00	200								
	Camera: Set-up SLAC equipment in Tucson lab	20-Jun-19	28-Jun-19	0%	7	0.00	\$0.00	\$0.00	\$0.00	103								
	Receive cryostat from SLAC		18-Oct-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	162								
	Integrate Cryostat with L1-L2 L3 Filter Changer ar	07-Nov-19	14-Nov-19	0%	6	0.00	\$0.00	\$0.00	\$0.00	13								
	Integrate filter changer controller with Utility Box	11-May-20	12-May-20	0%	2	0.00	\$0.00	\$0.00	\$0.00	33								
	Integrate Sled on CCIS	07-May-20	08-May-20	0%	2	0.00	\$0.00	\$0.00	\$0.00	33								
	Functional test (mechanical electrical software)	07-Nov-19	27-Nov-19	0%	15	0.00	\$0.00	\$0.00	\$0.00	141								
	Develop packing plan (Tucson to Chile)	28-Feb-19 A	30-Apr-19 A	100%	10	0.00	\$0.00	\$0.00	\$0.00									
	Develop shipping plan (Tucson to Chile)	28-Feb-19 A	30-Apr-19 A	100%	10	0.00	\$0.00	\$0.00	\$0.00									
	ComCam Ready for Onsite Testing		09-Jul-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	16								
	Ship Sled Assembly to SLAC for Integration	15-May-19 A	15-May-19 A	100%	5	0.00	\$0.00	\$850.00	\$850.00									
	Lens covers - Shop fabrication	03-Jun-19	02-Jul-19	0%	22	20.17	\$966.00	\$0.00	\$966.00	232								
	Filter Assemblies - Shop fabrication	03-Jul-19	02-Aug-19	0%	22	49.60	\$2,376.07	\$0.00	\$2,376.07	232								
	Filter Changer Assembly - End cover shop fabrication	07-Nov-19	06-Dec-19	0%	20	37.53	\$1,860.17	\$0.00	\$1,860.17	165								
	L1/L2 Assembly - Additional Mechanical Assembly	01-May-19 A	05-Jun-19	0%	20	160.00	\$7,664.00	\$0.00	\$7,664.00	127								
	L3 Assembly - Additional Machine shop fabrication	01-May-19 A	14-Jun-19	75%	20	150.00	\$6,942.00	\$0.00	\$6,942.00	120								
	Sled Assembly - Additional Machine shop fabrication	01-May-19 A	15-May-19 A	100%	156	500.00	\$23,950.00	\$0.00	\$23,950.00									
	ComCam Materials and shipping budget	06-Nov-19	06-Nov-19	0%	1	0.00	\$0.00	\$12,619.75	\$12,619.75	13								
	LSST ME 19-05.04C.14.02.02 Interferometer	01-Jun-17 A	02-Jun-20		867	3180.00	\$278,036.16	\$100,000.00	\$378,036.16	594								
	M3 Interferometer test design	01-Jun-17 A	29-Jun-17 A	100%	40	260.00	\$19,849.30	\$0.00	\$19,849.30									
	M3 Interferometer test design extended effort	01-Jul-17 A	31-Jan-19 A	100%	131	273.00	\$20,842.00	\$0.00	\$20,842.00									
	M3 Interferometer Optics Procurement	20-Jul-18 A	03-Mar-19 A	100%	46	108.66	\$11,434.93	\$0.00	\$11,434.93									
	M3 Interferometer Specification Documents	02-Jul-18 A	01-Mar-19 A	100%	23	75.00	\$6,458.52	\$0.00	\$6,458.52									
	M3 Interferometer SOW	20-Jul-18 A	02-Mar-19 A	100%	22	72.00	\$6,209.52	\$0.00	\$6,209.52									
	M3 Interferometer Support Structure Procurement	25-Sep-18 A	04-Mar-19 A	100%	43	160.00	\$13,241.89	\$0.00	\$13,241.89									
	M3 Interferometer additional labor support	01-Feb-19 A	05-Mar-19 A	100%	22	1344.27	\$100,000.00	\$0.00	\$100,000.00									
	Receive M3 equipment from UoA and install in NOAO	20-Mar-19 A	20-Apr-19 A	100%	42	0.00	\$0.00	\$0.00	\$0.00									
	Procure and receive missing components	03-Jun-19	30-Aug-19	0%	64	0.00	\$0.00	\$0.00	\$0.00	51								
	Assemble and align components and perform proof-	03-Sep-19	30-Oct-19	0%	42	0.00	\$0.00	\$0.00	\$0.00	51								
	Analyze data and decide for SHWFS or CS method	31-Oct-19	27-Nov-19	0%	20	0.00	\$0.00	\$0.00	\$0.00	51								
	Design telescope support structure	02-Dec-19	03-Feb-20	0%	42	0.00	\$0.00	\$0.00	\$0.00	51								
	Procure telescope structure	04-Feb-20	02-Apr-20	0%	42	0.00	\$0.00	\$0.00	\$0.00	51								
	Integrate M3 instrument on support structure and tes	03-Apr-20	01-Jun-20	0%	42	0.00	\$0.00	\$0.00	\$0.00	51								
	M3 instrument shipping to Chile	02-Jun-20	02-Jun-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	51								
	M3 instrument Planning Package	02-Jun-20	02-Jun-20	0%	1	887.08	\$100,000.00	\$100,000.00	\$200,000.00	594								
	LSST ME 19-05.04C.14.02.03 Image Quality Diagnostics Sy	12-Apr-17 A	25-Jun-20		1015	2917.53	\$234,125.31	\$236,295.25	\$470,420.57	18								
	SHWFS System Final Design	12-Sep-17 A	16-Mar-18 A	100%	65	900.00	\$66,203.40	\$0.00	\$66,203.40									
	SHWFS Specification Document	12-Apr-17 A	26-Jun-17 A	100%	22	100.00	\$10,276.94	\$0.00	\$10,276.94									
	SHWFS SOW	12-May-17 A	26-Jun-17 A	100%	19	78.00	\$8,354.06	\$0.00	\$8,354.06									
	SHWFS System Design Internal Review	15-Mar-18 A	30-Mar-18 A	100%	3	147.00	\$13,403.88	\$0.00	\$13,403.88									
	SHWFS Procurement	26-Jun-17 A	09-Aug-17 A	100%	65	180.00	\$24,894.00	\$0.00	\$24,894.00									
	SHWFS system procurement	01-Jul-17 A	09-Aug-17 A	100%	22	220.00	\$20,759.60	\$0.00	\$20,759.60									
	CMOS Camera Design	20-Mar-18 A	28-Sep-18 A	100%	44	70.00	\$4,861.50	\$0.00	\$4,861.50									
	SHWFS Support	01-Feb-18 A	28-Jun-19	80%	23	510.53	\$39,328.21	\$0.00	\$39,328.21	55								
	IO Kick-Off Meeting	12-Sep-17 A		100%	0	0.00	\$0.00	\$0.00	\$0.00									
	IO Final Design	12-Sep-17 A	10-Mar-18 A	100%	78	0.00	\$0.00	\$0.00	\$0.00									
	IO Develop Annular Zernike	10-Dec-17 A	10-Nov-18 A	100%	117	0.00	\$0.00	\$0.00	\$0.00									
	IO CDR Documentation	10-Dec-17 A	20-Feb-18 A	100%	21	0.00	\$0.00	\$0.00	\$0.00									
	IO CDR Documentation - phase 2	21-Feb-18 A	20-Nov-18 A	100%	40	0.00	\$0.00	\$0.00	\$0.00									
	IO CDR P#1	15-Sep-18 A	01-Oct-18 A	100%	5	0.00	\$0.00	\$47,475.00	\$47,475.00									
	IO Procurement	25-Dec-18 A	02-Mar-19 A	100%	56	0.00	\$0.00	\$0.00	\$0.00									
	IO Assembly and Alignment	01-Mar-19 A	02-Aug-19	80%	44	0.00	\$0.00	\$0.00	\$0.00	31								
	IO Software Development	10-Nov-18 A	22-Oct-19	90%	100	0.00	\$0.00	\$0.00	\$0.00	18								
	IO Preperation of FAT	29-Jan-19 A	02-Jul-19	90%	22	0.00	\$0.00	\$0.00	\$0.00	31								
	IO FAT P#2	25-Dec-18 A	07-Jun-19	50%	5	0.00	\$0.00	\$79,125.00	\$79,125.00	48								
	IO Pack and Ship to Tucson P#3	03-Jul-19	02-Aug-19	0%	22	0.00	\$0.00	\$31,650.00	\$31,650.00	31								
	SHWFS Integration and Test in Tucson	05-Aug-19	03-Oct-19	0%	43	120.00	\$6,824.20	\$0.00	\$6,824.20	31								
	CMOS Camera Specification Document	05-Dec-17 A	15-Sep-18 A	100%	22	8.00	\$575.04	\$0.00	\$575.04									
	CMOS Camera Filter Procurement Management	03-Jun-19	02-Jul-19	0%	22	16.00	\$766.40	\$0.00	\$766.40	69								
	CMOS Camera Filter Procurement Material Accepta	03-Jul-19	10-Jul-19	0%	5	0.00	\$0.00	\$1,030.23	\$1,030.23	69								
	CMOS Camera Procurement Management	07-May-18 A	01-Oct-18 A	100%	44	0.00	\$0.00	\$0.00	\$0.00									
	CMOS Camera Procurement Material Acceptance	20-May-18 A	01-Oct-18 A	100%	5	0.00	\$0.00	\$20,300.02	\$20,300.02									
	CMOS Camera Mechanical Integration and Testing	11-Jul-19	09-Aug-19	0%	22	96.00	\$8,820.24	\$0.00	\$8,820.24	69								
	IOTA Stages Engineering	01-Feb-18 A	20-Nov-18 A	100%	44	0.00	\$0.00	\$38,500.00	\$38,500.00									
	IOTA System Final Design Review	29-Jan-19 A	10-Feb-19 A	100%	5	80.00	\$8,145.76	\$0.00	\$8,145.76									
	IOTAs Stages Procurement Management	25-Dec-18 A	01-Mar-19 A	100%	22	0.00	\$0.00	\$0.00	\$0.00									
	IOTAs Stages Hardware	25-Dec-18 A	03-Jun-19	90%	1	0.00	\$0.00	\$18,215.00	\$18,215.00	95								
	IOTA System integration and testing	23-Oct-19	27-Dec-19	0%	44	156.00	\$14,057.20	\$0.00	\$14,057.20	18								
	IOTA System Preship Review	30-Dec-19	06-Jan-20	0%	5	80.00	\$6,854.88	\$0.00	\$6,854.88	126								
	Ship IOTA	29-May-20	25-Jun-20	0%	20	0.00	\$0.00	\$0.00	\$0.00	18								
	IOTA System Tucson Storage	30-Dec-19	28-May-20	0%	106	156.00	\$0.00	\$0.00	\$0.00	18								

LSST May 2019 Month End Forecast																		
Activity ID	Activity Name	Start	Finish	Physical % Complete	Original Duration	Budgeted Labor Units	Budgeted Labor Cost	Budgeted Material Cost	Budgeted Total Cost no	Total Float	FY2015 2014-10-01	FY2016 2015-10-01	FY2017 2016-10-01	FY2018 2017-10-01	FY2019 2018-10-01	FY2020 2019-10-01	FY2021 2020-10-01	FY2022 2021-10-01
<div></div>	<b>LSST ME 19-05.04C.14.02.04 ComCam Integrating Structure</b>	01-Jul-16 A	19-Feb-20		930	1985.47	\$116,739.91	\$0.00	\$116,739.91	87								
	T&SC- Camera Mass Simulator Design	01-Jul-16 A	15-Feb-17 A	100%	106	197.00	\$13,362.83	\$0.00	\$13,362.83									
	T&SC- Design Internal Review	17-Nov-16 A	15-Dec-16 A	100%	3	21.00	\$1,458.45	\$0.00	\$1,458.45									
	T&SC- Camera Mass Simulator - Design Convergence	01-Jun-17 A	02-Oct-17 A	100%	64	60.00	\$4,167.00	\$0.00	\$4,167.00									
	T&SC- Camera Mass Simulator - SOW/ACL Deveoped and	02-Oct-17 A	30-Oct-17 A	100%	43	60.00	\$4,312.80	\$0.00	\$4,312.80									
	T&SC- Integrating Structure - Design convergence	01-May-17 A	02-Oct-17 A	100%	109	0.00	\$0.00	\$0.00	\$0.00									
	T&SC- Integrating Structure - Utility Box and Refrigeration F	26-Jun-17 A	01-Nov-17 A	100%	30	0.00	\$0.00	\$0.00	\$0.00									
	T&SC- Integrating Structure - Mechanical design of structu	29-May-18 A	21-Feb-19 A	100%	20	170.00	\$12,219.60	\$0.00	\$12,219.60									
	T&SC- Integrating Structure - Mechanical design of cart	01-Jan-19 A	21-Feb-19 A	100%	5	40.00	\$2,875.20	\$0.00	\$2,875.20									
	T&SC- Integrating Structure - Structural analysis	01-Aug-18 A	28-Feb-19 A	100%	20	0.00	\$0.00	\$0.00	\$0.00									
	T&SC- Integrating Structure - Utility routing	03-Oct-17 A	21-Feb-19 A	100%	100	80.00	\$5,750.40	\$0.00	\$5,750.40									
	T&SC- Integrating Structure - Design review	21-Feb-19 A	21-Feb-19 A	100%	1	0.00	\$0.00	\$0.00	\$0.00									
	T&SC- Integrating Structure - Make mechanical drawings of	01-Mar-19 A	14-Jun-19	75%	10	32.00	\$2,300.16	\$0.00	\$2,300.16	97								
	T&SC- Integrating Structure - Send mechanical drawings fo	01-Apr-19 A	28-Jun-19	50%	20	16.00	\$1,190.24	\$0.00	\$1,190.24	87								
	T&SC- Integrating Structure - Order COTS items	01-Apr-19 A	28-Jun-19	50%	20	157.62	\$11,725.64	\$0.00	\$11,725.64	237								
	T&SC- Integrating Structure - Award fabrication	01-Jul-19	01-Jul-19	0%	1	16.00	\$1,190.24	\$0.00	\$1,190.24	87								
	T&SC- Integrating Structure - Fabrication	02-Jul-19	04-Feb-20	0%	148	1071.84	\$51,341.28	\$0.00	\$51,341.28	87								
	T&SC- Integrating Structure - Procure storage space (Flex i	01-Apr-19 A	28-Jun-19	50%	20	16.00	\$1,150.08	\$0.00	\$1,150.08	237								
	T&SC- Integrating Structure - Inspect and accept fabricate	05-Feb-20	05-Feb-20	0%	1	16.00	\$1,232.00	\$0.00	\$1,232.00	87								
	T&SC- Integrating Structure - Mechanical assembly	06-Feb-20	19-Feb-20	0%	10	32.00	\$2,464.00	\$0.00	\$2,464.00	87								
	<b>LSST ME 19-05.04C.14.02.05 Laser Tracker Summit</b>	10-Apr-17 A	11-Feb-20		725	0.00	\$0.00	\$164,489.24	\$164,489.24	126								
	T&SC- Laser Tracker System Hardware Procurement	01-Oct-19	25-Nov-19	0%	40	0.00	\$0.00	\$0.00	\$0.00	126								
	T&SC- Laser Tracker System Hardware Delivery	26-Nov-19	13-Jan-20	0%	30	0.00	\$0.00	\$18,003.67	\$18,003.67	126								
	T&SC- Laser Tracker System Hardware Shipping	14-Jan-20	11-Feb-20	0%	20	0.00	\$0.00	\$0.00	\$0.00	126								
	T&SC- Procure Laser Tracker System Software	10-Apr-17 A	22-Apr-17 A	100%	15	0.00	\$0.00	\$28,985.58	\$28,985.58									
	T&SC- Develop Laser tracker alignment interface Phase 1 (	01-Feb-18 A	30-Apr-18 A	100%	84	0.00	\$0.00	\$58,750.00	\$58,750.00									
	T&SC- Develop Laser tracker alignment interface Phase 2 (	10-Jun-18 A	30-Sep-19	25%	84	0.00	\$0.00	\$58,750.00	\$58,750.00	126								
	<b>LSST ME 19-05.04C.14.03 Major Equipment Leasing and Ren</b>	30-Mar-18 A	04-May-20		520	0.00	\$0.00	\$649,362.45	\$649,362.45	601								
	T&SC-35i Major Equip. Leasing and Rental	30-Mar-18 A	15-Sep-18 A	100%	456	0.00	\$0.00	\$64,000.00	\$64,000.00									
	T&SC-35i Crane Leasing and Rental	10-Jun-18 A	04-May-20	35%	224	0.00	\$0.00	\$214,190.00	\$214,190.00	601								
	T&SC-35i Dome Interior Scaffolding rental for EIE April 2018 -	15-Apr-18 A	29-Jul-18 A	100%	54	0.00	\$0.00	\$11,172.42	\$11,172.42									
	T&SC-35i Dome Scaffolding Procurement	15-Jun-18 A	10-Aug-18 A	100%	43	0.00	\$0.00	\$200,000.03	\$200,000.03									
	T&SC-35i Manlift rental for dome construction	02-Jan-19 A	29-Aug-19	60%	141	0.00	\$0.00	\$60,000.00	\$60,000.00	289								
	T&SC-35i Scaffolding rental for dome construction	25-Mar-19 A	25-Nov-19	5%	141	0.00	\$0.00	\$100,000.00	\$100,000.00	231								
	<b>LSST ME 19-05.04C.14.04 Subsystem Integration and Test</b>	01-Sep-16 A	04-Feb-21		1129	54588.18	\$4,376,285.79	\$391,309.81	\$4,767,595.60	680								
	T&SC-14i Lower Enclosure Ready for Dome		14-Oct-16 A	100%	0	0.00	\$0.00	\$0.00	\$0.00									
	T&SC-14i Summit Support Facility Full Occupancy		15-May-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00									
	T&SC-14i M2 Hexapod System on Site		14-Oct-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	178								
	T&SC-14i Camera Hexapod/Rotator Support System on Site		28-Oct-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	183								
	T&SC-14i M2 On Site		22-Dec-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00									
	T&SC-14i IOTA On Site		25-Jun-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	18								
	T&SC-14i Coating System Ready for Use		30-May-19 A	100%	0	0.00	\$0.00	\$0.00	\$0.00									
	T&SC-14i M1M3 Cell Arrives on Site for Integration		22-Oct-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	57								
	T&SC-14i TMA Contract Complete		03-Nov-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	-59								
	T&SC-14i Calibration Screen Install Complete		11-Mar-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	121								
	T&SC-14i Telescope Ready for 3-mirror Testing		16-Nov-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	-40								
	T&SC-14i Telescope on-axis IQ demonstrated		28-Jan-21	0%	0	0.00	\$0.00	\$0.00	\$0.00	-57								
	T&SC-14i T & S Completed		04-Feb-21	0%	0	0.00	\$0.00	\$0.00	\$0.00	-61								
	T&SC-83i Network Start		12-Apr-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00									
	<b>LSST ME 19-05.04C.14.04.01 TMA Integration &amp; Test</b>	03-Jun-19	03-Nov-20		362	276.00	\$21,838.68	\$0.00	\$21,838.68	-19								
	SUMM TMA On Site Vendor Install and test 1 (support)	06-Jan-20	14-Apr-20	0%	69	0.00	\$0.00	\$0.00	\$0.00	-18								
	SUMM TMA On Site Vendor Install and test 2 (support)	15-Apr-20	03-Jul-20	0%	58	0.00	\$0.00	\$0.00	\$0.00	-19								
	SUMM TMA Final On Site Vendor Install and test (support)	06-Jul-20	27-Oct-20	0%	81	0.00	\$0.00	\$0.00	\$0.00	-19								
	SUMM Pointing Test with star tracker and test telescope on	13-Oct-20	26-Oct-20	0%	10	276.00	\$21,838.68	\$0.00	\$21,838.68	-18								
	SUMM TMA Handoff Review	28-Oct-20	03-Nov-20	0%	5	0.00	\$0.00	\$0.00	\$0.00	-19								
	T&SC- TMA AZCW to Facility Utilities Connection Interface I	03-Jun-19	28-Jun-19	0%	20	0.00	\$0.00	\$0.00	\$0.00	-10								
	T&SC- TMA AZCW to Facility Utilities Connection Interface I	26-Jul-19	06-Sep-19	0%	30	0.00	\$0.00	\$0.00	\$0.00	-10								
	T&SC- TMA AZCW to Facility Utilities Connection Interface I	09-Sep-19	04-Oct-19	0%	20	0.00	\$0.00	\$0.00	\$0.00	-10								
	T&SC- TMA Oversight	07-Oct-19	17-Dec-19	0%	50	0.00	\$0.00	\$0.00	\$0.00	-10								
	T&SC- TMA Vendor Complete		03-Nov-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	-58								
	<b>LSST ME 19-05.04C.14.04.02 M1M3 Integration &amp; Test</b>	01-Apr-19 A	04-Feb-21		434	2838.00	\$207,802.40	\$14,000.00	\$221,802.40	-61								
	SUMM M1M3 Mirror Cell Cart preparation on site	01-Apr-19 A	11-Jun-19	9.84%	7	0.00	\$0.00	\$5,000.00	\$5,000.00	169								
	SUMM M1M3 mirror lifter preparation	23-Oct-19	19-Nov-19	0%	20	284.00	\$20,718.08	\$0.00	\$20,718.08	143								
	SUMM M1M3 mirror cell cart testing and training	01-Apr-19 A	03-Jun-19	35.75%	19	0.00	\$0.00	\$0.00	\$0.00	161								
	SUMM M1M3 cell inspection and minimal reassembly	23-Oct-19	12-Nov-19	0%	15	1419.00	\$103,538.78	\$0.00	\$103,538.78	61								
	SUMM M1M3 cell and surrogate mirror test with coating cha	26-Feb-20	24-Mar-20	0%	19	0.00	\$0.00	\$0.00	\$0.00	-8								
	SUMM M1M3 cell inspection and full reassembly	25-Mar-20	14-Apr-20	0%	15	0.00	\$0.00	\$0.00	\$0.00	-8								
	SUMM M1M3 cell and surrogate mirror functional testing in s	15-Apr-20	05-May-20	0%	15	851.00	\$62,102.62	\$0.00	\$62,102.62	-8								
	SUMM M1M3 Cell w/Surrogate Mirror on TMA Testing	06-Jul-20	14-Aug-20	0%	30	0.00	\$0.00	\$0.00	\$0.00	-48								
	SUMM M1M3 cell and surrogate mirror removal from TMA	17-Aug-20	24-Aug-20	0%	6	0.00	\$0.00	\$0.00	\$0.00	-49								
	SUMM M1M3 mirror installation into mirror cell	25-Aug-20	17-Sep-20	0%	17	0.00	\$0.00	\$0.00	\$0.00	-49								
	SUMM M1M3 mirror cleaning and coating	18-Sep-20	08-Oct-20	0%	15	0.00	\$0.00	\$0.00	\$0.00	-49								



## LSST May 2019 Month End Forecast

Activity ID	Activity Name	Start	Finish	Physical % Complete	Original Duration	Budgeted Labor Units	Budgeted Labor Cost	Budgeted Material Cost	Budgeted Total Cost no	Total Float	FY2015 2014-10-01	FY2016 2015-10-01	FY2017 2016-10-01	FY2018 2017-10-01	FY2019 2018-10-01	FY2020 2019-10-01	FY2021 2020-10-01	FY2022 2021-10-01	
19-05.04C.14.04.03	SUMM	M1M3 cell preparation after coating	09-Oct-20	15-Oct-20	0%	5	0.00	\$0.00	\$0.00	\$0.00	-46								
	SUMM	M1M3 baffle Installation	09-Oct-20	15-Oct-20	0%	5	0.00	\$0.00	\$0.00	\$0.00	-49								
	SUMM	M1M3 installation on TMA	03-Nov-20	16-Nov-20	0%	10	0.00	\$0.00	\$0.00	\$0.00	-58								
	SUMM	M1M3 Communication Test	17-Nov-20	02-Dec-20	0%	10	284.00	\$21,442.92	\$0.00	\$21,442.92	-28								
	T&SC-	M1M3 Thermal Testing on TMA	17-Nov-20	04-Feb-21	0%	53	0.00	\$0.00	\$0.00	\$0.00	-61								
	T&SC-	M1M3 surrogate mirror preperation on site	17-Feb-20	25-Feb-20	0%	7	0.00	\$0.00	\$9,000.00	\$9,000.00	-8								
	LSST ME 19-05.04C.14.04.03 Top End Assembly Integration					29-Oct-19	05-Oct-20	237	1588.00	\$119,443.28	\$52,309.80	\$171,753.08	-18						
	SUMM	M2 hexapod interface blocks - Delivery Acceptance	02-Jul-20	15-Jul-20	0%	10	387.00	\$29,116.14	\$10,259.96	\$39,376.10	6								
	SUMM	M2 hexapod installation fixtures - Delivery Acceptanc	02-Jul-20	15-Jul-20	0%	10	387.00	\$29,116.14	\$42,049.84	\$71,165.98	6								
	SUMM	M2 hexapod legs test before installation on TMA	02-Jul-20	20-Jul-20	0%	13	387.00	\$29,116.14	\$0.00	\$29,116.14	6								
	SUMM	Camera rotator and hexapod test before installation	29-Oct-19	04-Nov-19	0%	5	194.00	\$14,583.88	\$0.00	\$14,583.88	183								
	SUMM	camera cart assembly	13-Nov-19	20-Nov-19	0%	6	233.00	\$17,510.98	\$0.00	\$17,510.98	177								
	SUMM	Clean and pressure test the TMA camera refrigeratic	05-May-20	18-May-20	0%	10	0.00	\$0.00	\$0.00	\$0.00	46								
	SUMM	Camera assembly surrogate removal from TMA (with	17-Aug-20	21-Aug-20	0%	5	0.00	\$0.00	\$0.00	\$0.00	-18								
	SUMM	M2 Hexapod installation on TMA	24-Aug-20	28-Aug-20	0%	5	0.00	\$0.00	\$0.00	\$0.00	-18								
	SUMM	IOTA installation with cable wrap and electronics	31-Aug-20	04-Sep-20	0%	5	0.00	\$0.00	\$0.00	\$0.00	-18								
	SUMM	camera rotator and hexapod installation on integratir	08-Sep-20	05-Oct-20	0%	20	0.00	\$0.00	\$0.00	\$0.00	-18								
	T&SC-	M2 Hexapod System Ready for Integration		20-Jul-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	6								
	LSST ME 19-05.04C.14.04.04 M2 Integration & Test					01-Apr-19 A	02-Oct-20	434	2268.95	\$183,194.45	\$0.00	\$183,194.45	-11						
	LSST ME 19-05.04C.14.04.04.01 M2 Cart & Cell Operati					01-Apr-19 A	02-Jul-19	135	642.95	\$54,129.09	\$0.00	\$54,129.09	298						
	SUI	M2 Cart and Cell installation	01-Apr-19 A	28-May-19 A	100%	61	576.29	\$46,868.49	\$0.00	\$46,868.49									
	SUI	M2 Cart and Cell Functional Testing	01-Apr-19 A	17-May-19 A	100%	21	33.33	\$3,630.30	\$0.00	\$3,630.30									
	SUI	M2 Cart Towing and Anchoring	20-May-19 A	02-Jul-19	13.57%	22	0.00	\$0.00	\$0.00	\$0.00	298								
	SUI	M2 controller deployment on summit	28-May-19 A	01-Jul-19	0.07%	19	33.33	\$3,630.30	\$0.00	\$3,630.30	299								
	LSST ME 19-05.04C.14.04.04.02 M2 Maintenance Operat					01-Apr-19 A	26-Jul-19	37	0.00	\$0.00	\$0.00	\$0.00	281						
	SUI	M2 Maintenance Operations	01-Apr-19 A	26-Jul-19	7.52%	37	0.00	\$0.00	\$0.00	\$0.00	281								
	LSST ME 19-05.04C.14.04.04.03 M2 Coating Operations					01-May-19 A	26-Jul-19	38	0.00	\$0.00	\$0.00	\$0.00	251						
	SUI	M2 Coating Operations	01-May-19 A	26-Jul-19	5.79%	38	0.00	\$0.00	\$0.00	\$0.00	251								
	LSST ME 19-05.04C.14.04.04.04 M2 TMA& Dome Operat					24-Aug-20	02-Oct-20	29	1626.00	\$129,065.36	\$0.00	\$129,065.36	-11						
	SUI	M2 TMA and Dome Operations	24-Aug-20	02-Oct-20	0%	29	1626.00	\$129,065.36	\$0.00	\$129,065.36	-11								
	LSST ME 19-05.04C.14.04.05 Integrated Optical Testing					26-Jun-20	28-Jan-21	149	689.00	\$61,978.58	\$0.00	\$61,978.58	-61						
	SUMM	IOTA System testing on Summit	26-Jun-20	06-Aug-20	0%	30	590.00	\$53,095.00	\$0.00	\$53,095.00	18								
	SUMM	IOTA System installation on camera surrogate mass	07-Aug-20	13-Aug-20	0%	5	99.00	\$8,883.58	\$0.00	\$8,883.58	18								
	SUMM	Laser tracker and SMR installation and test	03-Nov-20	05-Nov-20	0%	3	0.00	\$0.00	\$0.00	\$0.00	-61								
	SUMM	Install and Perform M3 Horizon testing with SHWFS	06-Nov-20	07-Dec-20	0%	20	0.00	\$0.00	\$0.00	\$0.00	-61								
	SUMM	Installation of camera assembly with camera rotator/	08-Dec-20	14-Dec-20	0%	5	0.00	\$0.00	\$0.00	\$0.00	-61								
	SUMM	Perform 3-mirror on axis SHWFS and Imaging Cam	15-Dec-20	28-Jan-21	0%	30	0.00	\$0.00	\$0.00	\$0.00	-61								
	LSST ME 19-05.04C.14.04.06 Coating Chamber Integration					20-Oct-18 A	30-Sep-20	698	15944.00	\$1,318,122.10	\$60,000.00	\$1,378,122.10	766						
	SUMM	Coating Chamber Management and Oversight FY19	02-Apr-19 A	30-Sep-19	2.67%	128	1500.00	\$163,380.00	\$0.00	\$163,380.00	25								
	SUMM	Coating Chamber Management and Oversight FY20	01-Oct-19	30-Sep-20	0%	254	8350.00	\$672,874.52	\$0.00	\$672,874.52	25								
	SUMM	Preparation of coating lab on summit	01-Nov-18 A	28-Jun-19	0%	316	700.00	\$51,978.00	\$0.00	\$51,978.00	260								
	SUMM	Preparation of the coating area before coating plant	20-Oct-18 A	23-Dec-19	14.4%	142	1750.00	\$129,120.00	\$0.00	\$129,120.00	962								
	SUMM	Preparation of LSST equipment for mirror washing &	01-Nov-18 A	23-Dec-19	0%	142	1550.00	\$114,744.00	\$0.00	\$114,744.00	962								
	SUMM	Coating Area Electrical Preparation - ADELCO contr	31-Oct-18 A	29-Jan-19 A	100%	42	0.00	\$0.00	\$20,000.00	\$20,000.00									
	SUMM	Preparation for M1M3 Surrogate Mirror Cleaning	22-Apr-19 A	25-Feb-20	0%	195	1047.00	\$93,012.79	\$0.00	\$93,012.79	-8								
	SUMM	Preparation for M1M3 Surrogate Mirror Coating	22-Apr-19 A	25-Feb-20	0%	195	1047.00	\$93,012.79	\$0.00	\$93,012.79	-8								
	SUMM	Preparation for Mirror Cleaning	24-Dec-19	17-Sep-20	0%	187	0.00	\$0.00	\$0.00	\$0.00	-49								
	SUMM	Preparation for M1M3 Mirror Coating	24-Dec-19	17-Sep-20	0%	187	0.00	\$0.00	\$0.00	\$0.00	-49								
	SUMM	Coating Chamber Base Plates	05-Nov-18 A	03-Jun-19	0%	31	0.00	\$0.00	\$40,000.00	\$40,000.00	27								
	LSST ME 19-05.04C.14.04.07 Calibration Systems Integrati					01-Apr-19 A	15-Jan-21	253	9064.00	\$798,634.45	\$0.00	\$798,634.45	-48						
SUMM	Calibration Screen Support Assembly and Install on I	10-Feb-20	11-Mar-20	0%	22	747.00	\$65,215.34	\$0.00	\$65,215.34	89									
SUMM	Install DIMM and weather Towers with utilities	01-Apr-19 A	08-Oct-19	4.57%	90	170.00	\$14,833.40	\$0.00	\$14,833.40	183									
SUMM	Laser Platform Installation and Test	20-May-20	30-Jun-20	0%	30	1018.00	\$88,897.16	\$0.00	\$88,897.16	40									
SUMM	Setup of Laser Room and Safety System	01-Jul-20	11-Aug-20	0%	30	1018.00	\$88,897.16	\$0.00	\$88,897.16	60									
SUMM	Calibration Screen White Light Source and Source S	01-Jul-20	28-Jul-20	0%	20	679.00	\$59,281.98	\$0.00	\$59,281.98	45									
SUMM	Install, test and verify DIMM, weather stations, GPS	27-May-19 A	08-Oct-19	0.82%	90	3055.00	\$266,743.10	\$0.00	\$266,743.10	273									
SUMM	Calibration Screen Reflector and Screen Characteriz	03-Nov-20	09-Dec-20	0%	25	849.00	\$76,706.07	\$0.00	\$76,706.07	-48									
SUMM	CBP Installation and Basic Functional Testing	04-Nov-20	03-Dec-20	0%	20	679.00	\$61,354.17	\$0.00	\$61,354.17	-19									
SUMM	Verification of Calibration Screen Illumination Uniform	10-Dec-20	15-Jan-21	0%	25	849.00	\$76,706.07	\$0.00	\$76,706.07	-48									
LSST ME 19-05.04C.14.04.08 Computing & Software Integr					15-Apr-18 A	26-Aug-19	370	480.00	\$28,072.00	\$0.00	\$28,072.00	281							
T&SC-	Summit Network Installation	15-Apr-18 A	01-Oct-18 A	100%	20	0.00	\$0.00	\$0.00	\$0.00										
T&SC-	Summit Computer Installation	15-May-18 A	01-Oct-18 A	100%	38	0.00	\$0.00	\$0.00	\$0.00										
T&SC-	Summit Control Room Implementation	01-Oct-18 A	28-Jun-19	80%	20	480.00	\$28,072.00	\$0.00	\$28,072.00	166									
T&SC-	Summit Control Room available	01-Nov-18 A	15-Jul-19	50%	30	0.00	\$0.00	\$0.00	\$0.00	213									
T&SC-	Integrate TCS - Application on summit	30-Jul-19	12-Aug-19	0%	10	0.00	\$0.00	\$0.00	\$0.00	291									
T&SC-	Integrate Middleware v4.0 on summit	01-Jul-19	15-Jul-19	0%	10	0.00	\$0.00	\$0.00	\$0.00	171									
T&SC-	Integrate EFD v4.0 on summit	16-Jul-19	29-Jul-19	0%	10	0.00	\$0.00	\$0.00	\$0.00	171									
T&SC-	Integrate OCS Application v1.2 on summit	30-Jul-19	12-Aug-19	0%	10	0.00	\$0.00	\$0.00	\$0.00	281									
T&SC-	Integrate OCS Sequencer v1.2 on summit	30-Jul-19	12-Aug-19	0%	10	0.00	\$0.00	\$0.00	\$0.00	291									
T&SC-	Integrate OCS Operator v1.0 on summit	13-Aug-19	26-Aug-19	0%	10	0.00	\$0.00	\$0.00	\$0.00	281									
T&SC-	Integrate OCS Application v2.0 on summit	13-Aug-19	26-Aug-19	0%	10	0.00	\$0.00	\$0.00	\$0.00	281									
T&SC-	Test Integration Cluster on Summit	01-Jul-19	22-Jul-19	0%	15	0.00	\$0.00	\$0.00	\$0.00	296									

## LSST May 2019 Month End Forecast

Activity ID	Activity Name	Start	Finish	Physical % Complete	Original Duration	Budgeted Labor Units	Budgeted Labor Cost	Budgeted Material Cost	Budgeted Total Cost no	Total Float
		FY2015 2014-10-01	FY2016 2015-10-01	FY2017 2016-10-01	FY2018 2017-10-01	FY2019 2018-10-01	FY2020 2019-10-01	FY2021 2020-10-01	FY2022 2021-10-01	
	LSST ME 19-05.04C.14.04.09 Monitoring Systems Integrati	15-Jul-18 A	10-Dec-20		620	6740.00	\$554,602.51	\$0.00	\$554,602.51	717
	SUMM Install In-Dome RFI Monitoring Station	03-Jul-19	02-Aug-19	0%	22	747.00	\$63,010.49	\$0.00	\$63,010.49	187
	SUMM Install In-Dome Animometers	03-Jul-19	02-Aug-19	0%	22	747.00	\$63,010.49	\$0.00	\$63,010.49	1060
	SUMM Establish pre-Dome Summit Facility Performance Ba	05-Aug-19	04-Sep-19	0%	22	747.00	\$63,010.49	\$0.00	\$63,010.49	187
	SUMM Establish post-Dome Instal Performance Baseline	14-Apr-20	13-May-20	0%	22	747.00	\$65,215.34	\$0.00	\$65,215.34	36
	SUMM post-Dome Summit Facility Performance Analysis	14-May-20	12-Jun-20	0%	22	747.00	\$65,215.34	\$0.00	\$65,215.34	36
	SUMM Establish pre-TMA Summit Facility Performance Bas	15-Jun-20	14-Jul-20	0%	22	747.00	\$65,215.34	\$0.00	\$65,215.34	36
	SUMM Establish post-TMA Summit Facility Performance Ba	08-Oct-20	06-Nov-20	0%	22	747.00	\$67,494.93	\$0.00	\$67,494.93	-24
	SUMM post-TMA Summit Facility Performance Analysis	09-Nov-20	10-Dec-20	0%	22	747.00	\$67,494.93	\$0.00	\$67,494.93	-24
	T&SC- Install Pier and Lower Endosure Vibration Transduc	01-Aug-18 A	15-Jan-19 A	100%	22	188.00	\$11,214.80	\$0.00	\$11,214.80	
	T&SC- Install Summit Facility Ground & Electrical Monitori	15-Jul-18 A	02-Jul-19	50%	22	200.00	\$12,113.00	\$0.00	\$12,113.00	209
	T&SC- Install Summit Seismic Monitoring System	01-Nov-18 A	02-Jul-19	50%	22	188.00	\$11,607.36	\$0.00	\$11,607.36	209
	T&SC- Monitoring Systems Delay	15-Nov-18 A	02-Jul-19	75%	160	188.00	\$0.00	\$0.00	\$0.00	187
	LSST ME 19-05.04C.14.04.10 Dome Integration and Test	13-Jul-17 A	11-May-20		702	2456.00	\$161,451.45	\$0.00	\$161,451.45	82
	SUMM ECS Testing after Dome Completio n	14-Apr-20	11-May-20	0%	20	354.00	\$27,412.68	\$0.00	\$27,412.68	82
	T&SC- Dome Installation (support)	13-Jul-17 A	05-Feb-20	30%	170	2102.00	\$134,038.77	\$0.00	\$134,038.77	83
	T&SC- ECS Testing before Dome Completion	03-Jun-19	20-Jun-19	0%	14	0.00	\$0.00	\$0.00	\$0.00	285
	LSST ME 19-05.04C.14.04.11 Roof and Platform Lift Integr	01-Sep-16 A	20-Apr-19 A		483	970.00	\$68,986.33	\$0.00	\$68,986.33	
	T&SC- Platform Lift Tower Preparations	01-Sep-16 A	25-Jan-17 A	100%	41	0.00	\$0.00	\$0.00	\$0.00	
	T&SC- PFlow Tower Erection Support	25-Oct-16 A	27-Dec-17 A	100%	30	0.00	\$0.00	\$0.00	\$0.00	
	T&SC- PFlow Drive and Carriage Installation Support	20-Jul-17 A	20-Apr-18 A	100%	113	0.00	\$0.00	\$0.00	\$0.00	
	T&SC- Folding Edge Control System Design and Procurement	15-Nov-16 A	15-Jun-17 A	100%	148	0.00	\$0.00	\$0.00	\$0.00	
	T&SC- Building-to-roof locks mechanisms	20-Sep-18 A	25-Mar-19 A	100%	148	0.00	\$0.00	\$0.00	\$0.00	
	T&SC- PFlow Platform Lift Testing on site	15-Oct-18 A	20-Apr-19 A	100%	20	302.00	\$21,380.02	\$0.00	\$21,380.02	
	T&SC- PFlow integration with Roof	15-Nov-18 A	20-Apr-19 A	100%	30	506.00	\$35,750.88	\$0.00	\$35,750.88	
	T&SC- PFlow Final Testing wth Roof	20-Dec-18 A	20-Apr-19 A	100%	10	162.00	\$11,855.43	\$0.00	\$11,855.43	
	LSST ME 19-05.04C.14.04.12 Global Interlock Safety Integr	15-Nov-18 A	16-Dec-20		680	1759.00	\$127,803.68	\$0.00	\$127,803.68	-28
	SUMM Interlock Installation Testing Delay	26-Mar-20	12-Aug-20	0%	100	114.00	\$0.00	\$0.00	\$0.00	10
	SUMM Interlock Tests with Dome and Platform Lift	13-Aug-20	26-Aug-20	0%	10	179.00	\$13,809.58	\$0.00	\$13,809.58	49
	SUMM Interlock Tests with Auxiliary Telescope	13-Aug-20	08-Oct-20	0%	40	718.00	\$55,631.54	\$0.00	\$55,631.54	10
	SUMM Interlock tests with Hexapods and Rotator	09-Oct-20	21-Oct-20	0%	9	161.00	\$12,857.43	\$0.00	\$12,857.43	10
	SUMM Interlock Tests with Calibration system	01-Jul-20	14-Jul-20	0%	10	179.00	\$13,809.58	\$0.00	\$13,809.58	80
	SUMM Interlock Tests with TMA	06-Aug-20	19-Aug-20	0%	10	179.00	\$13,809.58	\$0.00	\$13,809.58	54
	SUMM Interlock Tests with M1M3 system	03-Dec-20	16-Dec-20	0%	10	179.00	\$14,291.97	\$0.00	\$14,291.97	-28
	T&SC- Interlock Installation (support)	15-Nov-18 A	18-Jun-19	20%	12	50.00	\$3,594.00	\$0.00	\$3,594	

## LSST May 2019 Month End Forecast

Activity ID	Activity Name	Start	Finish	Physical % Complete	Original Duration	Budgeted Labor Units	Budgeted Labor Cost	Budgeted Material Cost	Budgeted Total Cost no	Total Float	FY2015 2014-10-01	FY2016 2015-10-01	FY2017 2016-10-01	FY2018 2017-10-01	FY2019 2018-10-01	FY2020 2019-10-01	FY2021 2020-10-01	FY2022 2021-10-01
LSST ME 19-05.04C.14.04.14 Verification	T&SC- Camera Facility Refrigeration Lines Testing (STA + MRCR) Schedule Delay	16-Jul-19	16-Jul-19	0%	0	160.00	\$0.00	\$0.00	\$0.00	197								
	T&SC- Camera Facility Fiber Optics installation (Staging and Test Area)	03-Jun-19	18-Dec-19	0%	139	0.00	\$0.00	\$0.00	\$0.00	71								
	T&SC- Camera Facility Fiber Optics testing (Staging and Test area)	19-Dec-19	21-Jan-20	0%	20	0.00	\$0.00	\$0.00	\$0.00	122								
	T&SC- Camera Facility Fiber Optics testing (Staging and Test area) Schedule Delay	22-Jan-20	22-Jan-20	0%	0	40.00	\$0.00	\$0.00	\$0.00	122								
	T&SC- Camera Facility Dynalene Chiller Installation in Pier	03-Jun-19	18-Dec-19	0%	139	0.00	\$0.00	\$0.00	\$0.00	144								
	T&SC- Camera Facility Dynalene Cooling lines Installation in Pier	19-Dec-19	21-Jan-20	0%	20	0.00	\$0.00	\$0.00	\$0.00	144								
	T&SC- Camera Facility Dynalene Cooling Lines Testing in Pier	22-Jan-20	04-Mar-20	0%	30	0.00	\$0.00	\$0.00	\$0.00	144								
	T&SC- Camera Clean Room Electrical Preparation - ADELCO contracted labor	24-Oct-18 A	15-Jan-19 A	100%	15	0.00	\$0.00	\$10,000.00	\$10,000.00									
	T&SC- Utilities Connecting, Troubleshooting and Tuning	04-Nov-20	04-Feb-21	0%	62	0.00	\$0.00	\$0.00	\$0.00	-61								
	T&SC- Shop Area Conversion to Camera Maintenance Refrigeration Compressors Room (MRCR)	15-Nov-18 A	25-Jun-19	10%	17	200.00	\$9,638.00	\$0.00	\$9,638.00	180								
	T&SC- Refrigeration compressors utilities installation and testing in MRCR	26-Jun-19	07-Aug-19	0%	30	0.00	\$0.00	\$0.00	\$0.00	180								
	T&SC- Safety equipment installation and testing in MRCR	26-Jun-19	07-Aug-19	0%	30	0.00	\$0.00	\$0.00	\$0.00	180								
	T&SC- Rails Installation on Dome	14-Apr-20	27-Apr-20	0%	10	276.00	\$21,101.52	\$10,000.00	\$31,101.52	136								
	LSST ME 19-05.04C.14.04.14 Verification	01-Jun-18 A	04-Feb-21		775	1695.23	\$141,245.42	\$0.00	\$141,245.42	-61								
	SUMM Final Transition Verification Review Preparation	15-Dec-20	21-Jan-21	0%	25	892.00	\$79,003.56	\$0.00	\$79,003.56	-56								
	SUMM Final Transition Verification review	29-Jan-21	04-Feb-21	0%	5	179.00	\$15,832.77	\$0.00	\$15,832.77	-61								
	T&SC- Requirements Verification Analysis	01-Jun-18 A	25-May-20	15%	599	624.23	\$46,409.09	\$0.00	\$46,409.09	86								
	LSST ME 19-05.04C.14.04.15 General Tasks	16-Jan-18 A	04-Feb-21		775	945.00	\$101,541.48	\$115,000.00	\$216,541.48	-61								
	T&SC- Equipment improvement and testing	06-Nov-20	04-Feb-21	0%	60	0.00	\$0.00	\$0.00	\$0.00	-61								
	T&SC- Design and Installation of missing equipment Labor	01-Nov-18 A	04-May-20	32%	584	945.00	\$101,541.48	\$0.00	\$101,541.48	131								
	T&SC- Design and Installation of missing equipment NonLabor	01-Nov-18 A	04-May-20	32%	584	0.00	\$0.00	\$100,000.00	\$100,000.00	131								
	T&SC- Engineering punch list	03-Nov-20	04-Feb-21	0%	63	0.00	\$0.00	\$0.00	\$0.00	-61								
	T&SC- Summit Storage Organization	15-Apr-20	04-Feb-21	0%	206	0.00	\$0.00	\$0.00	\$0.00	-61								
	T&SC- Summit Hardware Maintenance	06-Nov-20	04-Feb-21	0%	60	0.00	\$0.00	\$0.00	\$0.00	-61								
	T&SC- Procurement of miscellaneous equipment FY18	16-Jan-18 A	30-Aug-18 A	100%	181	0.00	\$0.00	\$15,000.00	\$15,000.00									
	LSST ME 19-05.04C.15 Telescope and Site Software	01-Jun-17 A	01-Feb-21		567	41086.11	\$3,604,249.00	\$1,247,062.58	\$4,851,311.58	683								
	LSST ME 19-05.04C.15.01 Telescope and Site Software Management	03-Dec-18 A	17-Jul-20		392	4441.37	\$473,566.37	\$40,706.81	\$514,273.18	77								
	T&SC-15i Start Project Transition planning	03-Dec-18 A		100%	0	0.00	\$0.00	\$0.00	\$0.00									
	T&SC-15i Transition planning	02-Jan-19 A	30-Apr-19 A	100%	83	0.00	\$0.00	\$0.00	\$0.00									
	T&SC-15i Begin Project Execution	01-May-19 A		100%	0	0.00	\$0.00	\$0.00	\$0.00									
	T&SC-15i Software and Control Subsys Mgmt - FY 19 - Labor	01-Jan-19 A	30-Sep-19	55%	186	3195.00	\$329,693.40	\$0.00	\$329,693.40	74								
	T&SC-15i Software and Control Subsys Mgmt - FY 20 - Labor	01-Oct-19	17-Jul-20	0%	194	1246.37	\$143,872.97	\$0.00	\$143,872.97	74								
	T&SC-15i Software and Control Subsys Mgmt NonLabor	01-Jan-19 A	17-Jul-20	27%	380	0.00	\$0.00	\$40,706.81	\$40,706.81	75								
	T&SC-15i Planning Package Marker	26-Jul-19		0%	0	0.00	\$0.00	\$0.00	\$0.00	82								
	LSST ME 19-05.04C.15.02 Main Telescope Software	31-Jan-19 A	20-Jul-20		393	22197.00	\$1,866,543.09	\$760,765.76	\$2,627,308.86	76								
DM-17094 M1M3 Mirror Test Campaign I	31-Jan-19 A	31-Jan-19 A	100%	17	120.00	\$9,819.60	\$0.00	\$9,819.60										
DM-17099 M1M3 Mirror Test Campaign I Data Analysis	31-Jan-19 A	28-Feb-19 A	100%	11	80.00	\$6,546.40	\$0.00	\$6,546.40										
DM-17100 M1M3 Mirror Test Campaign II	01-Feb-19 A	29-Mar-19 A	100%	12	80.00	\$6,546.40	\$0.00	\$6,546.40										
DM-17101 M1M3 Mirror Thermal Control Integration	01-Mar-19 A	31-May-19 A	100%	20	150.00	\$12,274.50	\$0.00	\$12,274.50										
DM-17177 MTWEP + MTOFC SW Int in Tucson	31-Jan-19 A	31-May-19 A	100%	11	80.00	\$6,546.40	\$0.00	\$6,546.40										
DM-17178 Finishing MTWEP Algo & SW Dev	31-Jan-19 A	31-May-19 A	100%	17	120.00	\$9,819.60	\$0.00	\$9,819.60										
DM-17179 PhoSim SW Integration	01-May-19 A	01-May-19 A	100%	6	40.00	\$3,273.20	\$0.00	\$3,273.20										
DM-17198 Finishing DIMM SW Development	31-Jan-19 A	31-May-19 A	100%	11	80.00	\$6,546.40	\$0.00	\$6,546.40										
DM-17200 DIMM + EFD HW Integration	18-Jun-19	25-Jun-19	0%	6	40.00	\$3,273.20	\$0.00	\$3,273.20	346									
DM-17251 HVAC Vendor Software Requirements	31-Jan-19 A	31-May-19 A	100%	20	150.00	\$12,274.50	\$0.00	\$12,274.50										
DM-17311 TMA Test Support	01-Feb-19 A	10-Jun-19	28.33%	6	40.00	\$3,273.20	\$0.00	\$3,273.20	215									
DM-17312 MTHexapod Sell-off Support	01-Feb-19 A	28-Jun-19	66.67%	20	150.00	\$12,274.50	\$0.00	\$12,274.50	260									
DM-17378 Testing of M1M3 Mirror Thermal Control	03-Jun-19	28-Jun-19	0%	20	150.00	\$12,274.50	\$0.00	\$12,274.50	283									
DM-17403 Finishing TunableLaser CSC Development	31-Jan-19 A	31-May-19 A	100%	11	80.00	\$6,546.40	\$0.00	\$6,546.40										
DM-17404 Finishing LinearStage CSC Development	31-Jan-19 A	31-May-19 A	100%	11	80.00	\$6,546.40	\$0.00	\$6,546.40										
DM-17407 Finishing of CBP CSC Development	03-Jun-19	17-Jun-19	0%	11	80.00	\$6,546.40	\$0.00	\$6,546.40	346									
DM-17410 AOCLC Algo & SW Dev	01-May-19 A	31-May-19 A	100%	11	80.00	\$6,546.40	\$0.00	\$6,546.40										
DM-17411 Integration of AOCLC Algo & SW	01-May-19 A	31-May-19 A	100%	6	40.00	\$3,273.20	\$0.00	\$3,273.20										
DM-17468 Align Sys Control Algo & SW Dev	31-Jan-19 A	31-May-19 A	100%	17	120.00	\$9,819.60	\$0.00	\$9,819.60										
DM-17515 Unpack & Install M2 controller in Summit computer room	01-Apr-19 A	31-May-19 A	100%	11	75.00	\$6,137.25	\$0.00	\$6,137.25										
DM-17516 M2 Functionality Check with CSC Controller	03-Jun-19	17-Jun-19	0%	11	75.00	\$6,137.25	\$0.00	\$6,137.25	324									
DM-17667 Finishing Weather Station SW Development	01-Apr-19 A	31-May-19 A	100%	11	75.00	\$6,137.25	\$0.00	\$6,137.25										
DM-17668 Testing of Weather Station SW	01-Apr-19 A	31-May-19 A	100%	11	75.00	\$6,137.25	\$0.00	\$6,137.25										
DM-17723 IOTA CMOS API Dev	01-Apr-19 A	31-May-19 A	100%	17	112.00	\$9,164.96	\$0.00	\$9,164.96										
DM-17821 MTAOS SW Dev	01-Apr-19 A	31-May-19 A	100%	22	150.00	\$12,274.50	\$0.00	\$12,274.50										
DM-18309 MTDome Planning & Management	01-Apr-19 A	31-May-19 A	100%	22	150.00	\$12,274.50	\$0.00	\$12,274.50										
DM-18331 M2 Functionality Check with CSC Controller + SAL - pt. 1	18-Jun-19	02-Jul-19	0%	11	75.00	\$6,137.25	\$0.00	\$6,137.25	324									
DM-18449 MainTel Calibration System Integration Tests in Tucson	06-Jun-19	08-Jul-19	0%	22	149.00	\$12,192.67	\$0.00	\$12,192.67	126									
DM-18717 M1M3 New Features Development	01-May-19 A	31-May-19 A	100%	22	150.00	\$12,274.50	\$0.00	\$12,274.50										
T&SC-15i allSky	26-Jul-19	29-Jul-19	0%	1	48.88	\$3,998.62	\$0.00	\$3,998.62	324									
T&SC-15i AOCLC	26-Jul-19	29-Jul-19	0%	1	120.00	\$9,819.60	\$0.00	\$9,819.60	324									
T&SC-15i archiver	26-Jul-19	29-Jul-19	0%	1	40.00	\$3,273.20	\$0.00	\$3,273.20	324									
T&SC-15i CalCS	26-Jul-19	29-Jul-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	325									
T&SC-15i CalibrationScreen	26-Jul-19	29-Jul-19	0%	1	120.00	\$9,819.60	\$0.00	\$9,819.60	324									
T&SC-15i camera	26-Jul-19	29-Jul-19	0%	1	10.00	\$818.30	\$0.00	\$818.30	324									
T&SC-15i catchupArchiver	26-Jul-19	29-Jul-19	0%	1	120.00	\$9,819.60	\$0.00	\$9,819.60	324									
T&SC-15i DIMM	26-Jul-19	26-Jul-19	0%	0	48.88	\$4,000.00	\$0.00	\$4,000.00	324									



LSST May 2019 Month End Forecast																			
Activity ID		Activity Name	Start	Finish	Physical % Complete	Original Duration	Budgeted Labor Units	Budgeted Labor Cost	Budgeted Material Cost	Budgeted Total Cost no	Total Float	FY2015 2014-10-01	FY2016 2015-10-01	FY2017 2016-10-01	FY2018 2017-10-01	FY2019 2018-10-01	FY2020 2019-10-01	FY2021 2020-10-01	FY2022 2021-10-01
	T&SC-15i	Dome	26-Jul-19	26-Jul-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	325								
	T&SC-15i	EEC	26-Jul-19	29-Jul-19	0%	1	120.00	\$9,819.60	\$0.00	\$9,819.60	324								
	T&SC-15i	EMCS	26-Jul-19	29-Jul-19	0%	1	120.00	\$9,819.60	\$0.00	\$9,819.60	324								
	T&SC-15i	GPS	26-Jul-19	29-Jul-19	0%	1	120.00	\$9,819.60	\$0.00	\$9,819.60	324								
	T&SC-15i	Guider	26-Jul-19	29-Jul-19	0%	1	46.00	\$3,764.50	\$0.00	\$3,764.50	324								
	T&SC-15i	headerService	26-Jul-19	29-Jul-19	0%	1	40.00	\$3,273.20	\$0.00	\$3,273.20	324								
	T&SC-15i	hexapod	26-Jul-19	29-Jul-19	0%	1	40.00	\$3,273.20	\$0.00	\$3,273.20	324								
	T&SC-15i	IOTA	26-Jul-19	26-Jul-19	0%	0	6.11	\$500.00	\$0.00	\$500.00	324								
	T&SC-15i	LaserTracker	26-Jul-19	29-Jul-19	0%	1	100.00	\$8,183.00	\$0.00	\$8,183.00	324								
	T&SC-15i	m1m3	26-Jul-19	26-Jul-19	0%	0	107.01	\$8,756.55	\$0.00	\$8,756.55	324								
	T&SC-15i	m2ms	26-Jul-19	29-Jul-19	0%	1	117.00	\$9,574.11	\$0.00	\$9,574.11	324								
	T&SC-15i	MTMount	26-Jul-19	26-Jul-19	0%	0	120.00	\$9,819.60	\$0.00	\$9,819.60	324								
	T&SC-15i	PointingComponent	26-Jul-19	29-Jul-19	0%	1	120.00	\$9,819.60	\$0.00	\$9,819.60	324								
	T&SC-15i	Rotator	26-Jul-19	29-Jul-19	0%	1	46.00	\$3,764.50	\$0.00	\$3,764.50	324								
	T&SC-15i	scheduler	26-Jul-19	29-Jul-19	0%	1	48.88	\$4,000.00	\$0.00	\$4,000.00	324								
	T&SC-15i	TCS	26-Jul-19	29-Jul-19	0%	1	48.88	\$4,000.00	\$0.00	\$4,000.00	324								
	T&SC-15i	tcsOFC	26-Jul-19	29-Jul-19	0%	1	58.16	\$4,759.00	\$0.00	\$4,759.00	324								
	T&SC-15i	tcsWEP	26-Jul-19	29-Jul-19	0%	1	107.04	\$8,759.00	\$0.00	\$8,759.00	324								
	T&SC-15i	Replan Planning Package Budget	20-Jul-20	20-Jul-20	0%	1	17478.17	\$1,480,400.93	\$624,091.00	\$2,104,491.93	76								
	T&SC-70i	TCS Pointing Application - Phase 2 Software Integra	03-Jun-19	30-Sep-19	0%	84	0.00	\$0.00	\$0.00	\$0.00	154								
	T&SC-70i	TCS Pointing Application - Phase 3 Software Integra	01-Oct-19	04-Nov-19	20%	25	0.00	\$0.00	\$0.00	\$0.00	154								
	T&SC-70i	Phase 3 Software Integration Payment	05-Nov-19	05-Nov-19	0%	1	0.00	\$0.00	\$68,124.76	\$68,124.76	149								
	T&SC-70i	TCS Pointing Application - Test Readiness Preparati	06-Nov-19	03-Feb-20	0%	58	0.00	\$0.00	\$0.00	\$0.00	154								
	T&SC-70i	Final Acceptance Preparation	04-Feb-20	31-Mar-20	0%	40	0.00	\$0.00	\$0.00	\$0.00	154								
	T&SC-70i	Final Acceptance Review	01-Apr-20	01-Apr-20	0%	1	0.00	\$0.00	\$68,550.00	\$68,550.00	148								
	LSST ME 19-05.04C.15.03 Auxiliary Telescope Software		01-Jan-19 A	21-Jan-20		265	6596.52	\$567,715.38	\$0.00	\$567,715.38	945								
	DM-16906	Finishing AT Dome Algorithm	01-Jan-19 A	31-May-19 A	99.91%	22	80.00	\$6,546.40	\$0.00	\$6,546.40									
	DM-16908	Finishing AT Dome Trajectory Algorithm	01-Feb-19 A	02-Jul-19	40%	22	150.00	\$12,274.50	\$0.00	\$12,274.50	269								
	DM-16910	Prepare Tucson Integration & Test Environment	01-Jan-19 A	31-May-19 A	100%	11	40.00	\$3,273.20	\$0.00	\$3,273.20									
	DM-16912	Finishing AT Hexapod Algorithm	01-Jan-19 A	31-May-19 A	79.95%	22	80.00	\$6,546.40	\$0.00	\$6,546.40									
	DM-16913	AuxTel Mount Control & Pointing Integration in Tucsc	01-Feb-19 A	31-May-19 A	100%	11	20.00	\$1,636.60	\$0.00	\$1,636.60									
	DM-16914	AuxTel Pneumatics & Pointing Configuration Integrat	01-Jan-19 A	31-May-19 A	100%	22	155.90	\$12,757.36	\$0.00	\$12,757.36									
	DM-16915	AuxTel Dome Pointing Control Test in Tucson	11-Jun-19	25-Jun-19	0%	11	77.95	\$6,378.68	\$0.00	\$6,378.68	101								
	DM-16920	AuxTel Scripts Development	31-Jan-19 A	31-May-19 A	100%	40	80.00	\$15,616.80	\$0.00	\$15,616.80									
	DM-16936	Finishing AT Pneumatics Algorithm	31-Jan-19 A	31-Jan-19 A	100%	40	80.00	\$15,616.80	\$0.00	\$15,616.80									
	DM-16939	Finishing AT MCS Algorithm	31-Jan-19 A	31-May-19 A	100%	40	80.00	\$15,616.80	\$0.00	\$15,616.80									
	DM-16943	Finishing AT Pointing Algorithm	31-Jan-19 A	31-May-19 A	100%	60	80.00	\$6,546.40	\$0.00	\$6,546.40									
	DM-16945	Finishing AT AOS Algorithm	01-Feb-19 A	02-Jul-19	80%	22	80.00	\$6,546.40	\$0.00	\$6,546.40	269								
	DM-17182	Finishing AT WhiteLightSource SW Development	31-Jan-19 A	31-May-19 A	100%	17	120.00	\$9,819.60	\$0.00	\$9,819.60									
	DM-17184	ATThermoelectricCooler SW Development	01-Apr-19 A	17-Jun-19	90%	11	80.00	\$6,546.40	\$0.00	\$6,546.40	99								
	DM-17286	SAL port for Raspberry Pi based AuxTel EAS Sensor	31-Jan-19 A	30-Apr-19 A	100%	20	150.00	\$12,274.50	\$0.00	\$12,274.50									
	DM-17405	Integration of LinearStage CSC	01-Feb-19 A	10-Jun-19	26.65%	6	40.00	\$3,273.20	\$0.00	\$3,273.20	101								
	DM-17406	Integration of TunableLaser CSC	31-Jan-19 A	31-May-19 A	100%	6	40.00	\$3,273.20	\$0.00	\$3,273.20									
	DM-17408	Integration of CBP CSC	03-Jun-19	10-Jun-19	0%	6	40.00	\$3,273.20	\$0.00	\$3,273.20	101								
	DM-17851	Finishing AT Spectrograph Algorithm	01-Apr-19 A	10-Jun-19	60%	6	37.00	\$3,027.71	\$0.00	\$3,027.71	99								
	DM-17888	Puppet Deployment of Auxiliary Telescope Compone	01-Apr-19 A	02-Jul-19	6.61%	22	80.00	\$6,546.40	\$0.00	\$6,546.40	341								
	DM-18010	ATMonochromator SW Development	01-Apr-19 A	10-Jun-19	80%	6	37.00	\$3,027.71	\$0.00	\$3,027.71	99								
	DM-18411	Auxtel Calibration System Integration Tests in Tucso	01-Apr-19 A	25-Jun-19	19.99%	17	112.00	\$9,164.96	\$0.00	\$9,164.96	69								
	DM-18441	Spectrograph On-Sky Integration	26-Nov-19	20-Dec-19	0%	17	112.00	\$9,486.40	\$0.00	\$9,486.40	156								
	DM-18443	AuxTel On-Sky w/ Spectrograph + Scheduler Integr	23-Dec-19	17-Jan-20	0%	17	112.00	\$9,486.40	\$0.00	\$9,486.40	161								
	DM-18445	AuxTel 1st Light Integration	30-Jul-19	21-Aug-19	0%	17	112.00	\$9,164.96	\$0.00	\$9,164.96	284								
	DM-18597	Electrometer (AuxTel) SW Development	01-Apr-19 A	17-Jun-19	29.97%	11	75.00	\$6,137.25	\$0.00	\$6,137.25	1093								
	DM-18698	Finishing FibreSpectrograph (AuxTel) SW Developm	01-May-19 A	02-Jul-19	11.75%	22	150.00	\$12,274.50	\$0.00	\$12,274.50	88								
	T&SC-15i	atAOS	26-Jul-19	29-Jul-19	0%	1	249.00	\$20,375.67	\$0.00	\$20,375.67	324								
	T&SC-15i	atArchiver	26-Jul-19	29-Jul-19	0%	1	249.00	\$20,375.67	\$0.00	\$20,375.67	324								
	T&SC-15i	atBuilding	26-Jul-19	29-Jul-19	0%	1	249.00	\$20,375.67	\$0.00	\$20,375.67	324								
	T&SC-15i	atCalibration_Electrometer	26-Jul-19	29-Jul-19	0%	1	47.23	\$3,864.46	\$0.00	\$3,864.46	324								
	T&SC-15i	atCamera	26-Jul-19	29-Jul-19	0%	1	249.00	\$20,375.67	\$0.00	\$20,375.67	324								
	T&SC-15i	At Dome	26-Jul-19	29-Jul-19	0%	1	70.00	\$5,728.10	\$0.00	\$5,728.10	324								
	T&SC-15i	atFiberSpectrometer	26-Jul-19	29-Jul-19	0%	1	85.54	\$7,000.00	\$0.00	\$7,000.00	324								
	T&SC-15i	atHeaderService	26-Jul-19	29-Jul-19	0%	1	200.00	\$16,366.00	\$0.00	\$16,366.00	324								
	T&SC-15i	at_Hexapod	26-Jul-19	29-Jul-19	0%	1	120.00	\$9,819.60	\$0.00	\$9,819.60	324								
	T&SC-15i	atMCS	26-Jul-19	29-Jul-19	0%	1	348.00	\$28,476.84	\$0.00	\$28,476.84	324								
	T&SC-15i	atMonochromator	26-Jul-19	29-Jul-19	0%	1	171.09	\$14,000.00	\$0.00	\$14,000.00	324								
	T&SC-15i	atPneumatics	26-Jul-19	29-Jul-19	0%	1	249.00	\$20,375.67	\$0.00	\$20,375.67	324								
	T&SC-15i	atPointingComponent	26-Jul-19	29-Jul-19	0%	1	249.00	\$20,375.67	\$0.00	\$20,375.67	324								
	T&SC-15i	atScheduler	26-Jul-19	29-Jul-19	0%	1	122.20	\$10,000.00	\$0.00	\$10,000.00	324								
	T&SC-15i	atSpectrograph	21-Jan-20	21-Jan-20	0%	0	11.81	\$1,000.00	\$0.00	\$1,000.00	205								
	T&SC-15i	atTCS	26-Jul-19	29-Jul-19	0%	1	249.00	\$20,375.67	\$0.00	\$20,375.67	324								
	T&SC-15i	atWhiteLightChiller	26-Jul-19	29-Jul-19	0%	1	249.00	\$20,375.67	\$0.00	\$20,375.67	324								
	T&SC-15i	atWhiteLightSource	26-Jul-19	29-Jul-19	0%	1	249.00	\$20,375.67	\$0.00	\$20,375.67	324								
	T&SC-15i	CBP	26-Jul-19	29-Jul-19	0%	1	249.00	\$20,375.67	\$0.00	\$20,375.67	324								



## LSST May 2019 Month End Forecast

Activity ID	Activity Name	Start	Finish	Physical % Complete	Original Duration	Budgeted Labor Units	Budgeted Labor Cost	Budgeted Material Cost	Budgeted Total Cost no	Total Float	FY2015 2014-10-01	FY2016 2015-10-01	FY2017 2016-10-01	FY2018 2017-10-01	FY2019 2018-10-01	FY2020 2019-10-01	FY2021 2020-10-01	FY2022 2021-10-01
Activity ID	T&SC-15i PhotoDiodes	26-Jul-19	29-Jul-19	0%	1	120.00	\$9,819.60	\$0.00	\$9,819.60	324						PhotoDiodes		
	T&SC-15i SEDSpectrograph	21-Jan-20	21-Jan-20	0%	1	11.81	\$1,000.00	\$0.00	\$1,000.00	204						SEDSSpectrograph		
	T&SC-15i TunableLaser	26-Jul-19	29-Jul-19	0%	1	249.00	\$20,375.67	\$0.00	\$20,375.67	324						TunableLaser		
	T&SC-15i WhiteLightSource	26-Jul-19	29-Jul-19	0%	1	249.00	\$20,375.67	\$0.00	\$20,375.67	324						WhiteLightSource		
	LSST ME 19-05.04C.15.04 Telescope Software Infrastructure	01-Jan-19 A	02-Aug-19		146	875.77	\$71,664.24	\$0.00	\$71,664.24	319								
	DM-17150 SW Infrastructure Support for M1M3 Mirror Test Ca	31-Jan-19 A	28-Feb-19 A	100%	6	40.00	\$3,273.20	\$0.00	\$3,273.20							SW Infrastructure Support for M1M3 Mirror Test Campaign I		
	DM-17151 SW Infrastructure Support for M1M3 Mirror Test Ca	01-Feb-19 A	29-Mar-19 A	100%	3	20.00	\$1,636.60	\$0.00	\$1,636.60							SW Infrastructure Support for M1M3 Mirror Test Campaign II		
	DM-17218 Middleware SW Development	01-Jan-19 A	31-May-19 A	100%	17	120.00	\$9,819.60	\$0.00	\$9,819.60							Middleware SW Development		
	DM-18555 EFD Infrastructure Development & Integration	01-Apr-19 A	02-Aug-19	43.31%	44	300.00	\$24,549.00	\$0.00	\$24,549.00	132						EFD Infrastructure Development & Integration		
	T&SC-15i CCS_OCS_Bridge	26-Jul-19	29-Jul-19	0%	1	28.00	\$2,291.24	\$0.00	\$2,291.24	324						CCS_OCS_Bridge		
	T&SC-15i EFD_SciencePlatform	26-Jul-19	29-Jul-19	0%	1	24.44	\$2,000.00	\$0.00	\$2,000.00	324						EFD_SciencePlatform		
	T&SC-15i efdTransformationService	26-Jul-19	29-Jul-19	0%	1	24.44	\$2,000.00	\$0.00	\$2,000.00	324						efdTransformationService		
	T&SC-15i OCS	26-Jul-19	29-Jul-19	0%	1	48.88	\$4,000.00	\$0.00	\$4,000.00	324						OCS		
	T&SC-15i Queue	26-Jul-19	29-Jul-19	0%	1	150.01	\$12,275.00	\$0.00	\$12,275.00	324						Queue		
	T&SC-15i WEP_Server	26-Jul-19	29-Jul-19	0%	1	120.00	\$9,819.60	\$0.00	\$9,819.60	324						WEP_Server		
	LSST ME 19-05.04C.15.05 Telescope and Site Software Qualit	14-Jan-19 A	24-Sep-20		429	1201.56	\$107,824.48	\$0.00	\$107,824.48	29								
	DM-16907 Test ATDome Algorithm	03-Jun-19	17-Jun-19	0%	11	40.00	\$3,273.20	\$0.00	\$3,273.20	110						Test ATDome Algorithm		
	DM-16909 Test ATDomeTrajectory Algorithm	03-Jul-19	18-Jul-19	0%	11	40.00	\$3,273.20	\$0.00	\$3,273.20	269						Test ATDomeTrajectory Algorithm		
	DM-16917 Test ATHexapod Algorithm	01-Feb-19 A	31-May-19 A	100%	11	40.00	\$3,273.20	\$0.00	\$3,273.20							Test ATHexapod Algorithm		
	DM-16921 Test AuxTel Scripts	14-Jan-19 A	31-May-19 A	100%	11	40.00	\$3,273.20	\$0.00	\$3,273.20							Test AuxTel Scripts		
	DM-16938 Test ATPneumatics Algorithm	01-May-19 A	31-May-19 A	100%	11	40.00	\$7,808.40	\$0.00	\$7,808.40							Test ATPneumatics Algorithm		
	DM-16941 Test ATMCS Algorithm	03-Jun-19	17-Jun-19	0%	11	40.00	\$7,808.40	\$0.00	\$7,808.40	280						Test ATMCS Algorithm		
	DM-16944 Test ATPointing Algorithm	31-Jan-19 A	31-May-19 A	100%	11	40.00	\$3,273.20	\$0.00	\$3,273.20							Test ATPointing Algorithm		
	DM-16946 Test ATAOS Algorithm	03-Jul-19	18-Jul-19	0%	11	40.00	\$3,273.20	\$0.00	\$3,273.20	269						Test ATAOS Algorithm		
	DM-17180 MTWEP Algo & SW Testing	01-Feb-19 A	31-May-19 A	100%	6	40.00	\$3,273.20	\$0.00	\$3,273.20							MTWEP Algo & SW Testing		
	DM-17183 Testing of ATWhiteLightSource SW	31-Jan-19 A	31-May-19 A	100%	6	40.00	\$3,273.20	\$0.00	\$3,273.20							Testing of ATWhiteLightSource SW		
	DM-17185 Testing of ATThermoelectricCooler SW	01-Apr-19 A	31-May-19 A	100%	6	40.00	\$3,273.20	\$0.00	\$3,273.20							Testing of ATThermoelectricCooler SW		
	DM-17199 Testing of DIMM SW	01-Apr-19 A	31-May-19 A	100%	6	40.00	\$3,273.20	\$0.00	\$3,273.20							Testing of DIMM SW		
	DM-17215 Middleware Testing Process & Infrastructure	31-Jan-19 A	31-May-19 A	100%	17	120.00	\$9,819.60	\$0.00	\$9,819.60							Middleware Testing Process & Infrastructure		
	DM-17469 Testing of Align Sys Control SW	03-Jun-19	10-Jun-19	0%	6	40.00	\$3,273.20	\$0.00	\$3,273.20	104						Testing of Align Sys Control SW		
	DM-17724 IOTA CMOS API Testing	07-Jan-20	14-Jan-20	0%	6	37.00	\$3,133.90	\$0.00	\$3,133.90	126						IOTA CMOS API Testing		
	DM-17822 Testing of MTAOS SW	03-Jun-19	17-Jun-19	0%	11	75.00	\$6,137.25	\$0.00	\$6,137.25	165						Testing of MTAOS SW		
	DM-17852 Testing of ATSpectrograph Algorithm	10-Jun-19	17-Jun-19	0%	6	37.00	\$3,027.71	\$0.00	\$3,027.71	99						Testing of ATSpectrograph Algorithm		
	DM-18011 Testing of ATMonochromator SW	10-Jun-19	17-Jun-19	0%	6	37.00	\$3,027.71	\$0.00	\$3,027.71	99						Testing of ATMonochromator SW		
	DM-18338 M2 Functionality Check with CSC Controller + SAL	01-Sep-20	24-Sep-20	0%	17	112.00	\$9,486.40	\$0.00	\$9,486.40	29						M2 Functionality Check with CSC Controller + SAL		
	DM-18598 Testing of Electrometer (AuxTel) SW	01-Apr-19 A	10-Jun-19	0.2%	6	37.00	\$3,027.71	\$0.00	\$3,027.71	104						Testing of Electrometer (AuxTel) SW		
	DM-18699 Testing of FibreSpectrograph (AuxTel) Algorithm	03-Jul-19	18-Jul-19	0%	11	75.00	\$6,137.25	\$0.00	\$6,137.25	88						Testing of FibreSpectrograph (AuxTel) Algorithm		
	DM-18718 Testing of M1M3 New Features w/ Simulator in Tucs	03-Jun-19	02-Jul-19	0%	22	150.00	\$12,274.50	\$0.00	\$12,274.50	188						Testing of M1M3 New Features w/ Simulator in Tucson		
	T&SC-15i QA - FY 19 - Labor	26-Jul-19	04-Oct-19	0%	49	0.56	\$45.75	\$0.00	\$45.75	79						QA - FY 19 - Labor		
	T&SC-15i QA - FY 20 - Labor	07-Oct-19	13-Jul-20	0%	186	1.00	\$84.70	\$0.00	\$84.70	79						QA - FY 20 - Labor		
	LSST ME 19-05.04C.15.06 Telescope and Site Software Build	31-Jan-19 A	13-Jul-20		388	446.57	\$47,097.89	\$0.00	\$47,097.89	81								
	DM-17418 Update TSSW CI Infrastructure	31-Jan-19 A	28-Feb-19 A	100%	17	120.00	\$9,819.60	\$0.00	\$9,819.60							Update TSSW CI Infrastructure		
	T&SC-15i Software build FY 19 - Labor	26-Jul-19	04-Oct-19	0%	49	290.50	\$33,043.29	\$0.00	\$33,043.29	79						Software build FY 19 - Labor		
	T&SC-15i Software build FY 20 - Labor	07-Oct-19	13-Jul-20	0%	186	36.08	\$4,235.00	\$0.00	\$4,235.00	79						Software build FY 20 - Labor		
	LSST ME 19-05.04C.15.07 LSST Operator Visualization Envir	01-Jun-17 A	19-Oct-20		497	0.00	\$0.00	\$445,590.01	\$445,590.01	12								
	LSST1000 INRIA Contract phase 1 - workshop 1	01-Jun-17 A	01-Jul-17 A	100%	22	0.00	\$0.00	\$29,335.00	\$29,335.00							INRIA Contract phase 1 - workshop 1		
	LSST1020 INRIA Contract phase 1 - interfaces integration to tel	01-Nov-17 A	31-Jan-18 A	100%	67	0.00	\$0.00	\$28,325.00	\$28,325.00							INRIA Contract phase 1 - interfaces integration to telemetry simulators		
	LSST1030 INRIA Contract phase 1 - workshop 2	01-Mar-18 A	16-Mar-18 A	100%	21	0.00	\$0.00	\$28,325.00	\$28,325.00							INRIA Contract phase 1 - workshop 2		
	LSST1040 INRIA Contract phase 1 - review of deliverables	21-Aug-20	19-Oct-20	0%	41	0.00	\$0.00	\$359,605.01	\$359,605.01	12						INRIA Contract phase 1 - review of deliverables		
	LSST1050 INRIA Contract phase 1 - development	03-Jun-19	20-Aug-20	0%	310	0.00	\$0.00	\$0.00	\$0.00	12						INRIA Contract phase 1 - development		
LSST ME 19-05.04C.15.09 Telescope and Site Software Integr	01-Mar-19 A	01-Feb-21		485	5327.31	\$469,837.55	\$0.00	\$469,837.55	-58									
DM-16866 AuxTel & (Closed) Dome Pointing Control Test In chi	26-Jun-19	11-Jul-19	0%	11	80.00	\$6,546.40	\$0.00	\$6,546.40	101						AuxTel & (Closed) Dome Pointing Control Test In Chile			
DM-16949 AuxTel Pneumatics & Pointing Configuration Integrat	01-Jul-19	29-Jul-19	0%	20	150.00	\$17,013.00	\$0.00	\$17,013.00	171						AuxTel Pneumatics & Pointing Configuration Integration in Chile			
DM-16950 AuxTel Mount Control & Pointing Integration in Chile	30-Jul-19	26-Aug-19	0%	20	150.00	\$17,013.00	\$0.00	\$17,013.00	259						AuxTel Mount Control & Pointing Integration in Chile			
DM-16952 Test ATDome Algorithm w/ Hardware	01-Mar-19 A	28-Jun-19	72.69%	20	150.00	\$17,013.00	\$0.00	\$17,013.00	171						Test ATDome Algorithm w/ Hardware			
DM-16953 Test ATHexapod Algorithm w/ Hardware	01-Mar-19 A	31-May-19 A	100%	20	150.00	\$17,013.00	\$0.00	\$17,013.00							Test ATHexapod Algorithm w/ Hardware			
DM-16954 Test ATPneumatics Algorithm w/ Hardware	01-May-19 A	31-May-19 A	100%	20	150.00	\$17,013.00	\$0.00	\$17,013.00							Test ATPneumatics Algorithm w/ Hardware			
DM-16955 Test AuxTel Scripts w/ Hardware	03-Jun-19	28-Jun-19	0%	20	150.00	\$17,013.00	\$0.00	\$17,013.00	171						Test AuxTel Scripts w/ Hardware			
DM-18412 Auxtel Calibration System Integration Tests in Chile	25-Jun-19	26-Jul-19	0%	22	150.00	\$12,274.50	\$0.00	\$12,274.50	82						Auxtel Calibration System Integration Tests in Chile			
DM-18442 Spectrograph On-Sky Commissioning	12-Mar-20	10-Apr-20	0%	22	80.00	\$6,776.00	\$0.00	\$6,776.00	103						Spectrograph On-Sky Commissioning			
DM-18444 AuxTel On-Sky w/ Spectrograph + Scheduler Comm	14-May-20	12-Jun-20	0%	22	80.00	\$6,776.00	\$0.00	\$6,776.00	80						AuxTel On-Sky w/ Spectrograph + Scheduler Commissioning			
DM-18446 AuxTel 1st Light Commissioning	11-Sep-20	12-Oct-20	0%	22	80.00	\$6,862.11	\$0.00	\$6,862.11	17						AuxTel 1st Light Commissioning			
DM-18450 MainTel Calibration System Integration Tests in Chile	09-Jul-19	07-Aug-19	0%	22	150.00	\$12,274.50	\$0.00	\$12,274.50	126						MainTel Calibration System Integration Tests in Chile			
DM-18719 Testing of M1M3 New Features w/ Hardware in Chil	15-Apr-20	05-May-20	0%	15	75.00	\$6,352.50	\$0.00	\$6,352.50	-8						Testing of M1M3 New Features w/ Hardware in Chile			
DM-18721 Support M1M3 Thermal Testing on TMA	17-Nov-20	01-Feb-21	0%	50	300.00	\$26,298.00	\$0.00	\$26,298.00	-58						Support M1M3 Thermal Testing on TMA			
DM-18723 Support M1M3 cell and surrogate mirror test with co	26-Feb-20	24-Mar-20	0%	19	150.00	\$12,705.00	\$0.00	\$12,705.00	-8						Support M1M3 cell and surrogate mirror test with coating chamber			
DM-18724 Support M1M3 Cell w/Surrogate Mirror on TMA Test	06-Jul-20	14-Aug-20	0%	30	200.00	\$16,940.00	\$0.00	\$16,940.00	-48						Support M1M3 Cell w/Surrogate Mirror on TMA Testing			
DM-18725 Support M1M3 installation on TMA	03-Nov-20	16-Nov-20	0%	10	80.00	\$7,012.80	\$0.00	\$7,012.80	-58						Support M1M3 installation on TMA			
DM-18732 Support EAS instrument Site Test ng	09-Oct-19	19-Feb-20	0%	90	320.00	\$27,104.00	\$0.00	\$27,104.00	183						Support EAS instrument Site Testing			
DM-18737 Support for M2 Hexapod System Ready for Integrati	02-Jul-20	20-Jul-20	0%	13	80.00	\$6,776.00	\$0.00	\$6,776.00	6						Support for M2 Hexapod System Ready for Integration			
DM-18738 Support for M2 Hexapod installation and test on TM	01-May-19 A	07-Jun-19	19.96%	5	40.00	\$3,388.00	\$0.00	\$3,388.00	293						Support for M2 Hexapod installation and test on TMA			
T&SC-14i Software Integration and Test Planning Package	03-Jun-19	03-Jun-19	0%	0	2562.31	\$209,673.74	\$0.00	\$209,673.74	363						Software Integration and Test Planning Package			

LSST May 2019 Month End Forecast

Activity ID	Activity Name	Start	Finish	Physical % Complete	Original Duration	Budgeted Labor Units	Budgeted Labor Cost	Budgeted Material Cost	Budgeted Total Cost no	Total Float	FY2015 2014-10-01	FY2016 2015-10-01	FY2017 2016-10-01	FY2018 2017-10-01	FY2019 2018-10-01	FY2020 2019-10-01	FY2021 2020-10-01	FY2022 2021-10-01
LSST ME 19-05.05C Education and Public Outrea		01-Sep-14 A	15-Aug-22		2039	76474.59	\$5,834,141.47	\$3,398,126.02	\$9,232,267.49	33								
LSST ME 19-05.05C.00 EPO Level 2 Milestones		03-Oct-16 A	15-Aug-22		1491	0.00	\$0.00	\$0.00	\$0.00	33								
EPOC1000	EPO System Start	03-Oct-16 A		100%	0	0.00	\$0.00	\$0.00	\$0.00				EPO System Start					
EPOC280	EPO Acceptance Review		28-Sep-17 A	100%	0	0.00	\$0.00	\$0.00	\$0.00					EPO Acceptance Review				
EPOC285	EPO Construction Finish		15-Aug-22	0%	0	0.00	\$0.00	\$0.00	\$0.00	33								
EPOC300	Begin evaluation of technologies for Skyviewer		30-Sep-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	763						Begin evaluation of technologies for Skyviewer		
EPOC301	Full drafts of Formal Education Investigations Compl		30-Apr-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	617						Full drafts of Formal Education Investigations Complete		
EPOC302	Begin execution of Marketing Strategy		30-Sep-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	509						Begin execution of Marketing Strategy		
EPOC303	Citizen Science Test in Science Platform Complete		01-Feb-22	0%	0	0.00	\$0.00	\$0.00	\$0.00	171							Citizen Science Test in Science Platform Complete	
EPOC304	Citizen Science Commissioning Project running via L		17-May-22	0%	0	0.00	\$0.00	\$0.00	\$0.00	96								Citizen Science Commissioning Project running via L
LSST ME 19-05.05C.01 System Management		01-Sep-14 A	16-May-22		1975	33501.72	\$2,360,624.99	\$969,877.95	\$3,330,502.93	97								
LSST ME 19-05.05C.01.01 System Management		01-Sep-14 A	16-May-22		1975	33501.72	\$2,360,624.99	\$969,877.95	\$3,330,502.93	97								
EPO-1047	EPO Mgmt & Ongoing Activities FY19 - Chile - Dec-	03-Dec-18 A	31-Jan-19 A	100%	38	300.00	\$13,251.00	\$0.00	\$13,251.00									
EPO-1052	EPO System Evaluation FY19 - Dec-Jan	03-Dec-18 A	31-Jan-19 A	100%	40	300.00	\$14,370.00	\$0.00	\$14,370.00									
EPO-1053	EPO System Evaluation FY19	03-Jun-19	30-Sep-19	0%	84	150.00	\$7,185.00	\$0.00	\$7,185.00	255								
EPO-1057	Graphic Design Support FY19 - Dec-Jan	03-Dec-18 A	31-Jan-19 A	100%	40	75.00	\$5,579.25	\$0.00	\$5,579.25									
EPO-1058	Graphic Design Support FY19	03-Jun-19	30-Sep-19	0%	84	300.00	\$22,317.00	\$0.00	\$22,317.00	181								
EPO-113	EPO Mgmt & Ongoing Activities FY18	30-Oct-17 A	28-Sep-18 A	100%	253	3240.00	\$329,155.20	\$0.00	\$329,155.20									
EPO-114	EPO Mgmt & Ongoing Activities FY18 - Chile	01-Mar-18 A	28-Sep-18 A	100%	185	1350.00	\$57,618.00	\$0.00	\$57,618.00									
EPO-115	EPO Office Computers and Software FY18	02-Oct-17 A	28-Sep-18 A	100%	253	0.00	\$0.00	\$17,686.80	\$17,686.80									
EPO-116	EPO System Evaluation FY18 - Oct	02-Oct-17 A	31-Oct-17 A	100%	22	150.00	\$6,942.00	\$0.00	\$6,942.00									
EPO-117	EPO Travel FY18	02-Oct-17 A	28-Sep-18 A	100%	253	0.00	\$0.00	\$86,705.28	\$86,705.28									
EPO-118	Broader Impacts FY18	28-Jun-18 A	31-Aug-18 A	100%	150	0.00	\$0.00	\$9,551.04	\$9,551.04									
EPO-119	Broader Impacts FY19	03-Sep-18 A	30-Sep-18 A	100%	254	0.00	\$0.00	\$997.00	\$997.00									
EPO-120	EPO Mgmt & Ongoing Activities FY19	01-Oct-18 A	30-Sep-19	66.54%	254	2925.00	\$246,500.25	\$0.00	\$246,500.25	181								
EPO-121	EPO Mgmt & Ongoing Activities FY19 - Chile - Oct-N	01-Oct-18 A	30-Nov-18 A	100%	42	300.00	\$13,251.00	\$0.00	\$13,251.00									
EPO-122	EPO Office Computers and Software FY19	01-Oct-18 A	30-Sep-19	77.56%	254	0.00	\$0.00	\$6,242.40	\$6,242.40	255								
EPO-123	EPO System Evaluation FY19 - Oct-Nov	01-Oct-18 A	30-Nov-18 A	100%	45	300.00	\$14,370.00	\$0.00	\$14,370.00									
EPO-124	EPO Travel FY19	01-Oct-18 A	30-Sep-19	66.14%	254	0.00	\$0.00	\$82,719.16	\$82,719.16	255								
EPO-125	Broader Impacts FY20	03-Jun-19	03-Jun-20	0%	254	0.00	\$0.00	\$26,701.02	\$26,701.02	340								
EPO-126	EPO Mgmt & Ongoing Activities FY20	01-Oct-19	30-Sep-20	0%	254	2700.00	\$185,508.00	\$0.00	\$185,508.00	181								
EPO-127	EPO Mgmt & Ongoing Activities FY20 - Chile	05-Feb-20	04-Nov-20	0%	188	1360.00	\$62,445.41	\$0.00	\$62,445.41	152								
EPO-128	EPO Office Computers and Software FY20	01-Oct-19	30-Sep-20	0%	254	0.00	\$0.00	\$6,242.40	\$6,242.40	255								
EPO-129	EPO System Evaluation FY20	01-Oct-19	30-Sep-20	0%	254	1799.95	\$89,223.30	\$0.00	\$89,223.30	255								
EPO-130	EPO Travel FY20	01-Oct-19	30-Sep-20	0%	254	0.00	\$0.00	\$86,937.64	\$86,937.64	255								
EPO-131	Broader Impacts FY21	04-Jun-20	02-Jun-21	0%	253	0.00	\$0.00	\$13,842.82	\$13,842.82	340								
EPO-132	EPO Mgmt & Ongoing Activities FY21	01-Oct-20	30-Sep-21	0%	254	2250.00	\$161,928.00	\$0.00	\$161,928.00	181								
EPO-133	EPO Mgmt & Ongoing Activities FY21 - Chile	05-Nov-20	05-Nov-21	0%	248	1799.95	\$85,450.53	\$0.00	\$85,450.53	152								
EPO-134	EPO Office Computers and Software FY21	01-Oct-20	30-Sep-21	0%	254	0.00	\$0.00	\$6,242.40	\$6,242.40	255								
EPO-135	EPO System Evaluation FY21	01-Oct-20	30-Sep-21	0%	254	1799.95	\$92,355.21	\$0.00	\$92,355.21	255								
EPO-136	EPO Travel FY21	01-Oct-20	30-Sep-21	0%	254	0.00	\$0.00	\$91,371.26	\$91,371.26	255								
EPO-254	Graphic Design Support FY18 - Oct	02-Oct-17 A	31-Oct-17 A	100%	22	37.50	\$2,695.50	\$0.00	\$2,695.50									
EPO-255	Graphic Design Support FY19 - Oct-Nov	01-Oct-18 A	30-Nov-18 A	100%	45	75.00	\$5,579.25	\$0.00	\$5,579.25									
EPO-256	Graphic Design Support FY20	01-Oct-19	30-Sep-20	0%	254	450.00	\$34,650.09	\$0.00	\$34,650.09	181								
EPO-257	Graphic Design Support FY21	01-Oct-20	30-Sep-21	0%	254	450.00	\$35,860.59	\$0.00	\$35,860.59	181								
EPO-258	Graphic Design Support FY18 - Dec	01-Dec-17 A	29-Dec-17 A	100%	19	37.50	\$2,695.50	\$0.00	\$2,695.50									
EPO-259	Graphic Design Support FY18 - Jan	01-Jan-18 A	31-Jan-18 A	100%	21	37.50	\$2,695.50	\$0.00	\$2,695.50									
EPO-260	Graphic Design Support FY18 - Feb	01-Feb-18 A	28-Feb-18 A	100%	19	37.50	\$2,695.50	\$0.00	\$2,695.50									
EPO-261	Graphic Design Support FY18 - Mar	01-Mar-18 A	30-Mar-18 A	100%	22	37.50	\$2,695.50	\$0.00	\$2,695.50									
EPO-262	Graphic Design Support FY18 - Apr	02-Apr-18 A	20-Jun-18 A	100%	21	37.50	\$2,695.50	\$0.00	\$2,695.50									
EPO-263	Graphic Design Support FY18 - May	01-Aug-18 A	31-Aug-18 A	100%	23	37.50	\$2,695.50	\$0.00	\$2,695.50									
EPO-264	Graphic Design Support FY18 Jun-Jul	30-Jun-18 A	31-Aug-18 A	100%	42	75.00	\$5,391.00	\$0.00	\$5,391.00									
EPO-266	Graphic Design Support FY18 Aug-Sep	01-Aug-18 A	28-Sep-18 A	100%	42	68.48	\$4,922.22	\$0.00	\$4,922.22									
EPO-268	Graphic Design Support FY18 - Nov	01-Nov-17 A	30-Nov-17 A	100%	22	37.50	\$2,695.50	\$0.00	\$2,695.50									
EPO-341	EPO System Evaluation FY18 - Nov	15-Nov-17 A	30-Nov-17 A	100%	22	150.00	\$6,942.00	\$0.00	\$6,942.00									
EPO-342	EPO System Evaluation FY18 - Dec	13-Dec-17 A	29-Dec-17 A	100%	19	150.00	\$6,942.00	\$0.00	\$6,942.00									
EPO-343	EPO System Evaluation FY18 - Jan	01-Jan-18 A	31-Jan-18 A	100%	21	150.00	\$6,942.00	\$0.00	\$6,942.00									
EPO-344	EPO System Evaluation FY18 - Feb	01-Feb-18 A	28-Feb-18 A	100%	19	150.00	\$6,942.00	\$0.00	\$6,942.00									
EPO-345	EPO System Evaluation FY18 - Mar	27-Feb-18 A	30-Mar-18 A	100%	22	150.00	\$6,942.00	\$0.00	\$6,942.00									
EPO-346	EPO System Evaluation FY18 - Apr	02-Apr-18 A	30-Apr-18 A	100%	21	150.00	\$6,942.00	\$0.00	\$6,942.00									
EPO-347	EPO System Evaluation FY18 - May	01-May-18 A	20-Jun-18 A	100%	23	150.00	\$6,942.00	\$0.00	\$6,942.00									
EPO-348	EPO System Evaluation FY18 Jun-Jul	05-Jun-18 A	31-Aug-18 A	100%	42	300.00	\$13,884.00	\$0.00	\$13,884.00									
EPO-350	EPO System Evaluation FY18 Aug-Sep	01-Aug-18 A	28-Sep-18 A	100%	42	273.91	\$12,676.70	\$0.00	\$12,676.70									
EPO-667	Technology Refresh & - Chilean Components and T	08-Nov-21	22-Feb-22	0%	74	524.39	\$25,684.80	\$0.00	\$25,684.80	155								
EPO-668	Technology Refresh & Rebranding - Graphic Design	01-Oct-21	14-Jan-22	0%	74	482.61	\$39,805.57	\$0.00	\$39,805.57	181								
EPO-670	Technology Refresh & Rebranding - Science Verifica	01-Feb-22	16-May-22	0%	74	524.39	\$47,578.23	\$0.00	\$47,578.23	97								
EPO-671	Technology Refresh & Rebranding - Portal Content	01-Oct-21	14-Jan-22	0%	74	524.39	\$27,845.30	\$0.00	\$27,845.30	181								
EPO-672	Technology Refresh & Rebranding - Portal	01-Oct-21	14-Jan-22	0%	74	525.00	\$47,633.25	\$0.00	\$47,633.25	181								
EPO-673	Technology Refresh & Rebranding - Jupyter	01-Oct-21	14-Jan-22	0%	74	482.61	\$39,805.57	\$0.00	\$39,805.57	181								
EPO-M1	On-going Activities Complete		22-Feb-22	0%	0	0.00	\$0.00	\$0.00	\$0.00	155								
EPOC-10	EPO Mgmt & On Going Activities FY 1 - LOE Labor	01-Sep-14 A	30-Sep-14 A	100%	42	109.00	\$9,240.41	\$0.00	\$9,240.41									
EPOC-10	EPO Mgmt & On Going Activities FY 2 - LOE Labor	01-Oct-14 A	30-Sep-15 A	100%	252	1768.97	\$141,763.03	\$0.00	\$141,763.03									



LSST May 2019 Month End Forecast																					
Activity ID	Activity Name		Start	Finish	Physical % Complete	Original Duration	Budgeted Labor Units	Budgeted Labor Cost	Budgeted Material Cost	Budgeted Total Cost no	Total Float	FY2015 2014-10-01	FY2016 2015-10-01	FY2017 2016-10-01	FY2018 2017-10-01	FY2019 2018-10-01	FY2020 2019-10-01	FY2021 2020-10-01	FY2022 2021-10-01		
EPOC-10	EPO Mgmt & On Going Activities FY 3 - LOE Labor	EPO Mgmt & On Going Activities FY 3 - LOE Labor	01-Oct-15 A	29-Apr-16 A	100%	146	1629.39	\$139,265.71	\$0.00	\$139,265.71											
	EPOC-10	EPO Mgmt & On Going Activities FY 4 - LOE Labor	01-Oct-16 A	28-Feb-17 A	100%	103	72.99	\$7,421.84	\$0.00	\$7,421.84											
	EPOC-10	EPO Mgmt & On Going Activities FY 4 - LOE Labor	01-Mar-17 A	29-Sep-17 A	100%	151	1395.00	\$143,387.55	\$0.00	\$143,387.55											
	EPOC-10	EPO Mgmt & Ongoing Activities FY21	01-Oct-21	14-Jan-22	0%	74	450.00	\$31,122.00	\$0.00	\$31,122.00	181										
	EPOC-10	EPO Pilot Project	01-Oct-14 A	19-May-15 A	100%	252	221.48	\$17,373.10	\$0.00	\$17,373.10		EPO Pilot Project									
	EPOC-10	Evaluate EPO Best Practices	01-Oct-14 A	09-Jan-15 A	100%	42	36.00	\$2,823.84	\$0.00	\$2,823.84		Evaluate EPO Best Practices									
	EPOC-10	Finalize EPO Best Practices White Paper	12-Jan-15 A	16-Jan-15 A	100%	10	9.00	\$705.96	\$0.00	\$705.96		Finalize EPO Best Practices White Paper									
	EPOC-10	EPO Best Practices White Paper Complete		16-Jan-15 A	100%	0	0.00	\$0.00	\$0.00	\$0.00		EPO Best Practices White Paper Complete									
	EPOC-10	Design Cloud Service EPO Architecture	16-Mar-15 A	02-Nov-15 A	100%	66	57.00	\$4,471.08	\$0.00	\$4,471.08		Design Cloud Service EPO Architecture									
	EPOC-10	Draft Recommended EPO architecture document	02-Nov-15 A	16-Nov-15 A	100%	33	28.00	\$2,196.32	\$0.00	\$2,196.32		Draft Recommended EPO architecture document									
	EPOC-10	Draft Recommended EPO architecture document Complete		16-Nov-15 A	100%	0	0.00	\$0.00	\$0.00	\$0.00		Draft Recommended EPO architecture document Complete									
	EPOC-10	Finalize Recommended EPO architecture document	17-Nov-15 A	18-Dec-15 A	100%	85	83.00	\$6,510.52	\$0.00	\$6,510.52		Finalize Recommended EPO architecture document									
	EPOC-10	Final Recommended EPO architecture document Complete		18-Dec-15 A	100%	0	0.00	\$0.00	\$0.00	\$0.00		Final Recommended EPO architecture document Complete									
	EPOC-10	EPO Mgmt & On Going Activities FY 3 - LOE Labor	01-Oct-15 A	30-Sep-16 A	100%	254	436.26	\$35,419.91	\$0.00	\$35,419.91		EPO Mgmt & On Going Activities FY 3 - LOE Labor									
	EPOC-11	EPO Mgmt & On Going Activities FY 1 - LOE NonLa	01-Sep-14 A	16-Jan-15 A	100%	42	0.00	\$0.00	\$6,026.73	\$6,026.73		EPO Mgmt & On Going Activities FY 1 - LOE NonLabor									
	EPOC-11	EPO Mgmt & On Going Activities FY 2 - LOE NonLa	19-Jan-15 A	01-Sep-15 A	100%	210	0.00	\$0.00	\$184,196.71	\$184,196.71		EPO Mgmt & On Going Activities FY 2 - LOE NonLabor									
	EPOC-11	EPO Mgmt & On Going Activities FY 4 - LOE NonLa	03-Oct-16 A	29-Sep-17 A	100%	254	0.00	\$0.00	\$332,370.41	\$332,370.41		EPO Mgmt & On Going Activities FY 4 - LOE NonLabor									
	EPOC-11	EPO Mgmt & On Going Activities FY 4 - LOE NonLa	01-Oct-16 A	28-Feb-17 A	100%	103	0.00	\$0.00	\$12,044.87	\$12,044.87		EPO Mgmt & On Going Activities FY 4 - LOE NonLabor									
	LSST ME 19-05.05C.02 EPO Database and Data Access Services		03-Apr-17 A	16-May-22		1277	3545.90	\$340,080.50	\$204,600.08	\$544,680.59	97										
	LSST ME 19-05.05C.02.01 EPO Database and Data Access Services		03-Apr-17 A	16-May-22		1277	3545.90	\$340,080.50	\$204,600.08	\$544,680.59	97										
	EPO-137	EDC Operational Expense FY18	02-Oct-17 A	28-Sep-18 A	100%	253	0.00	\$0.00	\$113,173.28	\$113,173.28					EDC Operational Expense FY18						
	EPO-138	Alert Stream machine learning advising	30-Oct-17 A	14-Feb-18 A	100%	253	0.00	\$0.00	\$31,009.76	\$31,009.76					Alert Stream machine learning advising						
	EPO-139	Prototype EPO EDC database	15-Nov-17 A	29-Dec-17 A	100%	41	290.54	\$30,576.68	\$0.00	\$30,576.68					Prototype EPO EDC database						
	EPO-140	EDC sample database dataset	31-Oct-17 A	30-Nov-17 A	100%	22	155.90	\$13,558.69	\$0.00	\$13,558.69					EDC sample database dataset						
	EPO-141	Infrastructure support for formal education Jupyter proof of concept	14-Feb-18 A	14-Feb-18 A	100%	21	92.12	\$9,695.05	\$0.00	\$9,695.05					Infrastructure support for formal education Jupyter proof of concept						
	EPO-142	Object Storage bandwidth testing	28-Nov-17 A	31-Jan-18 A	100%	13	92.12	\$8,011.95	\$0.00	\$8,011.95					Object Storage bandwidth testing						
	EPO-143	Jupyter cross-widget communication capability	19-Feb-18 A	30-Mar-18 A	100%	27	191.33	\$20,135.86	\$0.00	\$20,135.86					Jupyter cross-widget communication capability						
	EPO-144	Jupyter widgets and sample data for Activity 1	30-Nov-17 A	14-Feb-18 A	100%	49	347.23	\$30,198.91	\$0.00	\$30,198.91					Jupyter widgets and sample data for Activity 1						
EPO-146	Jupyter Continuous Integration Improvements	26-Feb-18 A	26-Feb-18 A	100%	19	134.64	\$11,709.78	\$0.00	\$11,709.78					Jupyter Continuous Integration Improvements							
EPO-148	Investigation 1 Jupyter widget development	01-May-18 A	31-May-18 A	100%	58	768.72	\$75,332.44	\$0.00	\$75,332.44					Investigation 1 Jupyter widget development							
EPO-150	Bokeh server improvements	30-Mar-18 A	28-Jun-18 A	100%	42	304.71	\$26,501.00	\$0.00	\$26,501.00					Bokeh server improvements							
EPO-152	EPO Senior Architect Hire Search	03-Sep-18 A	28-Sep-18 A	100%	42	0.00	\$0.00	\$0.00	\$0.00					EPO Senior Architect Hire Search							
EPO-156	EDC Operational Expense FY19	01-Nov-18 A	31-May-19 A	100%	85	0.00	\$0.00	\$8,366.00	\$8,366.00					EDC Operational Expense FY19							
EPO-159	EDC Operational Expense FY20	01-Oct-19	30-Sep-20	0%	254	0.00	\$0.00	\$27,051.01	\$27,051.01	255							EDC Operational Expense FY20				
EPO-162	EDC Operational Expense FY21	01-Oct-20	30-Sep-21	0%	254	0.00	\$0.00	\$25,000.03	\$25,000.03	255											
EPO-1656	Front-end Developert Hire Search	01-May-19 A	01-May-19 A	100%	147	0.00	\$0.00	\$0.00	\$0.00					Front-end Developert Hire Search							
EPO-664	EPO tech Jun-Jul	30-Jun-18 A	30-Jul-18 A	100%	42	168.00	\$17,680.50	\$0.00	\$17,680.50					EPO tech Jun-Jul							
EPO-665	EPO Sr Astronomy Software Developer Hire Search	03-Sep-18 A	28-Sep-18 A	100%	42	155.90	\$13,558.69	\$0.00	\$13,558.69					EPO Sr Astronomy Software Developer Hire Search							
EPO-987	EPO infrastructure development and support F19	01-May-19 A	01-May-19 A	100%	84	619.67	\$67,494.69	\$0.00	\$67,494.69					EPO infrastructure development and support F19							
EPO-M2	Databases & Data Access Services Complete		16-May-22	0%	0	0.00	\$0.00	\$0.00	\$0.00	97								Database			
EPOC-205	DB Build Phase 1 - FY 4 - Labor	03-Apr-17 A	29-Sep-17 A	100%	104	225.00	\$15,626.25	\$0.00	\$15,626.25					DB Build Phase 1 - FY 4 - Labor							
LSST ME 19-05.05C.03 Infrastructure for Citizen Science		02-Apr-18 A	17-May-22		1130	0.00	\$0.00	\$282,020.01	\$282,020.01	96											
LSST ME 19-05.05C.03.01 Infrastructure for Citizen Science		02-Apr-18 A	17-May-22		1130	0.00	\$0.00	\$282,020.01	\$282,020.01	96											
EPO-165	Zooniverse design phase for authentication and DAC integration	19-Apr-18 A	20-Apr-18 A	100%	40	0.00	\$0.00	\$25,000.00	\$25,000.00					Zooniverse design phase for authentication and DAC integration							
EPO-165a	Finalize Zooniverse contract for Phase 1	02-Apr-18 A	18-Apr-18 A	100%	19	0.00	\$0.00	\$0.00	\$0.00					Finalize Zooniverse contract for Phase 1							
EPO-166	Zooniverse parallel processing of S3 manifest	01-May-18 A	28-Jun-18 A	100%	41	0.00	\$0.00	\$25,000.00	\$25,000.00					Zooniverse parallel processing of S3 manifest							
EPO-167	Add Spanish-language support to Zooniverse Project Builder	31-May-18 A	18-Dec-18 A	100%	25	0.00	\$0.00	\$25,000.00	\$25,000.00					Add Spanish-language support to Zooniverse Project Builder							

LSST May 2019 Month End Forecast																			
Activity ID	Activity Name	Start	Finish	Physical % Complete	Original Duration	Budgeted Labor Units	Budgeted Labor Cost	Budgeted Material Cost	Budgeted Total Cost no	Total Float	FY2015 2014-10-01	FY2016 2015-10-01	FY2017 2016-10-01	FY2018 2017-10-01	FY2019 2018-10-01	FY2020 2019-10-01	FY2021 2020-10-01	FY2022 2021-10-01	
LSST ME 19-05.05C.05 Visualization including Science Museum	EPO-181	Develop photometry requirements	30-Nov-17 A	30-Apr-18 A	100%	21	297.63	\$18,653.89	\$0.00	\$18,653.89				Develop photometry requirements					
	EPO-182	Science Notebook Investigation 1 - with code and extensions	01-May-18 A	20-Jun-18 A	100%	23	325.97	\$20,430.45	\$0.00	\$20,430.45				Science Notebook Investigation 1 - with code and extensions					
	EPO-183	Science Notebook Investigation 2	01-Jun-18 A	31-Jan-19 A	100%	170	1338.54	\$67,324.09	\$0.00	\$67,324.09				Science Notebook Investigation 2					
	EPO-184	Properties of Stars assessment video (contract)	12-Jul-18 A	29-Jan-19 A	100%	84	0.00	\$0.00	\$25,000.00	\$25,000.00				Properties of Stars assessment video (contract)					
	EPO-185	Professional Development Workshops FY19	01-Nov-18 A	30-Sep-19	67.5%	254	0.00	\$0.00	\$53,615.33	\$53,615.33	255				Professional Development Workshops FY19				
	EPO-187	Science Notebook Investigation 3 - video development	22-Jul-21	18-Nov-21	0%	85	0.00	\$0.00	\$26,010.00	\$26,010.00	92						Science Notebook Investigation 3 - video development		
	EPO-188	Science Notebook Investigation FY20	05-Mar-20	02-Dec-20	0%	192	2720.59	\$184,089.00	\$0.00	\$184,089.00	138						Science Notebook Investigation FY20		
	EPO-189	Science Notebook Investigation 4 - video development	22-Jul-21	18-Nov-21	0%	85	0.00	\$0.00	\$25,000.00	\$25,000.00	136						Science Notebook Investigation 4 - video development		
	EPO-190	Science Notebook Investigation FY21	03-Dec-20	02-Dec-21	0%	254	3599.89	\$251,619.36	\$0.00	\$251,619.36	138						Science Notebook Investigation FY21		
	EPO-191	Science Notebook Investigation 5 - video development	19-Nov-21	22-Mar-22	0%	84	0.00	\$0.00	\$25,000.00	\$25,000.00	92						Science Notebook Investigation 5 - video development		
	EPO-192	Professional Development Workshops FY20	06-Jul-20	05-Jul-21	0%	254	0.00	\$0.00	\$27,720.07	\$27,720.07	63						Professional Development Workshops FY20		
	EPO-194	Science Notebook Investigation 6 - video development	19-Nov-21	22-Mar-22	0%	84	0.00	\$0.00	\$26,010.00	\$26,010.00	136						Science Notebook Investigation 6 - video development		
	EPO-199	Professional Development Workshops FY21	06-Jul-21	01-Jul-22	0%	254	0.00	\$0.00	\$54,594.89	\$54,594.89	63						Professional Development Workshops FY21		
	EPO-204	Education program commissioning verification	03-Dec-21	18-Mar-22	0%	74	1048.78	\$75,423.01	\$0.00	\$75,423.01	138						Education program commissioning verification		
	EPO-205	Classroom tablet loaner sets	23-Mar-22	23-May-22	0%	44	0.00	\$0.00	\$581,613.67	\$581,613.67	92						Classroom tablet loaner sets		
	EPO-269	Professional Development Workshops FY18	30-Oct-17 A	23-Jul-18 A	100%	253	0.00	\$0.00	\$46,824.01	\$46,824.01				Professional Development Workshops FY18					
	EPO-M4	Research Toolkit Complete		01-Jul-22	0%	0	0.00	\$0.00	\$0.00	\$0.00	63						Research Toolkit Complete		
	EPO-M4b	Resume EPO Video Development	22-Jul-21		0%	0	0.00	\$0.00	\$0.00	\$0.00	92						Resume EPO Video Development		
	EPOC-401	CR Finalize Design	01-Mar-17 A	29-Sep-17 A	100%	149	1350.00	\$93,757.50	\$0.00	\$93,757.50				CR Finalize Design					
	LSST ME 19-05.05C.05 Visualization including Science Museum		01-Oct-16 A	15-Aug-22		1491	3230.57	\$179,756.06	\$676,200.01	\$855,956.07	33								
	LSST ME 19-05.05C.05.01 Visualization including Science Museum		01-Oct-16 A	15-Aug-22		1491	3230.57	\$179,756.06	\$676,200.01	\$855,956.07	33								
	EPO-1666	Interview archive material development - Group 2	03-Jun-19	01-Feb-21	0%	421	0.00	\$0.00	\$0.00	\$0.00	33						Interview archive material development - Group 2		
	EPO-206	VFX video - preproduction	30-Oct-17 A	30-Nov-17 A	100%	44	0.00	\$0.00	\$15,000.00	\$15,000.00				VFX video - preproduction					
	EPO-207	Data2Dome internship - Cycle 1	31-May-18 A	31-Aug-18 A	100%	83	0.00	\$0.00	\$2,000.00	\$2,000.00				Data2Dome internship - Cycle 1					
	EPO-211	VFX video - production	30-Mar-18 A	28-Jun-19	95.22%	209	0.00	\$0.00	\$46,010.00	\$46,010.00	827				VFX video - production				
	EPO-212	Gallery media import and metadata tagging - Round 1	31-Oct-17 A	30-Nov-17 A	100%	44	150.00	\$6,942.00	\$0.00	\$6,942.00				Gallery media import and metadata tagging - Round 1					
	EPO-213	Gallery media import and metadata tagging - Round 2	29-Dec-17 A	31-Aug-18 A	100%	40	150.00	\$6,942.00	\$0.00	\$6,942.00				Gallery media import and metadata tagging - Round 2					
	EPO-214	Gallery media import and metadata tagging - Round 3	27-Feb-18 A	30-Mar-18 A	100%	41	150.00	\$6,942.00	\$0.00	\$6,942.00				Gallery media import and metadata tagging - Round 3					
	EPO-215	Gallery media import and metadata tagging - Round 4	21-Mar-18 A	23-May-18 A	100%	44	150.00	\$6,942.00	\$0.00	\$6,942.00				Gallery media import and metadata tagging - Round 4					
	EPO-216	Gallery media import and metadata tagging - Round 5	06-Jun-18 A	31-Aug-18 A	100%	42	150.00	\$6,942.00	\$0.00	\$6,942.00				Gallery media import and metadata tagging - Round 5					
	EPO-217	Gallery media import and metadata tagging - Round 6	01-Aug-18 A	28-Sep-18 A	100%	42	150.00	\$6,942.00	\$0.00	\$6,942.00				Gallery media import and metadata tagging - Round 6					
	EPO-218	Gallery media import and metadata tagging - FY19	01-Oct-18 A	30-Nov-18 A	100%	45	150.00	\$7,185.00	\$0.00	\$7,185.00				Gallery media import and metadata tagging - FY19					
	EPO-219	Gallery media import and metadata tagging - FY20	01-May-20	30-Sep-20	0%	108	675.00	\$33,459.75	\$0.00	\$33,459.75	181						Gallery media import and metadata tagging - FY20		
	EPO-220	Gallery media import and metadata tagging - FY21	01-Oct-20	30-Sep-21	0%	254	900.00	\$46,179.00	\$0.00	\$46,179.00	181						Gallery media import and metadata tagging - FY21		
	EPO-221	Data2Dome media library FY18 - Contract A	31-May-18 A	31-Jan-19 A	100%	190	0.00	\$0.00	\$87,020.01	\$87,020.01				Data2Dome media library FY18 - Contract A					
	EPO-222	Data2Dome media library FY18 - Contract B	31-May-18 A	29-Mar-19 A	100%	190	0.00	\$0.00	\$87,020.01	\$87,020.01				Data2Dome media library FY18 - Contract B					
	EPO-223	Data2Dome media library - Contract A	22-Jul-21	21-Apr-22	0%	190	0.00	\$0.00	\$16,010.00	\$16,010.00	115						Data2Dome media library - Contract A		
	EPO-224	Data2Dome media library FY19 - Contract B (drone)	26-Aug-19	24-Oct-19	0%	43	0.00	\$0.00	\$46,010.00	\$46,010.00	352						Data2Dome media library FY19 - Contract B (drone)		
	EPO-225	Data2Dome media library - Contract B	22-Jul-21	22-Apr-22	0%	192	0.00	\$0.00	\$31,010.00	\$31,010.00	113						Data2Dome media library - Contract B		
	EPO-226	Data2Dome media library - Contract C	22-Jul-21	22-Apr-22	0%	192	0.00	\$0.00	\$31,010.00	\$31,010.00	113						Data2Dome media library - Contract C		
	EPO-227	Data2Dome media library - Contract D	22-Jul-21	21-Apr-22	0%	191	0.00	\$0.00	\$31,010.00	\$31,010.00	114						Data2Dome media library - Contract D		
	EPO-228	Data2Dome media library - Contract E	22-Jul-21	21-Apr-22	0%	191	0.00	\$0.00	\$31,010.00	\$31,010.00	114						Data2Dome media library - Contract E		
EPO-230	Interview archive material - Group 1	19-Feb-18 A	29-Jun-18 A	100%	44	0.00	\$0.00	\$26,010.00	\$26,010.00				Interview archive material - Group 1						
EPO-231	Interview archive material - Group 2	02-Feb-21	06-Apr-21	0%	45	0.00	\$0.00	\$26,010.00	\$26,010.00	33						Interview archive material - Group 2			
EPO-232	Interview archive material - Group 3	17-Jun-21	16-Aug-21	0%	43	0.00	\$0.00	\$26,010.00	\$26,010.00	33						Interview archive material - Group 3			
EPO-233	Interview archive material - Group 4	15-Jun-22	15-Aug-22	0%	43	0.00	\$0.00	\$26,010.00	\$26,010.00	33						Interview archive material - Group 4			
EPO-234	Solar System 3D Model - Contract A	22-Jul-21	30-Sep-21	0%	50	0.00	\$0.00	\$41,010.00	\$41,010.00	255						Solar System 3D Model - Contract A			
EPO-235	Solar System 3D Model - Contract B	22-Jul-21	30-Sep-21	0%	50	0.00	\$0.00	\$41,010.00	\$41,010.00	255						Solar System 3D Model - Contract B			
EPO-236	Simplified 3D Models	02-Feb-18 A	11-May-18 A	100%	45	0.00	\$0.00	\$32,010.00	\$32,010.00				Simplified 3D Models						
EPO-237	3D Tour of LSST Facility	22-Jul-21	30-Sep-21	0%	50	0.00	\$0.00	\$16,010.00	\$16,010.00	255						3D Tour of LSST Facility			
EPO-465	Low-fidelity, non-camera simplified models	05-Mar-1																	

## LSST May 2019 Month End Forecast

Activity ID	Activity Name	Start	Finish	Physical % Complete	Original Duration	Budgeted Labor Units	Budgeted Labor Cost	Budgeted Material Cost	Budgeted Total Cost no	Total Float	FY2015 2014-10-01	FY2016 2015-10-01	FY2017 2016-10-01	FY2018 2017-10-01	FY2019 2018-10-01	FY2020 2019-10-01	FY2021 2020-10-01	FY2022 2021-10-01
LSST ME 19-05.06C Systems Engineering and Commissioning	EPO-669 Technology Refresh & Rebranding - Infrastructure	01-Feb-22	16-May-22	0%	74	1048.79	\$126,651.54	\$0.00	\$126,651.54	97								
	EPO-M6 User Interfaces Complete		14-Jan-22	0%	0	0.00	\$0.00	\$0.00	\$0.00	181								
	EPOC-801 UI Finalize Design	01-Oct-16 A	29-Sep-17 A	100%	254	2501.91	\$202,764.50	\$0.00	\$202,764.50									
	LSST ME 19-05.06C.00 Systems Engineering and Commissioning	01-Sep-14 A	24-Jun-22		2004	215339.31	\$29,170,394.52	\$6,330,136.76	\$35,500,531.28	325								
	LSST ME 19-05.06C.00.01 Interfaces	01-Sep-14 A	24-Jun-22		1866	0.00	\$0.00	\$0.00	\$0.00	325								
	COMC-11 LSE-132 Infrastructure between Summit Fac. & OCS - Phase 3 Iterations and Completion	01-Sep-14 A	15-Apr-19 A	50%	60	0.00	\$0.00	\$0.00	\$0.00	277								
	COMC-11 LSE-132 Infrastructure between Summit Fac. & OCS - Phase 3, T&S Milestone		15-Apr-19 A	100%	0	0.00	\$0.00	\$0.00	\$0.00									
	COMC-11 LSE-72 OCS-DM Software Comm ICD - Phase 3 Iterations and Completion	31-Oct-14 A	23-Aug-19	90%	59	0.00	\$0.00	\$0.00	\$0.00	278								
	COMC-11 LSE-72 OCS-DM Software Comm ICD - Phase 3, DM Milestone		23-Aug-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	278								
	COMC-11 LSE-72 OCS-DM Software Comm ICD - Phase 3 Development	01-Oct-14 A	26-Aug-19	90%	60	0.00	\$0.00	\$0.00	\$0.00	277								
COMC-11 LSE-72 OCS-DM Software Comm ICD - Phase 3, T&S Milestone		26-Aug-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	277									
COMC-21 LSE-76 Infrastructure between Summit Fac. & DM - Phase 3 Iterations and Completion		30-Sep-17 A	100%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
COMC-21 LSE-77 Infrastructure between Base Fac. & DM - Phase 3 Iterations and Completion	01-Jun-15 A	30-Mar-18 A	100%	60	0.00	\$0.00	\$0.00	\$0.00	\$0.00									
LSST ME 19-05.06C.00.02 Early Deliverables & System Integration	03-Jun-19	04-Aug-21		552	0.00	\$0.00	\$0.00	\$0.00	\$0.00	166								
COMC-01 Pre-Ship Camera Accepted		16-Dec-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00	-3								
COMC-01 Mountain-Base Network Verified		17-Sep-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00	246								
COMC-01 Base - Archive Network Verified		28-Oct-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00	360								
COMC-01 Start Early Integration and Test	05-Feb-21		0%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00	-61								
COMC-01 Camera Arrives at Summit Facility		12-Jan-21	0%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00	93								
COMC-01 Camera Ready for System Integration		04-Aug-21	0%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00	166								
COMC-01 ComCam Dewar Assembly Ready for Integration		03-Jun-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00	130								
COMC-01 ComCam Ready for System Tests		06-Nov-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00	13								
COMC-01 Telescope Top End Interface Ready for ComCam Integration	26-Oct-20		0%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00	8								
COMC-01 Start ComCam Integration on Summit		25-Jun-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00	-19								
COMC-11 ComCam Ready at Summit	26-Oct-20		0%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00	8								
COMC-11 3-mirror Telescope Ready for Optical Testing	17-Nov-20		0%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00	-43								
COMC-11 Commissioning Data Processing Cluster Ready for Commissioning	16-Sep-20		0%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00	-6								
COMC-11 DMS Base Center Complete		16-Sep-20	0%	0	0.00</													



LSST May 2019 Month End Forecast																				
Activity ID	Activity Name	Start	Finish	Physical % Complete	Original Duration	Budgeted Labor Units	Budgeted Labor Cost	Budgeted Material Cost	Budgeted Total Cost no	Total Float	FY2015 2014-10-01	FY2016 2015-10-01	FY2017 2016-10-01	FY2018 2017-10-01	FY2019 2018-10-01	FY2020 2019-10-01	FY2021 2020-10-01	FY2022 2021-10-01		
COMC-01	System Engineering FY 6 - LOE Labor	01-Oct-18 A	30-Sep-19	67%	254	5154.24	\$494,123.61	\$0.00	\$494,123.61	129							System Engineering FY 6 - LOE Labor			
	System Engineering FY 7 - LOE Labor	01-Oct-19	30-Sep-20	0%	254	8275.70	\$791,722.54	\$0.00	\$791,722.54	129							System Engineering FY 7 - LOE Labor			
	System Engineering FY 8 - LOE Labor	01-Oct-20	30-Sep-21	0%	254	10799.84	\$1,077,178.49	\$0.00	\$1,077,178.49	129							System Engineering FY 8 - LOE Labor			
	System Engineering FY 22 - LOE Labor	01-Oct-21	31-Mar-22	0%	126	5400.00	\$557,442.00	\$0.00	\$557,442.00	129								System Engineering FY 22 - LOE Labor		
	System Engineering FY 1 - LOE NonLabor	01-Sep-14 A	12-Jan-15 A	100%	42	0.00	\$0.00	\$41,560.82	\$41,560.82		System Engineering FY 1 - LOE NonLabor									
	System Engineering FY 2 - LOE NonLabor	13-Jan-15 A	30-Sep-15 A	100%	252	0.00	\$0.00	\$180,892.09	\$180,892.09		System Engineering FY 2 - LOE NonLabor									
	System Engineering FY 3 - LOE NonLabor	01-Oct-15 A	30-Sep-16 A	100%	254	0.00	\$0.00	\$181,305.50	\$181,305.50		System Engineering FY 3 - LOE NonLabor									
	System Engineering FY 3 - LOE NonLabor	01-Oct-15 A	30-Sep-16 A	100%	254	0.00	\$0.00	\$8,693.10	\$8,693.10		System Engineering FY 3 - LOE NonLabor									
	System Engineering FY 4 - LOE NonLabor	03-Oct-16 A	29-Sep-17 A	100%	254	0.00	\$0.00	\$190,392.96	\$190,392.96		System Engineering FY 4 - LOE NonLabor									
	System Engineering FY 4 - LOE NonLabor	03-Oct-16 A	29-Sep-17 A	100%	254	0.00	\$0.00	\$7,959.22	\$7,959.22		System Engineering FY 4 - LOE NonLabor									
	Procure MagicDraw MBSE Software and Needed Plugins	03-Mar-17 A	03-Mar-17 A	100%	5	0.00	\$0.00	\$76,841.70	\$76,841.70		Procure MagicDraw MBSE Software and Needed Plugins									
	Training for New MagicDraw Software	25-Apr-17 A	28-Apr-17 A	100%	5	0.00	\$0.00	\$17,000.00	\$17,000.00		Training for New MagicDraw Software									
	MagicDraw Custom Development Support	20-Feb-17 A	29-Sep-17 A	100%	88	0.00	\$0.00	\$50,000.00	\$50,000.00		MagicDraw Custom Development Support									
COMC-01	System Engineering FY 5 - LOE NonLabor	02-Oct-17 A	28-Sep-18 A	100%	253	0.00	\$0.00	\$188,821.37	\$188,821.37											
	System Engineering FY 5 - LOE NonLabor	02-Oct-17 A	28-Sep-18 A	100%	253	0.00	\$0.00	\$16,574.83	\$16,574.83											
	System Engineering FY 6 - LOE NonLabor	01-Oct-18 A	30-Sep-19	67%	254	0.00	\$0.00	\$216,432.15	\$216,432.15	255							System Engineering FY 6 - LOE NonLabor			
	System Engineering FY 6 - LOE NonLabor	01-Oct-18 A	30-Sep-19	67%	254	0.00	\$0.00	\$62,582.54	\$62,582.54	255							System Engineering FY 6 - LOE NonLabor			
	System Engineering FY 7 - LOE NonLabor	01-Oct-19	30-Sep-20	0%	254	0.00	\$0.00	\$135,502.46	\$135,502.46	255							System Engineering FY 7 - LOE NonLabor			
	System Engineering FY 7 - LOE NonLabor	01-Oct-19	30-Sep-20	0%	254	0.00	\$0.00	\$58,548.96	\$58,548.96	255							System Engineering FY 7 - LOE NonLabor			
	System Engineering FY 8 - LOE NonLabor	01-Oct-20	30-Sep-21	0%	254	0.00	\$0.00	\$151,884.29	\$151,884.29	255							System Engineering FY 8 - LOE NonLabor			
	FY18Q4 SE General Mgmt	19-Jul-18 A	28-Sep-18 A	100%	63	319.00	\$31,569.96	\$0.00	\$31,569.96					FY18Q4 SE General Mgmt						
	FY18Q4 SE Workshops and Meetings	19-Jul-18 A	28-Sep-18 A	100%	63	296.00	\$28,215.36	\$0.00	\$28,215.36					FY18Q4 SE Workshops and Meetings						
	FY18Q4 SE Planning and Review Preparation	19-Jul-18 A	28-Sep-18 A	100%	63	32.00	\$3,234.24	\$0.00	\$3,234.24					FY18Q4 SE Planning and Review Preparation						
	FY18Q4 SE Subsystem Reviews & Acceptance	19-Jul-18 A	28-Sep-18 A	100%	63	80.00	\$7,084.80	\$0.00	\$7,084.80					FY18Q4 SE Subsystem Reviews & Acceptance						
	FY18Q4 SE General Subsystem Support	19-Jul-18 A	28-Sep-18 A	100%	63	28.00	\$2,746.56	\$0.00	\$2,746.56					FY18Q4 SE General Subsystem Support						
	FY18Q4 SE Change Control Management	19-Jul-18 A	28-Sep-18 A	100%	63	48.00	\$5,051.52	\$0.00	\$5,051.52					FY18Q4 SE Change Control Management						
COMC-01	System Engineering FY 6 - LOE NonLabor	01-Oct-18 A	30-Sep-19	67%	254	0.00	\$0.00	\$62,582.54	\$62,582.54	255							System Engineering FY 6 - LOE NonLabor			
	System Engineering FY 6 - LOE NonLabor	01-Oct-18 A	30-Sep-19	67%	254	0.00	\$0.00	\$62,582.54	\$62,582.54	255							System Engineering FY 6 - LOE NonLabor			
	System Engineering FY 7 - LOE NonLabor	01-Oct-19	30-Sep-20	0%	254	0.00	\$0.00	\$135,502.46	\$135,502.46	255							System Engineering FY 7 - LOE NonLabor			
	System Engineering FY 7 - LOE NonLabor	01-Oct-19	30-Sep-20	0%	254	0.00	\$0.00	\$58,548.96	\$58,548.96	255							System Engineering FY 7 - LOE NonLabor			
	System Engineering FY 8 - LOE NonLabor	01-Oct-20	30-Sep-21	0%	254	0.00	\$0.00	\$151,884.29	\$151,884.29	255							System Engineering FY 8 - LOE NonLabor			
	FY18Q4 SE General Mgmt	19-Jul-18 A	28-Sep-18 A	100%	63	319.00	\$31,569.96	\$0.00	\$31,569.96					FY18Q4 SE General Mgmt						
	FY18Q4 SE Workshops and Meetings	19-Jul-18 A	28-Sep-18 A	100%	63	296.00	\$28,215.36	\$0.00	\$28,215.36					FY18Q4 SE Workshops and Meetings						
	FY18Q4 SE Planning and Review Preparation	19-Jul-18 A	28-Sep-18 A	100%	63	32.00	\$3,234.24	\$0.00	\$3,234.24					FY18Q4 SE Planning and Review Preparation						
	FY18Q4 SE Subsystem Reviews & Acceptance	19-Jul-18 A	28-Sep-18 A	100%	63	80.00	\$7,084.80	\$0.00	\$7,084.80					FY18Q4 SE Subsystem Reviews & Acceptance						
	FY18Q4 SE General Subsystem Support	19-Jul-18 A	28-Sep-18 A	100%	63	28.00	\$2,746.56	\$0.00	\$2,746.56					FY18Q4 SE General Subsystem Support						
	FY18Q4 SE Change Control Management	19-Jul-18 A	28-Sep-18 A	100%	63	48.00	\$5,051.52	\$0.00	\$5,051.52					FY18Q4 SE Change Control Management						
	FY18Q4 SE Risk and Opportunity Management	19-Jul-18 A	28-Sep-18 A	100%	63	34.00	\$3,578.16	\$0.00	\$3,578.16					FY18Q4 SE Risk and Opportunity Management						
	FY18Q4 SE Specifications and ICD Management	19-Jul-18 A	28-Sep-18 A	100%	63	92.00	\$9,682.08	\$0.00	\$9,682.08					FY18Q4 SE Specifications and ICD Management						
COMC-01	Simulation & Analytic Tools FY 1 - LOE Labor	02-Feb-15 A	01-Mar-15 A	100%	42	208.18	\$19,137.04	\$0.00	\$19,137.04		Simulation & Analytic Tools FY 1 - LOE Labor									
	Simulation & Analytic Tools FY 1 - LOE UW Labor	01-Apr-15 A	29-Apr-15 A	100%	42	318.67	\$38,574.35	\$0.00	\$38,574.35		Simulation & Analytic Tools FY 1 - LOE UW Labor									
	Simulation & Analytic Tools FY 1 - LOE Purdue	01-Sep-15 A	30-Sep-15 A	100%	42	0.00	\$0.00	\$32,254.63	\$32,254.63		Simulation & Analytic Tools FY 1 - LOE Purdue									
	Simulation & Analytic Tools FY 2 - LOE Labor	01-Mar-15 A	30-Sep-15 A	100%	252	2500.00	\$242,661.00	\$0.00	\$242,661.00		Simulation & Analytic Tools FY 2 - LOE Labor									
	Simulation & Analytic Tools FY 2 - LOE UW Labor	30-Apr-15 A	30-Sep-15 A	100%	252	3530.00	\$417,705.40	\$0.00	\$417,705.40		Simulation & Analytic Tools FY 2 - LOE UW Labor									
	Simulation & Analytic Tools FY 2 - LOE Purdue	01-Oct-15 A	31-Oct-15 A	100%	252	0.00	\$0.00	\$129,606.65	\$129,606.65		Simulation & Analytic Tools FY 2 - LOE Purdue									
	Integrate PhoSim as the optical engine into the LSST Integrated Model	01-Oct-15 A	30-Nov-15 A	100%	41	0.00	\$0.00	\$22,357.05	\$22,357.05		Integrate PhoSim as the optical engine into the LSST Integrated Model									
	Provide proper PhoSim configurations and validated code for LSST wavefront sensor studies	01-Dec-15 A	31-Jan-16 A	100%	41	0.00	\$0.00	\$22,357.05	\$22,357.05		Provide proper PhoSim configurations and validated code for LSST wavefront sensor studies									
	Provide proper PhoSim configuration and validated code for LSST Active Optics studies	01-Feb-16 A	31-Mar-16 A	100%	43	0.00	\$0.00	\$22,357.05	\$22,357.05		Provide proper PhoSim configuration and validated code for LSST Active Optics studies									
	Provide proper PhoSim configurations and validated code for the implementation of atmospheric optical effects	01-Apr-16 A	31-May-16 A	100%	43	0.00	\$0.00	\$22,357.05	\$22,357.05		Provide proper PhoSim configurations and validated code for the implementation of atmospheric optical effects									
	Provide proper validation for PhoSim performance in all 6 LSST wavelength bands																			



LSST May 2019 Month End Forecast																		
Activity ID	Activity Name	Start	Finish	Physical % Complete	Original Duration	Budgeted Labor Units	Budgeted Labor Cost	Budgeted Material Cost	Budgeted Total Cost no	Total Float	FY2015 2014-10-01	FY2016 2015-10-01	FY2017 2016-10-01	FY2018 2017-10-01	FY2019 2018-10-01	FY2020 2019-10-01	FY2021 2020-10-01	FY2022 2021-10-01
<div></div>	SE-198 FY18Q4 V&V Planning	19-Jul-18 A	28-Sep-18 A	100%	63	328.00	\$29,714.88	\$0.00	\$29,714.88					<div></div>	FY18Q4 V&V Planning			
	SE-479 OSS Verification Element/Ticket Population	30-Oct-18 A	29-Mar-19 A	100%	63	547.00	\$61,174.06	\$0.00	\$61,174.06					<div></div>	OSS Verification Element/Ticket Population			
	SE-803 Phase 1 System Verification Plan Detailing	31-Jan-19 A	29-Mar-19 A	100%	61	288.00	\$32,062.36	\$0.00	\$32,062.36					<div></div>	Phase 1 System Verification Plan Detailing			
	LSST ME 19-05.06C.01.05 Tool Dev & Customization																	
	SE-199 Subsystem MBSE Model Integration and TMA Struct	19-Jul-18 A	28-Sep-18 A	100%	63	52.00	\$4,271.52	\$0.00	\$4,271.52					<div></div>	Subsystem MBSE Model Integration and TMA Structural Decomposition			
	SE-200 FY18Q4 Work Management Tool	19-Jul-18 A	28-Sep-18 A	100%	63	80.00	\$8,419.20	\$0.00	\$8,419.20					<div></div>	FY18Q4 Work Management Tool			
	SE-201 FY18Q4 SQuaSH Extensions for System Verification	19-Jul-18 A	28-Sep-18 A	100%	63	31.00	\$3,262.44	\$0.00	\$3,262.44					<div></div>	FY18Q4 SQuaSH Extensions for System Verification			
	SE-481 Subsystem MBSE Model Integration and TMA Struct	31-Oct-18 A	07-Jan-19 A	100%	63	92.00	\$10,020.64	\$0.00	\$10,020.64					<div></div>	Subsystem MBSE Model Integration and TMA Structural Decomposition			
	SE-482 Customization of Work Management JIRA Project ar	31-Oct-18 A	06-Jan-19 A	100%	63	16.00	\$1,742.72	\$0.00	\$1,742.72					<div></div>	Customization of Work Management JIRA Project and Trade Study of CMMS Tools			
	SE-483 SQuaSH V&V Feature Development	30-Oct-18 A	29-Mar-19 A	100%	63	13.00	\$1,415.96	\$0.00	\$1,415.96					<div></div>	SQuaSH V&V Feature Development			
	SE-805 Subsystem MBSE Model Integration and Structural I	31-Jan-19 A	29-Mar-19 A	100%	61	80.00	\$8,713.60	\$0.00	\$8,713.60					<div></div>	Subsystem MBSE Model Integration and Structural Decomposition			
	SE-806 Design and Implement WMS Pilot Program	30-Jan-19 A	29-Mar-19 A	100%	61	200.00	\$21,784.00	\$0.00	\$21,784.00					<div></div>	Design and Implement WMS Pilot Program			
	SE-807 System Verification Metric Development with New SC	01-Mar-19 A	29-Mar-19 A	100%	61	8.00	\$871.36	\$0.00	\$871.36					<div></div>	System Verification Metric Development with New SQuaSH System			
	LSST ME 19-05.06C.01.06 System Analyses																	
	SE-202 FY18Q4 Systems Performance Analysis	19-Jul-18 A	28-Sep-18 A	100%	63	0.00	\$0.00	\$0.00	\$0.00					<div></div>	FY18Q4 Systems Performance Analysis			
	SE-203 FY18Q4 Hazard Analysis	19-Jul-18 A	28-Sep-18 A	100%	63	24.00	\$2,882.16	\$0.00	\$2,882.16					<div></div>	FY18Q4 Hazard Analysis			
	SE-204 FY18Q4 FMECA	19-Jul-18 A	28-Sep-18 A	100%	63	20.00	\$2,104.80	\$0.00	\$2,104.80					<div></div>	FY18Q4 FMECA			
	SE-205 FY18Q4 OpsCon	19-Jul-18 A	28-Sep-18 A	100%	63	60.00	\$4,713.12	\$0.00	\$4,713.12					<div></div>	FY18Q4 OpsCon			
	SE-484 Establish System Performance Baseline	30-Oct-18 A	22-Dec-18 A	100%	63	12.00	\$1,723.08	\$0.00	\$1,723.08					<div></div>	Establish System Performance Baseline			
	SE-485 Clean up existing Hazard Analysis content	31-Oct-18 A	07-Jan-19 A	100%	63	16.00	\$1,742.72	\$0.00	\$1,742.72					<div></div>	Clean up existing Hazard Analysis content			
	SE-808 Establish System Performance Baseline	31-Jan-19 A	29-Mar-19 A	100%	61	16.00	\$2,297.44	\$0.00	\$2,297.44					<div></div>	Establish System Performance Baseline			
	SE-809 Clean up existing Hazard Analysis content - phase 2	03-Jun-19	27-Aug-19	0%	61	40.00	\$4,356.80	\$0.00	\$4,356.80	533					<div></div>	Clean up existing Hazard Analysis content - phase 2		
	SE-810 Clean up existing FMECA content	03-Jun-19	27-Aug-19	0%	61	40.00	\$4,356.80	\$0.00	\$4,356.80	533					<div></div>	Clean up existing FMECA content		
	SE-811 Develop OpsCon Use Cases	30-Jan-19 A	29-Mar-19 A	100%	61	80.00	\$8,713.60	\$0.00	\$8,713.60					<div></div>	Develop OpsCon Use Cases			
	LSST ME 19-05.06C.02 Commissioning																	
	LSST ME 19-05.06C.02.00 Milestones																	
	LSST ME 19-05.06C.02.00.00 Early Subsystem Assembly &																	
	COMC DMS Base Center Approved for System I&T		16-Sep-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	391								
	COMC Rotator/Hexapod Testing at Vendor	28-Jun-17 A	01-Jan-19 A	100%	318	0.00	\$0.00	\$0.00	\$0.00					<div></div>	Rotator/Hexapod Testing at Vendor			
	COMC Rotator/Hexapod Pre-Ship Acceptance		01-Jan-19 A	100%	0	0.00	\$0.00	\$0.00	\$0.00					<div></div>	Rotator/Hexapod Pre-Ship Acceptance			
	COMC M2+Cell Optical Testing at Excels	01-Oct-18 A	31-Oct-18 A	100%	27	0.00	\$0.00	\$0.00	\$0.00					<div></div>	M2+Cell Optical Testing at Excels			
	COMC M2 Pre-Ship Acceptance		31-Oct-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00					<div></div>	M2 Pre-Ship Acceptance			
	COMC TMA Testing at Vendor	01-Nov-16 A	19-Nov-18 A	100%	281	0.00	\$0.00	\$0.00	\$0.00					<div></div>	TMA Testing at Vendor			
	COMC TMA Pre-Ship Acceptance		19-Nov-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00					<div></div>	TMA Pre-Ship Acceptance			
	COMC M1M3+Cell Integration & Optical Testing at SOML	15-Nov-18 A	15-Feb-19 A	100%	385	0.00	\$0.00	\$0.00	\$0.00					<div></div>	M1M3+Cell Integration & Optical Testing at SOML			
	COMC TS M1M3 Pre-Ship Acceptance		03-Apr-19 A	0%	0	0.00	\$0.00	\$0.00	\$0.00					<div></div>	TS M1M3 Pre-Ship Acceptance			
	COMC Coating Chamber Testing at Vendor	11-Jun-18 A	14-Aug-18 A	100%	213	0.00	\$0.00	\$0.00	\$0.00					<div></div>	Coating Chamber Testing at Vendor			
	COMC Coating Chamber Pre-Ship Acceptance		14-Aug-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00					<div></div>	Coating Chamber Pre-Ship Acceptance			
	COMC Summit Facility Inspection	28-Feb-18 A	01-Jan-19 A	100%	134	0.00	\$0.00	\$0.00	\$0.00					<div></div>	Summit Facility Inspection			
	COMC Summit Facility Inspection Complete		01-Jan-19 A	100%	0	0.00	\$0.00	\$0.00	\$0.00					<div></div>	Summit Facility Inspection Complete			
	COMC TMA In-Situ Testing	06-Jul-20	21-Oct-20	0%	77	0.00	\$0.00	\$0.00	\$0.00	10					<div></div>	TMA In-Situ Testing		
	COMC TMA Pre-Commissioning Acceptance		21-Oct-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	10					<div></div>	TMA Pre-Commissioning Acceptance		
	COMC Mirror Coating & Integration	03-Jun-19	08-Oct-20	0%	344	0.00	\$0.00	\$0.00	\$0.00	-16					<div></div>	Mirror Coating & Integration		
	COMC Mirror Integration Complete		08-Oct-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	-16					<div></div>	Mirror Integration Complete		
	COMC Telescope Approved for System I&T		05-Feb-21	0%	0	0.00	\$0.00	\$0.00	\$0.00	-61					<div></div>	Telescope Approved for System I&T		
	COMC Base Facility Finish & Inspection	05-Nov-18 A	05-Nov-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00					<div></div>	Base Facility Finish & Inspection			
	COMC Base Facility Inspection Complete		05-Nov-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00					<div></div>	Base Facility Inspection Complete			
	COMC MTN-Base Network Full BW (2 x 100 Gbps)		02-Apr-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00					<div></div>	MTN-Base Network Full BW (2 x 100 Gbps)			
	COMC Base - Archive Network Functional 100 Gbps		28-Oct-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	360					<div></div>	Base - Archive Network Functional 100 Gbps		
	COMC Base Infrastructure Pre-Ship Acceptance		03-Jun-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	123					<div></div>	Base Infrastructure Pre-Ship Acceptance		
	COMC Base Com. Cluster Test & Verification		16-Sep-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	36					<div></div>	Base Com. Cluster Test & Verification		
	COMC Com. Cluster R8.1 Pre-Commissioning Acceptance		16-Sep-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	36					<div></div>	Com. Cluster R8.1 Pre-Commissioning Acceptance		
	COMC Base-Archive Network Full BW (100 Gbps)	16-Sep-20		0%	0	0.00	\$0.00	\$0.00	\$0.00	391					<div></div>	Base-Archive Network Full BW (100 Gbps)		
	COMC Filter Mechanisms Testing & Verification at IN2P3	12-Apr-19 A	09-Oct-19	0%	25	0.00	\$0.00	\$0.00	\$0.00	29					<div></div>	Filter Mechanisms Testing & Verification at IN2P3		
	COMC Filter Mechanism Pre-Ship Acceptance		09-Oct-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	29					<div></div>	Filter Mechanism Pre-Ship Acceptance		
	COMC 1st Production Science Raft Acceptance		26-May-17 A	100%	0	0.00	\$0.00	\$0.00	\$0.00					<div></div>	1st Production Science Raft Acceptance			
	COMC L3 Assembly, Test and Verification at Vendor	10-Oct-19	10-Oct-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	303					<div></div>	L3 Assembly, Test and Verification at Vendor		
	COMC L3 Pre-Ship Acceptance		10-Oct-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	303					<div></div>	L3 Pre-Ship Acceptance		
	COMC Shutter Testing at SLAC	29-Aug-19	01-Oct-19	0%	23	0.00	\$0.00	\$0.00	\$0.00	39					<div></div>	Shutter Testing at SLAC		
	COMC Shutter Pre-Integration Acceptance		01-Oct-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	39					<div></div>	Shutter Pre-Integration Acceptance		
	COMC Corner Rafts Pre-Ship Acceptance		30-Sep-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	162					<div></div>	Corner Rafts Pre-Ship Acceptance		
	COMC Cryostat+FPA Testing at SLAC	01-May-19 A	30-Sep-19	0%	19	0.00	\$0.00	\$0.00	\$0.00	162					<div></div>	Cryostat+FPA Testing at SLAC		
	COMC Cryostat+FPA Pre-Integration Acceptance		30-Sep-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	162					<div></div>	Cryostat+FPA Pre-Integration Acceptance		
	COMC L1L2 Testing at Vendor	12-Jun-19	09-Oct-19	90%	84	0.00	\$0.00	\$0.00	\$0.00	303					<div></div>	L1L2 Testing at Vendor		
	COMC L1L2 Pre-Ship Acceptance		10-Oct-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	303					<div></div>	L1L2 Pre-Ship Acceptance		
	COMC Full Filter Complement Acceptance		30-Sep-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	304					<div></div>	Full Filter Complement Acceptance		
	COMC Camera Pre-Ship Acceptance		16-Dec-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	93					<div></div>	Camera Pre-Ship Acceptance		
	COMC Camera Received @ Summit		12-Jan-21	0%	0	0.00	\$0.00	\$0.00	\$0.00	93					<div></div>	Camera Received @ Summit		
	COMC Camera Approved for System I&T		04-Aug-21	0%	0	0.00	\$0.00	\$0.00	\$0.00	166					<div></div>	Camera Approved for System I&T		
	COMC Archive Center Ready for System I&T		28-Oct-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	360					<div></div>	Archive Center Ready for System I&T		
	LSST ME 19-05.06C.02.00.01 Data Delivery																	
	COMC Start of On-Sky Data from Auxiliary Telescope	12-Mar-20	10-Feb-22	0%	0	0.00	\$0.00	\$0.00	\$0.00	17					<div></div>	Start of On-Sky Data from Auxiliary Telescope		



LSST May 2019 Month End Forecast																			
Activity ID	Activity Name	Start	Finish	Physical % Complete	Original Duration	Budgeted Labor Units	Budgeted Labor Cost	Budgeted Material Cost	Budgeted Total Cost no	Total Float		FY2015 2014-10-01	FY2016 2015-10-01	FY2017 2016-10-01	FY2018 2017-10-01	FY2019 2018-10-01	FY2020 2019-10-01	FY2021 2020-10-01	FY2022 2021-10-01
COMC	Start of On-Sky & Calibration Data with ComCam	05-Feb-21		0%	0	0.00	\$0.00	\$0.00	\$0.00	-61								Start of On-Sky & Calibration Data with Com	
	Sustained Observing with ComCam	17-May-21		0%	0	0.00	\$0.00	\$0.00	\$0.00	7								Sustained Observing with ComCam	
	Start of LSSTCam re-Verification	19-Apr-21		0%	0	0.00	\$0.00	\$0.00	\$0.00	233								Start of LSSTCam re-Verification	
	Start of On-Sky & Calibration Data with LSSTCam	06-Oct-21		0%	0	0.00	\$0.00	\$0.00	\$0.00	112								Start of On-Sky & Calibration Data with LSSTCam	
	Sustained Observing with LSSTCam	23-Dec-21		0%	0	0.00	\$0.00	\$0.00	\$0.00	-27								Sustained Observing with LSSTCam	
COMC	Start of Science Verification mini-Surveys	10-Feb-22		0%	0	0.00	\$0.00	\$0.00	\$0.00	-61								Start of Science Verification mini-Surveys	
LSST ME 19-05.06C.02.00.02 Subsystem Readiness		01-Oct-18 A	24-Jun-22		1068	0.00	\$0.00	\$0.00	\$0.00	325									
COMC	ComCam Optics & Filters Ready for Integration in tu		01-Feb-19 A	100%	0	0.00	\$0.00	\$0.00	\$0.00									ComCam Optics & Filters Ready for Integration in tu	
COMC	Summit Network Available		01-Oct-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00									Summit Network Available	
COMC	Summit Facility Computer Room Available		01-Oct-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00									Summit Facility Computer Room Available	
COMC	Summit Control Room Available		15-Jul-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	221								Summit Control Room Available	
COMC	Engineering Facility Database Functional		29-Jul-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	171								Engineering Facility Database Functional	
COMC	Dome Installation Substantial Completion		04-Oct-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	-61								Dome Installation Substantial Completion	
COMC	Summit Facility Camera Utility Room Ready		08-Aug-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	233								Summit Facility Camera Utility Room Ready	
COMC	Camera Facility Fiber Optic Lines Ready		22-Jan-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	122								Camera Facility Fiber Optic Lines Ready	
COMC	Camera Facility Refrigeration Lines Ready		22-Jan-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	122								Camera Facility Refrigeration Lines Ready	
COMC	Summit Facility White Room ready		02-Apr-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	894								Summit Facility White Room ready	
COMC	Camera Staging Area Utilities Ready		25-Mar-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	77								Camera Staging Area Utilities Ready	
COMC	Summit Facility Clean Room Ready		02-Apr-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	71								Summit Facility Clean Room Ready	
COMC	ComCam Dewar & Imaging System Ready for AI&T		03-Jun-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	1094								ComCam Dewar & Imaging System Ready for AI&T at Slac	
COMC	ComCam Dewar Ready for AI&T in Tucson		14-Jun-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	1094								ComCam Dewar Ready for AI&T in Tucson	
COMC	Base Facility Data Center Building + Utilities Ready		30-Aug-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	147								Base Facility Data Center Building + Utilities Ready	
COMC	TMA Final Tests Start		06-Jul-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	823								TMA Final Tests Start	
COMC	OCS Available on Summit		26-Aug-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	281								OCS Available on Summit	
COMC	ComCam arrives at summit		25-Jun-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	-19								ComCam arrives at summit	
COMC	TCS w/WFS Available on Summit		03-Jun-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	325								TCS w/WFS Available on Summit	
COMC	Global Interlock System Ready		14-Jul-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	80								Global Interlock System Ready	
COMC	Auxiliary Telescope + Spectrograph Ready		11-Mar-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	169								Auxiliary Telescope + Spectrograph Ready	
COMC	ComCam Ready to Start Early System AI&T		30-Oct-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	-19								ComCam Ready to Start Early System AI&T	
COMC	Telescope 3-Mirror Testing Starts		17-Nov-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	728								Telescope 3-Mirror Testing Starts	
COMC	Telescope Ready to Start Early System AI&T	05-Feb-21		0%	0	0.00	\$0.00	\$0.00	\$0.00	675								Telescope Ready to Start Early System AI&T	
COMC	Camera Ready for Full System AI&T		24-May-21	0%	0	0.00	\$0.00	\$0.00	\$0.00	1								Camera Ready for Full System AI&T	
COMC	Telescope Ready for Full System AI&T		04-Feb-21	0%	0	0.00	\$0.00	\$0.00	\$0.00	77								Telescope Ready for Full System AI&T	
COMC	DMS Ready for Full system AI&T		05-Feb-21	0%	0	0.00	\$0.00	\$0.00	\$0.00	77								DMS Ready for Full system AI&T	
COMC	Early System AI&T Complete		25-Aug-21	0%	0	0.00	\$0.00	\$0.00	\$0.00	280								Early System AI&T Complete	
COMC	Ready to Start Full System AI&T		10-Aug-21	0%	0	0.00	\$0.00	\$0.00	\$0.00	-55								Ready to Start Full System AI&T	
COMC	Full System AI&T Complete		09-Feb-22	0%	0	0.00	\$0.00	\$0.00	\$0.00	-61								Full System AI&T Complete	
COMC	Science Verification Complete		24-Jun-22	0%	0	0.00	\$0.00	\$0.00	\$0.00	-61								Science Verification Complete	
LSST ME 19-05.06C.02.01 Commissioning Management		01-Oct-15 A	24-Jun-22		1710	40214.32	\$6,090,734.44	\$3,309,672.38	\$9,400,406.82	325									
LSST ME 19-05.06C.02.01.01 MREFC Personell		03-Oct-16 A	31-Mar-22		1395	22340.71	\$3,186,171.89	\$0.00	\$3,186,171.89	129									
COMC	Systems Scientist FY-17 - LOE Labor LSST	03-Oct-16 A	29-Sep-17 A	100%	254	1440.00	\$251,884.80	\$0.00	\$251,884.80									Systems Scientist FY-17 - LOE Labor LSST	
COMC	Systems Scientist FY-18 - LOE Labor LSST	02-Oct-17 A	28-Sep-18 A	100%	253	2465.00	\$400,568.80	\$0.00	\$400,568.80									Systems Scientist FY-18 - LOE Labor LSST	
COMC	Systems Scientist FY-19 - LOE Labor LSST	01-Oct-18 A	30-Sep-19	67%	254	1424.00	\$266,829.12	\$0.00	\$266,829.12	129								Systems Scientist FY-19 - LOE Labor LSST	
COMC	Systems Scientist FY-20 - LOE Labor LSST	01-Oct-19	30-Sep-20	0%	254	2864.08	\$490,180.61	\$0.00	\$490,180.61	129								Systems Scientist FY-20 - LOE Labor LSST	
COMC	Systems Scientist FY-21 - LOE Labor LSST	01-Oct-20	30-Sep-21	0%	254	2864.08	\$507,352.38	\$0.00	\$507,352.38	129								Systems Scientist FY-21 - LOE Labor LSST	
COMC	Commissioning Management Support FY-18 - LOE Labor	01-Jan-18 A	28-Sep-18 A	100%	189	550.00	\$39,534.00	\$0.00	\$39,534.00									Commissioning Management Support FY-18 - LOE Labor	
COMC	Commissioning Management Support FY-19 - LOE Labor	01-Oct-18 A	30-Sep-19	67%	254	1607.00	\$170,746.85	\$0.00	\$170,746.85	129								Commissioning Management Support FY-19 - LOE Labor	
COMC	Commissioning Management Support FY-20 - LOE Labor	01-Oct-19	30-Sep-20	0%	254	1350.00	\$103,950.00	\$0.00	\$103,950.00	129								Commissioning Management Support FY-20 - LOE Labor	
COMC	Commissioning Management Support FY-21 - LOE Labor	01-Oct-20	30-Sep-21	0%	254	5810.00	\$627,974.30	\$0.00	\$627,974.30	129								Commissioning Management Support FY-21 - LOE Labor	
COMC	Systems Scientist FY-22- LOE Labor LSST	01-Oct-21	31-Mar-22	0%	126	1429.50	\$262,296.96	\$0.00	\$262,296.96	129								Systems Scientist FY-22- LOE Labor LSST	
COMC	Commissioning Management Support FY-22 - LOE Labor	01-Oct-21	31-Mar-22	0%	126	537.05	\$64,854.06	\$0.00	\$64,854.06	129								Commissioning Management Support FY-22 - LOE Labor	
LSST ME 19-05.06C.02.01.02 DOE Personell		01-Oct-19	30-Sep-21		508	5760.00	\$1,312,934.40	\$0.00	\$1,312,934.40	438									
COMC	C2T: FY-20 - LOE Labor	01-Oct-19	30-Sep-20	0%	254	2880.00	\$645,177.60	\$0.00	\$645,177.60	438								C2T: FY-20 - LOE Labor	
COMC	C2T: FY-21 - LOE Labor	01-Oct-20	30-Sep-21	0%	254	2880.00	\$667,756.80	\$0.00	\$667,756.80	438								C2T: FY-21 - LOE Labor	
LSST ME 19-05.06C.02.01.03 Materials and Supplies		17-Apr-17 A	31-Mar-22		1259	0.00	\$0.00	\$2,178,269.53	\$2,178,269.53	129									
COMC	Comissioning Materials, Supplies, and Travel FY-18 LSST	01-Jan-18 A	28-Sep-18 A	100%	189	0.00	\$0.00	\$163,327.29	\$163,327.29									Comissioning Materials, Supplies, and Travel FY-18 LSST	
COMC	Comissioning Materials, Supplies, and Travel FY-19 LSST	01-Oct-18 A	30-Sep-19	67%	147	0.00	\$0.00	\$150,531.00	\$150,531.00	129								Comissioning Materials, Supplies, and Travel FY-19 LSST	
COMC	Comissioning Materials, Supplies, and Travel FY-20 LSST	01-Oct-19	30-Sep-20	0%	254	0.00	\$0.00	\$587,089.00	\$587,089.00	129								Comissioning Materials, Supplies, and Travel FY-20 LSST	
COMC	Comissioning Materials, Supplies, and Travel FY-21 LSST	01-Oct-20	30-Sep-21	0%	254	0.00	\$0.00	\$842,004.73	\$842,004.73	129								Comissioning Materials, Supplies, and Travel FY-21 LSST	
COMC	Comissioning Materials, Supplies, and Travel FY-17 DOE	17-Apr-17 A	28-Sep-17 A	100%	118	0.00	\$0.00	\$0.00	\$0.00									Comissioning Materials, Supplies, and Travel FY-17 DOE	
COMC	Comissioning Materials, Supplies, and Travel FY-18 DOE	01-Oct-17 A	28-Sep-18 A	100%	253	0.00	\$0.00	\$0.00	\$0.00									Comissioning Materials, Supplies, and Travel FY-18 DOE	
COMC	Comissioning Materials, Supplies, and Travel FY-22 LSST	01-Oct-21	31-Mar-22	0%	126	0.00	\$0.00	\$435,317.51	\$435,317.51	129								Comissioning Materials, Supplies, and Travel FY-22 LSST	
LSST ME 19-05.06C.02.01.04 External Support		01-Oct-19	31-Mar-22		634	0.00	\$0.00	\$1,131,402.85	\$1,131,402.85	129									
COMC	SVT: FY20 DRP V&V Support UC Davis	01-Oct-19	30-Sep-20	0%	254	0.00	\$0.00	\$100,000.00	\$100,000.00	255								SVT: FY20 DRP V&V Support UC Davis	
COMC	SVT: FY20 DRP V&V Support UC Davis	01-Oct-20	30-Sep-21	0%	254	0.00	\$0.00	\$100,000.00	\$100,000.00	255								SVT: FY20 DRP V&V Support UC Davis	
COMC	SVT: FY-20 - Sabbatical Support	01-Oct-19	30-Sep-20	0%	254	0.00	\$0.00	\$400,000.00	\$400,000.00	129								SVT: FY-20 - Sabbatical Support	
COMC	SVT: FY-21 - Sabbatical Support	01-Oct-20	30-Sep-21	0%	254	0.00	\$0.00	\$400,000.00	\$400,000.00	255								SVT: FY-21 - Sabbatical Support	
COMC	SVT: FY22 DRP V&V Support UC Davis	01-Oct-20	30-Sep-21	0%	254	0.00	\$0.00	\$101,010.00	\$101,010.00	129								SVT: FY22 DRP V&V Support UC Davis	
COMC	C2T: FY-22 - COM Image Simulation Support Purdu	01-Oct-21	31-Mar-22	0%	126	0.00	\$0.00	\$30,392.85	\$30,392.85	129								C2T: FY-22 - COM Image Simulation Support Purdu	
LSST ME 19-05.06C.02.01.05 Data Services and Processing		12-Mar-20	23-Jun-22		584	12113.61	\$1,591,628.16	\$0.00	\$1,591,628.16	69									
LSST ME 19-05.06C.02.01.05.01 LDF-offered Services		12-Mar-20	23-Jun-22		584	3580.85	\$521,677.33	\$0.00	\$521,677.33	69									
NC:	NCSA Start Milestone	12-Mar-20		0%	0	0.00	\$0.00	\$0.00	\$0.00	130								NCSA Start Milestone	

LSST May 2019 Month End Forecast

Activity ID	Activity Name		Start	Finish	Physical % Complete	Original Duration	Budgeted Labor Units	Budgeted Labor Cost	Budgeted Material Cost	Budgeted Total Cost no	Total Float	FY2015 2014-10-01	FY2016 2015-10-01	FY2017 2016-10-01	FY2018 2017-10-01	FY2019 2018-10-01	FY2020 2019-10-01	FY2021 2020-10-01	FY2022 2021-10-01	
LSST ME 19-05.06C.02.01.05.02 Reuseable Production Services	NC:	EFD ETL Service FY20	12-Mar-20	29-Sep-20	0%	143	302.40	\$45,547.34	\$0.00	\$45,547.34	130						<div></div>	EFD ETL Service FY20		
	NC:	EFD ETL Service FY21	30-Sep-20	29-Sep-21	0%	254	72.00	\$9,811.58	\$0.00	\$9,811.58	130							<div></div>	EFD ETL Service FY21	
	NC:	EFD ETL Service FY22	30-Sep-21	30-Mar-22	0%	126	6.69	\$943.54	\$0.00	\$943.54	130							<div></div>	EFD ETL Service FY22	
	NC:	Spectrograph Archiving Service FY20	12-Mar-20	29-Sep-20	0%	143	561.60	\$81,112.46	\$0.00	\$81,112.46	130							<div></div>	Spectrograph Archiving Service FY20	
	NC:	Spectrograph Archiving Service FY21	30-Sep-20	29-Sep-21	0%	254	129.60	\$17,660.84	\$0.00	\$17,660.84	130							<div></div>	Spectrograph Archiving Service FY21	
	NC:	Spectrograph Archiving Service FY22	30-Sep-21	30-Mar-22	0%	126	10.70	\$1,509.67	\$0.00	\$1,509.67	130							<div></div>	Spectrograph Archiving Service FY22	
	NC:	ComCam Archiving Service FY21	05-Feb-21	06-Apr-21	0%	42	24.00	\$3,270.96	\$0.00	\$3,270.96	130							<div></div>	ComCam Archiving Service FY21	
	NC:	LSSTCam Archiving Service FY21	07-Apr-21	29-Sep-21	0%	125	125.81	\$18,141.77	\$0.00	\$18,141.77	130							<div></div>	LSSTCam Archiving Service FY21	
	NC:	LSSTCam Archiving Service FY22	30-Sep-21	30-Mar-22	0%	126	9.91	\$1,398.30	\$0.00	\$1,398.30	130							<div></div>	LSSTCam Archiving Service FY22	
	NC:	LSSTCam Initial Prompt Processing Services FY21	08-Dec-21	27-Dec-21	0%	14	52.66	\$8,129.01	\$0.00	\$8,129.01	69							<div></div>	LSSTCam Initial Prompt Processing Services FY21	
	NC:	LSSTCam Initial Prompt Processing Services FY22	28-Dec-21	23-Jun-22	0%	126	55.17	\$8,543.82	\$0.00	\$8,543.82	69							<div></div>	LSSTCam Initial Prompt Processing Services FY22	
	NC:	LSSTCam Prompt Processing Service for Alert Prod	08-Dec-21	27-Dec-21	0%	14	35.10	\$5,419.34	\$0.00	\$5,419.34	69							<div></div>	LSSTCam Prompt Processing Service for Alert Prod	
	NC:	LSSTCam Prompt Processing Service for Alert Prod	28-Dec-21	23-Jun-22	0%	126	85.82	\$12,867.43	\$0.00	\$12,867.43	69							<div></div>	LSSTCam Prompt Processing Service for Alert Prod	
	NC:	OCS-driven Batch Processing Service FY20	12-Mar-20	29-Sep-20	0%	143	331.20	\$49,340.02	\$0.00	\$49,340.02	130							<div></div>	OCS-driven Batch Processing Service FY20	
	NC:	OCS-driven Batch Processing Service FY21	30-Sep-20	29-Sep-21	0%	254	72.00	\$9,811.58	\$0.00	\$9,811.58	130							<div></div>	OCS-driven Batch Processing Service FY21	
	NC:	OCS-driven Batch Processing Service FY22	30-Sep-21	30-Mar-22	0%	126	6.69	\$943.54	\$0.00	\$943.54	130							<div></div>	OCS-driven Batch Processing Service FY22	
	NC:	ComCam Offline L1 Processing Services FY21	05-Feb-21	14-May-21	0%	70	240.00	\$35,487.36	\$0.00	\$35,487.36	129							<div></div>	ComCam Offline L1 Processing Services FY21	
	NC:	LSSTCam Offline L1 Processing Services FY21	17-May-21	30-Sep-21	0%	98	216.49	\$31,980.28	\$0.00	\$31,980.28	129							<div></div>	LSSTCam Offline L1 Processing Services FY21	
	NC:	LSSTCam Offline L1 Processing Services FY22	01-Oct-21	31-Mar-22	0%	126	53.12	\$8,146.82	\$0.00	\$8,146.82	129							<div></div>	LSSTCam Offline L1 Processing Services FY22	
	NC:	Observatory Operations Data Service FY21	05-Feb-21	29-Sep-21	0%	167	90.32	\$12,309.87	\$0.00	\$12,309.87	130							<div></div>	Observatory Operations Data Service FY21	
	NC:	Observatory Operations Data Service FY22	30-Sep-21	30-Mar-22	0%	126	12.39	\$1,747.87	\$0.00	\$1,747.87	130							<div></div>	Observatory Operations Data Service FY22	
	NC:	QA and Base Computing Endpoint Service FY20	12-Mar-20	29-Sep-20	0%	143	504.00	\$72,811.58	\$0.00	\$72,811.58	130							<div></div>	QA and Base Computing Endpoint Service FY20	
	NC:	QA and Base Computing Endpoint Service FY21	30-Sep-20	29-Sep-21	0%	254	129.60	\$17,660.84	\$0.00	\$17,660.84	130							<div></div>	QA and Base Computing Endpoint Service FY21	
	NC:	QA and Base Computing Endpoint Service FY22	30-Sep-21	30-Mar-22	0%	126	10.70	\$1,509.67	\$0.00	\$1,509.67	130							<div></div>	QA and Base Computing Endpoint Service FY22	
	NC:	Services for Designated Offline Campaign Processing	05-Feb-21	22-Jun-21	0%	97	264.00	\$39,036.10	\$0.00	\$39,036.10	130							<div></div>	Services for Designated Offline Campaign Processing	
	NC:	Services for Designated Offline Campaign Processing	23-Jun-21	29-Sep-21	0%	70	146.64	\$21,661.52	\$0.00	\$21,661.52	130							<div></div>	Services for Designated Offline Campaign Processing	
	NC:	Services for Designated Offline Campaign Processing	30-Sep-21	30-Mar-22	0%	126	32.22	\$4,874.23	\$0.00	\$4,874.23	130							<div></div>	Services for Designated Offline Campaign Processing	
	LSST ME 19-05.06C.02.01.05.02 Reuseable Production Services			12-Mar-20	30-Mar-22		523	4313.43	\$582,076.54	\$0.00	\$582,076.54	130								
	NC:	Prompt Processing Service FY21	23-Jun-21	29-Sep-21	0%	70	168.32	\$22,940.42	\$0.00	\$22,940.42	130							<div></div>	Prompt Processing Service FY21	
	NC:	Prompt Processing Service FY22	30-Sep-21	30-Mar-22	0%	126	40.90	\$5,767.98	\$0.00	\$5,767.98	130							<div></div>	Prompt Processing Service FY22	
	NC:	Internal Transient Event Handling Service FY21	05-Feb-21	29-Sep-21	0%	167	390.25	\$53,187.53	\$0.00	\$53,187.53	130							<div></div>	Internal Transient Event Handling Service FY21	
	NC:	Internal Transient Event Handling Service FY22	30-Sep-21	30-Mar-22	0%	126	40.90	\$5,767.98	\$0.00	\$5,767.98	130							<div></div>	Internal Transient Event Handling Service FY22	
	NC:	Telemetry Gatewaying Service FY21	05-Feb-21	29-Sep-21	0%	167	390.25	\$53,187.53	\$0.00	\$53,187.53	130							<div></div>	Telemetry Gatewaying Service FY21	
	NC:	Telemetry Gatewaying Service FY22	30-Sep-21	30-Mar-22	0%	126	40.90	\$5,767.98	\$0.00	\$5,767.98	130							<div></div>	Telemetry Gatewaying Service FY22	
	NC:	Master Batch Job Scheduling Service FY20	12-Mar-20	29-Sep-20	0%	143	619.20	\$81,542.45	\$0.00	\$81,542.45	130							<div></div>	Master Batch Job Scheduling Service FY20	
	NC:	Master Batch Job Scheduling Service FY21	30-Sep-20	29-Sep-21	0%	254	532.80	\$72,605.66	\$0.00	\$72,605.66	130							<div></div>	Master Batch Job Scheduling Service FY21	
	NC:	Master Batch Job Scheduling Service FY22	30-Sep-21	30-Mar-22	0%	126	44.16	\$6,227.38	\$0.00	\$6,227.38	130							<div></div>	Master Batch Job Scheduling Service FY22	
	NC:	LSST Science Platform Hosting Service FY20	12-Mar-20	29-Sep-20	0%	143	619.20	\$81,542.45	\$0.00	\$81,542.45	130							<div></div>	LSST Science Platform Hosting Service FY20	
	NC:	LSST Science Platform Hosting Service FY21	30-Sep-20	29-Sep-21	0%	254	532.80	\$72,605.66	\$0.00	\$72,605.66	130							<div></div>	LSST Science Platform Hosting Service FY21	
	NC:	LSST Science Platform Hosting Service FY22	30-Sep-21	30-Mar-22	0%	126	44.16	\$6,227.38	\$0.00	\$6,227.38	130							<div></div>	LSST Science Platform Hosting Service FY22	
	NC:	Implementation of File Management Policies and High Availability	12-Mar-20	30-Sep-20	0%	144	277.20	\$36,504.47	\$0.00	\$36,504.47	181							<div></div>	Implementation of File Management Policies and High Availability	
	NC:	Implementation of File Management Policies and High Availability	01-Oct-20	30-Sep-21	0%	254	532.80	\$72,615.31	\$0.00	\$72,615.31	181							<div></div>	Implementation of File Management Policies and High Availability	
	NC:	Implementation of File Management Policies and High Availability	01-Oct-21	14-Jan-22	0%	74	39.60	\$5,586.37	\$0.00	\$5,586.37	181							<div></div>	Implementation of File Management Policies and High Availability	
	LSST ME 19-05.06C.02.01.05.03 Data, Compute, and IT Services			12-Mar-20	23-Jun-22		584	4219.33	\$487,874.28	\$0.00	\$487,874.28	69								
	NC:	File-oriented Services within the Data Backbone FY20	12-Mar-20	29-Sep-20	0%	143	360.00	\$40,740.12	\$0.00	\$40,740.12	130							<div></div>	File-oriented Services within the Data Backbone FY20	
	NC:	File-oriented Services within the Data Backbone FY21	30-Sep-20	29-Sep-21	0%	254	360.00	\$42,159.03	\$0.00	\$42,159.03	130							<div></div>	File-oriented Services within the Data Backbone FY21	
	NC:	File-oriented Services within the Data Backbone FY22	30-Sep-21	30-Mar-22	0%	126	33.45	\$4,054.02	\$0.00	\$4,054.02	130							<div></div>	File-oriented Services within the Data Backbone FY22	
	NC:	Managed Database Services FY20	12-Mar-20	29-Sep-20	0%	143	450.00	\$51,199.38	\$0.00	\$51,199.38	130							<div></div>	Managed Database Services FY20	
	NC:	Managed Database Services FY21	30-Sep-20	29-Sep-21	0%	254	450.00	\$52,982.61	\$0.00	\$52,982.61	130							<div></div>	Managed Database Services FY21	
	NC:	Managed Database Services FY22	30-Sep-21	30-Mar-22	0%	126	41.81	\$5,094.81	\$0.00	\$5,094.81	130							<div></div>	Managed Database Services FY22	
	NC:	Backup and Disaster Recovery Services for Site File System	12-Mar-20	29-Sep-20	0%	143	198.00	\$22,352.22	\$0.00	\$22,352.22	130							<div></div>	Backup and Disaster Recovery Services for Site File System	
	NC:	Backup and Disaster Recovery Services for Site File System	30-Sep-20	29-Sep-21	0%	254	198.00	\$23,130.70	\$0.00	\$23,130.70	130							<div></div>	Backup and Disaster Recovery Services for Site File System	
	NC:	Backup and Disaster Recovery Services for Site File System	30-Sep-21	30-Mar-22	0%	126	18.40	\$2,224.25	\$0.00	\$2,224.25	130							<div></div>	Backup and Disaster Recovery Services for Site File System	
	NC:	Batch Computing and Data Staging Environment Services FY20	12-Mar-20	29-Sep-20	0%	143	360.00	\$40,740.12	\$0.00	\$40,740.12	130							<div></div>	Batch Computing and Data Staging Environment Services FY20	
	NC:	Batch Computing and Data Staging Environment Services FY21	30-Sep-20	29-Sep-21	0%	254	360.00	\$42,159.03	\$0.00	\$42,159.03	130							<div></div>	Batch Computing and Data Staging Environment Services FY21	
	NC:	Batch Computing and Data Staging Environment Services FY22	30-Sep-21	30-Mar-22	0%	126	33.45	\$4,054.02	\$0.00	\$4,054.02	130							<div></div>	Batch Computing and Data Staging Environment Services FY22	
	NC:	Containerized Application Management Services FY20	12-Mar-20	29-Sep-20	0%	143	450.00	\$51,199.38	\$0.00	\$51,199.38	130							<div></div>	Containerized Application Management Services FY20	
	NC:	Containerized Application Management Services FY21	30-Sep-20	29-Sep-21	0%	254	450.00	\$52,982.61	\$0.00	\$52,982.61	130							<div></div>	Containerized Application Management Services FY21	
	NC:	Containerized Application Management Services FY22	30-Sep-21	30-Mar-22	0%	126	41.81	\$5,094.81	\$0.00	\$5,094.81	130							<div></div>	Containerized Application Management Services FY22	
	NC:	IT Service Management and Service Monitoring Support FY20	12-Mar-20	29-Sep-20	0%	143	198.00	\$22,352.22	\$0.00	\$22,352.22	130							<div></div>	IT Service Management and Service Monitoring Support FY20	
NC:	IT Service Management and Service Monitoring Support FY21	30-Sep-20	29-Sep-21	0%	254	198.00	\$23,130.70	\$0.00	\$23,130.70	130							<div></div>	IT Service Management and Service Monitoring Support FY21		
NC:	IT Service Management and Service Monitoring Support FY22	30-Sep-21	30-Mar-22	0%	126	18.40	\$2,224.25	\$0.00	\$2,224.25	130							<div></div>	IT Service Management and Service Monitoring Support FY22		
NC:	NCSA FY22 Milestone		23-Jun-22	0%	0	0.00	\$0.00	\$0.00	\$0.00	69							<div></div>	NCSA FY22 Milestone		
LSST ME 19-05.06C.02.01.09 Plan Tracking			01-Oct-15 A	24-Jun-22		1710	0.00	\$0.00	\$0.00	\$0.00	325									
COMC	Pre-Shipping LSSTCam Testing at SLAC: 06C.02.01	30-Jan-20	16-Dec-20	0%	226	0.00	\$0.00	\$0.00	\$0.00	\$0.00	-3						<div></div>	Pre-Shipping LSSTCam Testing at SLAC: 06C.02.01		
COMC	Commissioning Management LOE: 06C.02.01	15-Jun-16 A	30-Sep-21	0%	1323	0.00	\$0.00	\$0.00	\$0.00	\$0.00	129						<div></div>	Commissioning Management LOE: 06C.02.01		
COMC	Commissioning, Planning, Preparation, Tooling & Support	01-Oct-15 A	09-Feb-22	0%	1554	0.00	\$0.00	\$0.00	\$0.00	\$0.00	421						<div></div>	Commissioning, Planning, Preparation, Tooling & Support		
COMC	ComCam Development & Oversight: 06C.02.02.01	01-Oct-15 A	30-Apr-19 A	100%	794	0.00	\$0.00	\$0.00	\$0.00	\$0.00							<div></div>	ComCam Development & Oversight: 06C.02.02.01		
COMC	Camera Summit Servicing Area Preparation: 06C.02.02.02	03-Sep-18 A	23-Apr-20	0%	343	0.00	\$0.00	\$0.00	\$0.00	\$0.00	56						<div></div>	Camera Summit Servicing Area Preparation: 06C.02.02.02		
COMC	Analysis Software & Procedure Simulation & Validation: 06C.02.02.03	30-Jan-17 A	27-Sep-19	0%	679	0.00	\$0.00	\$0.00	\$0.00	\$0.00	1021						<div></div>	Analysis Software & Procedure Simulation & Validation: 06C.02.02.03		
COMC	Special Tooling: 06C.02.02.04	01-Oct-18 A	30-Aug-19	0%	45	0.00	\$0.00	\$0.00	\$0.00	\$0.00	1040						<div></div>	Special Tooling: 06C.02.02.04		
COMC	Early System AI&T: 06C.02.03	02-Jan-18 A	04-Aug-21	0%	848	0.00	\$0.00	\$0.00	\$0.00	\$0.00	166						<div></div>	Early System AI&T: 06C.02.03		

LSST May 2019 Month End Forecast																			
Activity ID	Activity Name	Start	Finish	Physical % Complete	Original Duration	Budgeted Labor Units	Budgeted Labor Cost	Budgeted Material Cost	Budgeted Total Cost no	Total Float	FY2015 2014-10-01	FY2016 2015-10-01	FY2017 2016-10-01	FY2018 2017-10-01	FY2019 2018-10-01	FY2020 2019-10-01	FY2021 2020-10-01	FY2022 2021-10-01	
	COMC	ComCam Shipping, Receiving & re-Verification: 06C.02.03.02	26-Jun-20	23-Oct-20	0%	85	0.00	\$0.00	\$0.00	\$0.00	-19								
	COMC	Calibration System AI&T: 06C.02.03.02	12-Mar-20	10-Sep-20	0%	130	0.00	\$0.00	\$0.00	\$0.00	394								
	COMC	Camera refrigeration Pathfinders: 06C.02.03.03	02-Jan-18 A	09-Mar-21	0%	697	0.00	\$0.00	\$0.00	\$0.00	55								
	COMC	ComCam - Telescope AI&T: 06C.02.03.04	05-Feb-21	04-Aug-21	0%	128	0.00	\$0.00	\$0.00	\$0.00	166								
	COMC	DMS + TCS/OCS + ComCam AI&T: 06C.02.03.05	01-Mar-21	03-Aug-21	0%	112	0.00	\$0.00	\$0.00	\$0.00	167								
	COMC	Full System AI&T: 06C.02.04	17-Dec-20	07-Feb-22	0%	290	0.00	\$0.00	\$0.00	\$0.00	-43								
	COMC	Camera Shipping, Receiving & re-Verification: 06C.02.04.01	17-Dec-20	31-May-21	0%	114	0.00	\$0.00	\$0.00	\$0.00	-4								
	COMC	LSSTCam - Telescope AI&T: 06C.02.04.02	14-Jul-21	26-Jan-22	0%	137	0.00	\$0.00	\$0.00	\$0.00	-61								
	COMC	DMS + TCS/OCS + LSSTCam Integration: 06C.02.04.03	13-Oct-21	07-Feb-22	0%	81	0.00	\$0.00	\$0.00	\$0.00	-43								
	COMC	Science Verification: 06C.02.05	10-Feb-22	24-Jun-22	0%	96	0.00	\$0.00	\$0.00	\$0.00	-61								
	COMC	mini-Survey 1: 06C.02.05.01	10-Feb-22	26-May-22	0%	75	0.00	\$0.00	\$0.00	\$0.00	-45								
	COMC	mini-Survey 2: 06C.02.05.02	04-Mar-22	26-May-22	0%	60	0.00	\$0.00	\$0.00	\$0.00	-40								
	COMC	ORR Preparation: 06C.02.05.03	15-Apr-22	24-Jun-22	0%	51	0.00	\$0.00	\$0.00	\$0.00	-61								
	LSST ME 19-05.06C.02.02 Commissioning Planning, Preparation					01-Oct-15 A	09-Feb-22		1614	12688.19	\$1,616,655.56	\$791,507.48	\$2,408,163.04	421					
COMC-01	Procurement of Portable DIMM for Performance Baseline and System Verification	26-Nov-18 A	27-Nov-18 A	100%	5	0.00	\$0.00	\$100,000.00	\$100,000.00										
LSST ME 19-05.06C.02.02.00 Planning & Reviews																			
COMC	Commissioning Plan Preliminary Design	15-Jun-16 A	17-Nov-16 A	100%	88	0.00	\$0.00	\$0.00	\$0.00										
COMC	Resource Load Commissioning Plan	18-Nov-16 A	02-Jan-17 A	100%	30	0.00	\$0.00	\$0.00	\$0.00										
COMC	Commissioning PDR Preparations	18-Nov-16 A	23-Jan-17 A	100%	44	0.00	\$0.00	\$0.00	\$0.00										
COMC	NSF/DOE Commissioning PDR	24-Jan-17 A	27-Jan-17 A	100%	4	0.00	\$0.00	\$0.00	\$0.00										
COMC	Commissioning PDR Complete		27-Jan-17 A	100%	0	0.00	\$0.00	\$0.00	\$0.00										
COMC	Finalize Commissioning Baseline	30-Jan-17 A	30-Nov-17 A	100%	54	0.00	\$0.00	\$0.00	\$0.00										
COMC	Commissioning Baseline Accepted		01-Dec-17 A	100%	0	0.00	\$0.00	\$0.00	\$0.00										
COMC	Start Commissioning Readiness Review Preparation	05-Mar-20		0%	0	0.00	\$0.00	\$0.00	\$0.00	114									
COMC	Prepare for Commissioning Readiness Review	05-Mar-20	13-Apr-20	0%	28	0.00	\$0.00	\$0.00	\$0.00	114									
COMC	Commissioning Readiness Review	14-Apr-20	20-Apr-20	0%	5	0.00	\$0.00	\$0.00	\$0.00	114									
COMC	Commissioning Readiness Review Complete		20-Apr-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	114									
COMC	ComCam pre-Integration Review	26-Oct-20	30-Oct-20	0%	5	0.00	\$0.00	\$0.00	\$0.00	-19									
COMC	Telescope & Site Handoff Review	29-Jan-21	04-Feb-21	0%	5	0.00	\$0.00	\$0.00	\$0.00	-61									
COMC	ComCam Data Production Review	10-May-21	14-May-21	0%	5	0.00	\$0.00	\$0.00	\$0.00	-58									
COMC	Early System AI&T Report Generation	05-Aug-21	18-Aug-21	0%	10	0.00	\$0.00	\$0.00	\$0.00	280									
COMC	End of Early AI&T & Full System AI&T Readiness Review	19-Aug-21	25-Aug-21	0%	5	0.00	\$0.00	\$0.00	\$0.00	280									
COMC	LSSTCam Integration Readiness Review	11-Aug-21	17-Aug-21	0%	5	0.00	\$0.00	\$0.00	\$0.00	-60									
COMC	LSSTCam Data Production Review	01-Dec-21	07-Dec-21	0%	5	0.00	\$0.00	\$0.00	\$0.00	-61									
COMC	Full System AI&T Report Generation	27-Jan-22	02-Feb-22	0%	5	0.00	\$0.00	\$0.00	\$0.00	-61									
COMC	End of Full System AI&T & SV Readiness Review	03-Feb-22	09-Feb-22	0%	5	0.00	\$0.00	\$0.00	\$0.00	-61									
COMC	MIE: Prep Preship Review	03-Jun-19	07-Jun-19	0%	5	0.00	\$0.00	\$0.00	\$0.00	298									
COMC	COMP: C_TCR - 2018 Technical Commissioning Review		01-Feb-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00										
COMC	COMP: C_CR - 2018 Commissioning Review		31-Jul-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00										
LSST ME 19-05.06C.02.02.01 ComCam Development & Operations					01-Oct-15 A	20-May-20		1175	805.13	\$93,794.20	\$0.00	\$93,794.20	860						
COMC	MIE: Early ComCam Procurement	01-Oct-15 A	15-Jul-16 A	100%	200	0.00	\$0.00	\$0.00	\$0.00										
COMC	MIE: Engineer Cryostat Cooling	08-Sep-16 A	30-Dec-16 A	100%	80	0.00	\$0.00	\$0.00	\$0.00										
COMC	MIE: Engineer Cryostat Internals	02-Jan-17 A	25-Apr-17 A	100%	80	0.00	\$0.00	\$0.00	\$0.00										
COMC	MIE: Procure Cooling Hardware	02-Jan-17 A	28-Feb-17 A	100%	40	0.00	\$0.00	\$0.00	\$0.00										
COMC	MIE: Assembly & Test - Commissioning Camera - Cooling	01-Mar-17 A	25-Apr-17 A	100%	40	0.00	\$0.00	\$0.00	\$0.00										
COMC	MIE: Engineer ComCam Utility Trunk (Vacuum Pumps, Power Supplies, VQM, Cooling)	26-Apr-17 A	16-Aug-17 A	100%	80	0.00	\$0.00	\$0.00	\$0.00										
COMC	MIE: Procure Cryostat Internals	26-Apr-17 A	20-Jun-17 A	100%	40	0.00	\$0.00	\$0.00	\$0.00										
COMC	MIE: Assembly & Test - Commissioning Camera - Internals	21-Jun-17 A	16-Aug-17 A	100%	40	0.00	\$0.00	\$0.00	\$0.00										
COMC	MIE: Engineer ComCam Interface with Telescope (Parallel with Above)	17-Aug-17 A	07-Dec-17 A	100%	80	0.00	\$0.00	\$0.00	\$0.00										
COMC	MIE: NEED: Filter Changer in Tucson	01-Jul-19		0%	0	0.00	\$0.00	\$0.00	\$0.00	1084									
COMC	MIE: CCS Filter Changer Development in Tucson	01-Mar-19 A	31-May-19 A	100%	10	0.00	\$0.00	\$0.00	\$0.00										
COMC	MIE: NEED: Shutter at SLAC	10-Jun-17 A		100%	0	0.00	\$0.00	\$0.00	\$0.00										
COMC	MIE: CCS Shutter Development	10-Jun-17 A	01-Feb-18 A	100%	125	0.00	\$0.00	\$0.00	\$0.00										
COMC	MIE: CCS Filter Changer Development	01-Mar-19 A	31-May-19 A	100%	70	0.00	\$0.00	\$0.00	\$0.00										
COMC	MIE: Assembly & Test - Commissioning Camera - Pre RAFT loading	08-Dec-17 A	29-Mar-19 A	100%	80	0.00	\$0.00	\$0.00	\$0.00										
COMC	MIE: CCS MCM development	01-Jan-19 A	30-Apr-19 A	100%	40	0.00	\$0.00	\$0.00	\$0.00										
COMC	MIE: CCD ComCam module development	04-Sep-18 A	24-Dec-18 A	100%	80	0.00	\$0.00	\$0.00	\$0.00										
COMC	MIE: Assembly & Test - Commissioning Camera - Post RAFT loading	15-Feb-19 A	31-May-19 A	100%	40	0.00	\$0.00	\$0.00	\$0.00										
COMC	MIE: ComCam DAQ support	30-Jul-18 A	24-Sep-18 A	100%	40	0.00	\$0.00	\$0.00	\$0.00										
COMC	MIE: PSR ComCam deliverables		31-May-19 A	100%	0	0.00	\$0.00	\$0.00	\$0.00										
COMC	MIE: ComCam Sustained Engineering	01-Jan-19 A	30-Apr-19 A	100%	20	0.00	\$0.00	\$0.00	\$0.00										
COMC	Receive Integrated ComCam from T&S in Tucson	07-Jan-20	21-Jan-20	0%	10	150.00	\$22,291.50	\$0.00	\$22,291.50	-19									
COMC	ComCam Bench Interface Testing in Tucson	22-Jan-20	04-Mar-20	0%	30	240.00	\$11,896.80	\$0.00	\$11,896.80	-19									
COMC	ComCam Verification Testing in Tucson	05-Mar-20	06-May-20	0%	45	255.13	\$49,480.30	\$0.00	\$49,480.30	-19									
COMC	ComCam Disassembly	07-May-20	20-May-20	0%	10	160.00	\$10,125.60	\$0.00	\$10,125.60	-19									
COMC	FY18 Commissioning Support	02-Oct-17 A	28-Sep-18 A	100%	252	0.00	\$0.00	\$0.00	\$0.00										
LSST ME 19-05.06C.02.02.02 LSSTCam Summit Servicing & Preparation					03-Sep-18 A	23-Apr-20		394	0.00	\$0.00	\$0.00	\$0.00	56						
COMC	Summit Facility Prep Sprint 1	03-Sep-18 A	14-Dec-18 A	100%	63	0.00	\$0.00	\$0.00	\$0.00										



LSST May 2019 Month End Forecast																		
Activity ID	Activity Name	Start	Finish	Physical % Complete	Original Duration	Budgeted Labor Units	Budgeted Labor Cost	Budgeted Material Cost	Budgeted Total Cost no	Total Float	FY2015 2014-10-01	FY2016 2015-10-01	FY2017 2016-10-01	FY2018 2017-10-01	FY2019 2018-10-01	FY2020 2019-10-01	FY2021 2020-10-01	FY2022 2021-10-01
COMC	DOE-EO: Procedure Development and Validation F	30-Jan-17 A	29-Sep-17 A	100%	172	0.00	\$0.00	\$0.00	\$0.00					DOE-EO: Procedure Development and Validation FY-17				
	C2T: Procedure Development and Validation FY-18	02-Oct-17 A	28-Sep-18 A	100%	253	1080.00	\$149,828.40	\$0.00	\$149,828.40						C2T: Procedure Development and Validation FY-18			
	C2T: Procedure Development and Validation FY-19	01-Apr-19 A	27-Sep-19	33%	254	2010.00	\$288,615.90	\$0.00	\$288,615.90	130						C2T: Procedure Development and Validation FY-19		
	Science Validation Planning and Preparation FY18	01-Jan-18 A	28-Sep-18 A	100%	189	1080.00	\$149,828.40	\$0.00	\$149,828.40						Science Validation Planning and Preparation FY18			
	Science Validation Planning and Preparation FY19	01-Apr-19 A	27-Sep-19	33%	254	82.00	\$11,774.38	\$0.00	\$11,774.38	256					Science Validation Planning and Preparation FY19			
	Science Validation Planning and Preparation FY20	30-Sep-19	29-Sep-20	0%	254	0.00	\$0.00	\$187,551.57	\$187,551.57	256						Science Validation Planning and Preparation FY20		
	Science Validation Planning and Preparation FY21	30-Sep-20	29-Sep-21	0%	254	0.00	\$0.00	\$103,757.49	\$103,757.49	256						Science Validation Planning and Preparation FY21		
	SVT: FY-19 - LOE Labor UW	01-Oct-18 A	27-Sep-19	58%	254	0.00	\$0.00	\$0.00	\$0.00	1021					SVT: FY-19 - LOE Labor UW			
	SVT: FY-18 - LOE Labor UW	01-Oct-17 A	30-Nov-17 A	100%	44	348.29	\$50,095.63	\$0.00	\$50,095.63					SVT: FY-18 - LOE Labor UW				
	Science Verification Team Activity	01-May-19 A	04-Dec-19	51.89%	129	1110.00	\$162,726.45	\$0.00	\$162,726.45	79					Science Verification Team Activity			
	Run DM tutorials	22-May-18 A	22-May-18 A	100%	4	20.00	\$2,217.80	\$0.00	\$2,217.80					Run DM tutorials				
	Run DM tutorials in Jupyter lab	29-May-18 A	29-May-18 A	100%	9	44.00	\$4,879.16	\$0.00	\$4,879.16					Run DM tutorials in Jupyter lab				
	Design metrics	29-May-18 A	29-May-18 A	100%	5	24.00	\$2,661.36	\$0.00	\$2,661.36					Design metrics				
	DM boot camp	04-Jun-18 A	04-Jun-18 A	100%	5	24.00	\$2,661.36	\$0.00	\$2,661.36					DM boot camp				
	Implement metrics	06-Jul-18 A	06-Jul-18 A	100%	14	70.00	\$7,762.30	\$0.00	\$7,762.30					Implement metrics				
	Implement metrics in validation framework	03-Sep-18 A	28-Sep-18 A	100%	10	50.00	\$5,544.50	\$0.00	\$5,544.50					Implement metrics in validation framework				
	Respond to Directors' review	01-Aug-18 A	31-Aug-18 A	100%	5	25.00	\$2,772.25	\$0.00	\$2,772.25					Respond to Directors' review				
	DESC meeting	01-Aug-18 A	31-Aug-18 A	100%	10	50.00	\$5,544.50	\$0.00	\$5,544.50					DESC meeting				
	Respond to Commissioning review	01-Aug-18 A	31-Aug-18 A	100%	5	25.00	\$2,772.25	\$0.00	\$2,772.25					Respond to Commissioning review				
	All Hands Meeting	01-Aug-18 A	31-Aug-18 A	100%	5	25.00	\$2,772.25	\$0.00	\$2,772.25					All Hands Meeting				
	Design edge-casemetrics	03-Sep-18 A	28-Sep-18 A	100%	10	50.00	\$5,544.50	\$0.00	\$5,544.50					Design edge-casemetrics				
	Run edge-case metrics	03-Sep-18 A	28-Sep-18 A	100%	10	50.00	\$5,544.50	\$0.00	\$5,544.50					Run edge-case metrics				
	Support DESC simulations	03-Sep-18 A	28-Sep-18 A	100%	15	75.00	\$8,316.75	\$0.00	\$8,316.75					Support DESC simulations				
	All sky camera support	29-May-18 A	29-May-18 A	100%	14	47.00	\$5,211.83	\$0.00	\$5,211.83					All sky camera support				
	DM tutorials	29-May-18 A	29-May-18 A	100%	5	17.00	\$1,885.13	\$0.00	\$1,885.13					DM tutorials				
	DM bootcamp	04-Jun-18 A	04-Jun-18 A	100%	5	17.00	\$1,885.13	\$0.00	\$1,885.13					DM bootcamp				
	Implement metrics	18-Jun-18 A	18-Jun-18 A	100%	4	19.00	\$2,106.91	\$0.00	\$2,106.91					Implement metrics				
	Implement metrics in validation framework	03-Jul-18 A	18-Jul-18 A	100%	13	44.00	\$4,879.16	\$0.00	\$4,879.16					Implement metrics in validation framework				
	Respond to Directors' review	02-Jul-18 A	02-Jul-18 A	100%	4	13.00	\$1,441.57	\$0.00	\$1,441.57					Respond to Directors' review				
	Metrics into framework	31-Jul-18 A	28-Sep-18 A	100%	10	31.00	\$3,437.59	\$0.00	\$3,437.59					Metrics into framework				
	Develop DRP Verification/Validation prototyping & ex	31-Oct-18 A	04-Jan-19 A	100%	64	72.00	\$10,338.48	\$0.00	\$10,338.48					Develop DRP Verification/Validation prototyping & examples				
	Develop Commissioning LSST Science Platform tool	31-Oct-18 A	04-Jan-19 A	100%	64	82.00	\$11,774.38	\$0.00	\$11,774.38					Develop Commissioning LSST Science Platform tooling prototyping				
	Deploy and Test Dome Seeing Probe	30-Oct-18 A	22-Dec-18 A	100%	64	146.00	\$17,843.84	\$0.00	\$17,843.84					Deploy and Test Dome Seeing Probe				
	Deploy and Test DIMM	22-Dec-18 A	02-Jan-19 A	100%	64	32.00	\$4,594.88	\$0.00	\$4,594.88					Deploy and Test DIMM				
	Prep for Commissioning Plan	03-Sep-18 A	28-Sep-18 A	100%	11	34.00	\$3,770.26	\$0.00	\$3,770.26					Prep for Commissioning Plan				
	Respond to Commissioning review	03-Sep-18 A	28-Sep-18 A	100%	6	20.00	\$2,217.80	\$0.00	\$2,217.80					Respond to Commissioning review				
	All Hands Meeting	01-Aug-18 A	31-Aug-18 A	100%	11	33.00	\$3,659.37	\$0.00	\$3,659.37					All Hands Meeting				
	DESC support	18-Jun-18 A	18-Jun-18 A	100%	9	30.00	\$3,326.70	\$0.00	\$3,326.70					DESC support				
	MAF scheduler support	29-May-18 A	29-May-18 A	100%	15	45.00	\$4,990.05	\$0.00	\$4,990.05					MAF scheduler support				
	LOE support for PST, commissioning, simulations, D	29-May-18 A	28-Sep-18 A	100%	107	110.24	\$20,792.37	\$0.00	\$20,792.37					LOE support for PST, commissioning, simulations, DESC				
	Extract SRD, OSS LSE-61 metrics relevant for AP	29-May-18 A	29-May-18 A	100%	9	19.00	\$3,583.59	\$0.00	\$3,583.59					Extract SRD, OSS LSE-61 metrics relevant for AP				
	Develop verification plan	19-Jun-18 A	29-Jun-18 A	100%	9	19.00	\$3,583.59	\$0.00	\$3,583.59					Develop verification plan				
	DM bootcamp	19-Jun-18 A	29-Jun-18 A	100%	5	11.00	\$2,074.71	\$0.00	\$2,074.71					DM bootcamp				
	Support for generation of CESC DC2 data for commr	29-Oct-18 A	07-Jan-19 A	100%	64	110.00	\$12,624.70	\$0.00	\$12,624.70					Support for generation of CESC DC2 data for commissioning - SD				
	Creation of test plans for Alert Production commissio	07-Jan-19 A	07-Jan-19 A	100%	64	218.00	\$25,019.86	\$0.00	\$25,019.86					Creation of test plans for Alert Production commissioning - SD				
	Prepare for and attend Commissioning Bootcamp - S	01-Nov-18 A	30-Nov-18 A	100%	5	32.00	\$3,672.64	\$0.00	\$3,672.64					Prepare for and attend Commissioning Bootcamp - SD				
	Develop validation plan	29-Jun-18 A	02-Jul-18 A	100%	10	22.00	\$4,149.42	\$0.00	\$4,149.42					Develop validation plan				
	Support of PST, commissioning, simulation framewor	30-Oct-18 A	07-Jan-19 A	100%	64	110.00	\$21,473.10	\$0.00	\$21,473.10					Support of PST, commissioning, simulation framework, DESC, LSST PubBoard - AC				
	Prepare for and attend Commissioning Bootcamp - A	01-Nov-18 A	30-Nov-18 A	100%	5	37.00	\$7,222.77	\$0.00	\$7,222.77					Prepare for and attend Commissioning Bootcamp - AC				
	Creation of test plans for Alert Production commissio	07-Jan-19 A	07-Jan-19 A	100%	64	78.00	\$15,226.38	\$0.00	\$15,226.38					Creation of test plans for Alert Production commissioning - AC				
	Write draft VVC plan for AP production	05-Jul-18 A	31-Aug-18 A	100%	5	11.00	\$2,074.71	\$0.00	\$2,074.71					Write draft VVC plan for AP production				
	Respond to Directors' review of Commissioning Plan	01-Aug-18 A	31-Aug-18 A	100%	5	11.00	\$2,074.71	\$0.00	\$2,074.71					Respond to Directors' review of Commissioning Plan				
	Develop characterisation plan	05-Jul-18 A	31-Aug-18 A	100%	10	22.00	\$4,149.42	\$0.00	\$4,149.42					Develop characterisation plan				
	Prepare review of Commissioning Plan	01-Aug-18 A	31-Aug-18 A	100%	5	11.00	\$2,074.71	\$0.00	\$2,074.71					Prepare review of Commissioning Plan				
	Respond review of Commissioning Plan	01-Aug-18 A	31-Aug-18 A	100%	5	11.00	\$2,074.71	\$0.00	\$2,074.71					Respond review of Commissioning Plan				
	AHM	01-Aug-18 A	31-Aug-18 A	100%	10	22.00	\$4,149.42	\$0.00	\$4,149.42					AHM				
	Review draft VVC plan with data management and r	01-Aug-18 A	28-Sep-18 A	100%	10	22.00	\$4,149.42	\$0.00	\$4,149.42					Review draft VVC plan with data management and revise				
	Write final VVC plan for AP production	03-Sep-18 A	20-Jun-19	54.55%	14	33.00	\$6,224.13	\$0.00	\$6,224.13	833				Write final VVC plan for AP production				
	Develop 2019 plan	01-Aug-18 A	28-Sep-18 A	100%	5	11.00	\$2,074.71	\$0.00	\$2,074.71					Develop 2019 plan				
	Run DM tutorials on HSC data	29-May-18 A	29-May-18 A	100%	5	11.00	\$2,074.71	\$0.00	\$2,074.71					Run DM tutorials on HSC data				
	Updates of Dome Seeing Probe	31-Jan-19 A	29-Mar-19 A	100%	61	34.00	\$4,049.98	\$0.00	\$4,049.98					Updates of Dome Seeing Probe				
	Test production software on portable DIMM	31-Jan-19 A	29-Mar-19 A	100%	61	88.00	\$12,219.88	\$0.00	\$12,219.88					Test production software on portable DIMM				
	Support for DC2	01-Feb-19 A	29-Mar-19 A	100%	61	60.00	\$6,886.20	\$0.00	\$6,886.20					Support for DC2				
	Support for Simulations	01-Feb-19 A	29-Mar-19 A	100%	61	30.00	\$3,443.10	\$0.00	\$3,443.10					Support for Simulations				
	Support of PST, commissioning, simulation framewor	01-Feb-19 A	30-Apr-19 A	100%	61	112.00	\$21,863.52	\$0.00	\$21,863.52					Support of PST, commissioning, simulation framework, DESC, LSST PubBoard - AC				
	Produce content for an write test plans for Alert Prod	01-Feb-19 A	30-Apr-19 A	100%	61	375.00	\$46,864.35	\$0.00	\$46,864.35					Produce content for an write test plans for Alert Production				
	Prepare for and attend Spring Commissioning Bootc	30-Apr-19 A	28-Jun-19	40.82%	61	98.00	\$13,200.48	\$0.00	\$13,200.48	827				Prepare for and attend Spring Commissioning Bootcamp				
	Attend LSST Engineering Infrastructure Training	03-Jun-19	27-Aug-19	0%	61	30.00	\$2,339.40	\$0.00	\$2,339.40	786				Attend LSST Engineering Infrastructure Training				
	Prototype feature based scheduler	01-Nov-17 A	02-Nov-17 A	100%	44	0.00	\$0.00	\$0.00	\$0.00					Prototype feature based scheduler				
	Generate variability samples for DM	19-Dec-17 A	16-Jan-18 A	100%	44	0.00	\$0.00	\$0.00	\$0.00					Generate variability samples for DM				
	Evaluate firefly for interactive visualization	01-Dec-17 A	01-Dec-17 A	100%	14	74.00	\$8,205.86	\$0.00	\$8,205.86					Evaluate firefly for interactive visualization				
	Evaluate image display capabilities	12-Jan-18 A	12-Jan-18 A	100%	14	74.00	\$8,205.86	\$0.00	\$8,205.86					Evaluate image display capabilities				

## LSST May 2019 Month End Forecast

Activity ID	Activity Name	Start	Finish	Physical % Complete	Original Duration	Budgeted Labor Units	Budgeted Labor Cost	Budgeted Material Cost	Budgeted Total Cost no	Total Float	FY2015 2014-10-01	FY2016 2015-10-01	FY2017 2016-10-01	FY2018 2017-10-01	FY2019 2018-10-01	FY2020 2019-10-01	FY2021 2020-10-01	FY2022 2021-10-01	
19-05.06C.02.02.04 19-05.06C.02.02.05 19-05.06C.02.03.01 19-05.06C.02.03.02 19-05.06C.02.03.03	SIM-24 Define requirements for image visualization	15-Feb-18 A	30-Mar-18 A	100%	7	37.00	\$4,102.93	\$0.00	\$4,102.93					Define requirements for image visualization					
	SIM-24 Report on visualization requirements	25-Apr-18 A	26-Apr-18 A	100%	7	37.00	\$4,102.93	\$0.00	\$4,102.93					Report on visualization requirements					
	SIM-24 Develop observing procedures for generation of initial templates	02-Apr-18 A	30-Apr-18 A	100%	22	96.00	\$10,645.44	\$0.00	\$10,645.44					Develop observing procedures for generation of initial templates					
	SIM-24 Generate simulated images for evaluating templates	07-Mar-18 A	30-Mar-18 A	100%	37	143.00	\$15,857.27	\$0.00	\$15,857.27					Generate simulated images for evaluating templates					
	SIM-24 Identify KPMs for photometric measurements on difference images	07-Mar-18 A	30-Mar-18 A	100%	12	0.00	\$0.00	\$0.00	\$0.00					Identify KPMs for photometric measurements on difference images					
	SIM-25 Identify KPMs for astrometric performance	25-Apr-18 A	26-Apr-18 A	100%	2	7.00	\$776.23	\$0.00	\$776.23					Identify KPMs for astrometric performance					
	SIM-25 Generate simulated images for astrometric tests	02-Apr-18 A	30-Apr-18 A	100%	20	111.00	\$12,308.79	\$0.00	\$12,308.79					Generate simulated images for astrometric tests					
	SIM-25 support of DESC simulations v1.0	14-Nov-17 A	15-Nov-17 A	100%	36	47.00	\$5,211.83	\$0.00	\$5,211.83					support of DESC simulations v1.0					
	SIM-25 support of DESC simulations v2.0	16-Jan-18 A	31-Jan-18 A	100%	58	47.00	\$5,211.83	\$0.00	\$5,211.83					support of DESC simulations v2.0					
	SIM-25 support of DESC simulations v3.0	31-Jan-18 A	07-Mar-18 A	100%	58	47.00	\$5,211.83	\$0.00	\$5,211.83					support of DESC simulations v3.0					
	SIM-25 support of DESC simulations v4.0	07-Mar-18 A	07-Mar-18 A	100%	57	0.00	\$0.00	\$0.00	\$0.00					support of DESC simulations v4.0					
	SIM-25 meeting support 1.0 (Peter Yoachim)	01-Dec-17 A	29-Dec-17 A	100%	17	36.00	\$3,992.04	\$0.00	\$3,992.04					meeting support 1.0 (Peter Yoachim)					
	SIM-25 meeting support 2.0 (Peter Yoachim)	28-Dec-17 A	22-Feb-18 A	100%	39	36.00	\$3,992.04	\$0.00	\$3,992.04					meeting support 2.0 (Peter Yoachim)					
	SIM-25 meeting support 3.0 (Peter Yoachim)	26-Feb-18 A	19-Apr-18 A	100%	39	36.00	\$3,992.04	\$0.00	\$3,992.04					meeting support 3.0 (Peter Yoachim)					
	SIM-25 meeting support 4.0 (Peter Yoachim)	17-Nov-17 A	30-Mar-18 A	100%	38	36.00	\$3,992.04	\$0.00	\$3,992.04					meeting support 4.0 (Peter Yoachim)					
	SIM-25 Replanned - meeting support 5.0 (Peter Yoachim)	03-Sep-18 A	28-Sep-18 A	100%	38	0.00	\$0.00	\$0.00	\$0.00					Replanned - meeting support 5.0 (Peter Yoachim)					
	SIM-25 meeting support 6.0 (Peter Yoachim)	15-Feb-18 A	30-Mar-18 A	100%	38	0.00	\$0.00	\$0.00	\$0.00					meeting support 6.0 (Peter Yoachim)					
	SIM-25 meeting support 1.0 (Scott Daniel)	07-Mar-18 A	07-Mar-18 A	100%	17	48.00	\$5,322.72	\$0.00	\$5,322.72					meeting support 1.0 (Scott Daniel)					
	SIM-25 meeting support 2.0 (Scott Daniel)	07-Mar-18 A	07-Mar-18 A	100%	39	48.00	\$5,322.72	\$0.00	\$5,322.72					meeting support 2.0 (Scott Daniel)					
	SIM-25 meeting support 3.0 (Scott Daniel)	07-Mar-18 A	07-Mar-18 A	100%	39	48.00	\$5,322.72	\$0.00	\$5,322.72					meeting support 3.0 (Scott Daniel)					
	SIM-25 meeting support 4.0 (Scott Daniel)	07-Mar-18 A	14-Mar-18 A	100%	38	48.00	\$5,322.72	\$0.00	\$5,322.72					meeting support 4.0 (Scott Daniel)					
	SIM-25 Simulation and Science Verification Coordination	01-Dec-17 A	30-Apr-18 A	100%	102	460.02	\$86,764.84	\$0.00	\$86,764.84					Simulation and Science Verification Coordination					
	SIM-M1 UW Sims FY18 Year End		01-Oct-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00				UW Sims FY18 Year End					
	SIM-M2 UW Team FY19 Year End		04-Dec-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00	718				UW Team FY19 Year End				
	LSST ME 19-05.06C.02.02.04 Special Tooling	03-Sep-18 A	20-Sep-21		951	0.00	\$0.00	\$400,198.41	\$0.00	\$400,198.41	181								
	COMC Misc. Hardware and Test Support FY-18 LSST	03-Sep-18 A	28-Sep-18 A	100%	39	0.00	\$0.00	\$21,914.72	\$0.00	\$21,914.72					Misc. Hardware and Test Support FY-18 LSST				
	COMC Misc. Hardware and Test Support FY-19 LSST	01-Oct-18 A	31-May-19 A	100%	147	0.00	\$0.00	\$103,998.00	\$0.00	\$103,998.00									
	COMC Misc. Hardware and Test Support FY-20 LSST	05-Dec-19	30-Sep-20	0%	209	0.00	\$0.00	\$174,285.69	\$0.00	\$174,285.69	79								
	COMC Misc. Hardware and Test Support FY-21 LSST	01-Oct-20	30-Sep-21	0%	254	0.00	\$0.00	\$100,000.01	\$0.00	\$100,000.01	181								
	LSST ME 19-05.06C.02.02.05 Shipping, Receiving and Log	07-Mar-19 A	12-Jan-21		522	1684.50	\$102,360.28	\$0.00	\$102,360.28	\$102,360.28	-3								
	COMC COMP: C_PDR - Transport Container		07-Mar-19 A	100%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00					COMP: C_PDR - Transport Container				
	COMC on-Site Preparation for CCS Install	26-Jun-20	23-Jul-20	0%	20	301.73	\$15,247.20	\$0.00	\$0.00	\$15,247.20	-19				on-Site Preparation for CCS Install				
	COMC on-Site Preparation for DAQ Install	26-Jun-20	23-Jul-20	0%	20	381.73	\$19,212.80	\$0.00	\$0.00	\$19,212.80	-19				on-Site Preparation for DAQ Install				
	COMC On-Site CCS Software Install	24-Jul-20	06-Aug-20	0%	10	150.86	\$7,623.60	\$0.00	\$0.00	\$7,623.60	-19				On-Site CCS Software Install				
	COMC Prepare for TMA DAQ+CCS Fiber Verification	07-Aug-20	13-Aug-20	0%	5	75.43	\$3,811.80	\$0.00	\$0.00	\$3,811.80	-19				Prepare for TMA DAQ+CCS Fiber Verification				
	COMC TMA DAQ+CCS Fiber Verification	14-Aug-20	20-Aug-20	0%	5	75.43	\$3,811.80	\$0.00	\$0.00	\$3,811.80	-19				TMA DAQ+CCS Fiber Verification				
	COMC ComCam Unpack and Inspection	26-Jun-20	09-Jul-20	0%	10	211.73	\$19,420.85	\$0.00	\$0.00	\$19,420.85	11				ComCam Unpack and Inspection				
	COMC on-Site ComCam DAQ Install	21-Aug-20	03-Sep-20	0%	10	190.86	\$11,701.96	\$0.00	\$0.00	\$11,701.96	-19				on-Site ComCam DAQ Install				
	COMC on-Site ComCam DAQ + CCS Integration	04-Sep-20	18-Sep-20	0%	10	150.86	\$7,623.60	\$0.00	\$0.00	\$7,623.60	-19				on-Site ComCam DAQ + CCS Integration				
	COMC on-Site ComCam Test Stand Assembly & White Room Prep	10-Jul-20	16-Jul-20	0%	5	145.86	\$13,906.66	\$0.00	\$0.00	\$13,906.66	16				on-Site ComCam Test Stand Assembly & White Room Prep				
	COMC LSSTCam Pre-Ship Acceptance		16-Dec-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00	-3				LSSTCam Pre-Ship Acceptance				
	COMC LSSTCam Received @ Summit		12-Jan-21	0%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00	-3				LSSTCam Received @ Summit				
	LSST ME 19-05.06C.02.03 Early System A&T	18-Jan-18 A	24-Jun-22		1063	48953.25	\$7,168,085.56	\$0.00	\$0.00	\$7,168,085.56	325								
	COMC-01 CPP: Final test development	01-Oct-19	31-Mar-20	0%	120	1461.00	\$249,013.74	\$0.00	\$0.00	\$249,013.74	374								
	COMC-01 APP: Final test development	01-Oct-19	31-Mar-20	0%	120	1587.00	\$215,922.96	\$0.00	\$0.00	\$215,922.96	384								
	LSST ME 19-05.06C.02.03.01 ComCam Re-Verification	17-Jul-20	16-Nov-20		86	5477.30	\$793,851.97	\$0.00	\$0.00	\$793,851.97	130								
	COMC on-Site ComCam re-Assembly	17-Jul-20	30-Jul-20	0%	10	835.00	\$122,866.25	\$0.00	\$0.00	\$122,866.25	16				on-Site ComCam re-Assembly				
	COMC on-Site ComCam Functional Tests & re-Verification	21-Sep-20	02-Oct-20	0%	10	765.00	\$117,207.04	\$0.00	\$0.00	\$117,207.04	-19				on-Site ComCam Functional Tests & re-Verification				
	COMC ComCam CCS - OCS Command ICD Bench Testing	05-Oct-20	16-Oct-20	0%	10	840.00	\$121,483.10	\$0.00	\$0.00	\$121,483.10	-19				ComCam CCS - OCS Command ICD Bench Testing				
	COMC ComCam CCS - OCS Telemetry ICD Bench Testing	05-Oct-20	16-Oct-20	0%	10	840.00	\$121,483.10	\$0.00	\$0.00	\$121,483.10	-19				ComCam CCS - OCS Telemetry ICD Bench Testing				
COMC ComCam DAQ - TCS/WFS Interface Bench Testing	05-Oct-20	19-Oct-20	0%	10	840.00	\$121,483.10	\$0.00	\$0.00	\$121,483.10	-14				ComCam DAQ - TCS/WFS Interface Bench Testing					
COMC ComCam DAQ - DMS ICD Bench Testing	19-Oct-20	23-Oct-20	0%	5	577.00	\$75,369.36	\$0.00	\$0.00	\$75,369.36	-18				ComCam DAQ - DMS ICD Bench Testing					
COMC COMP: ComCam re-Verification Complete		23-Oct-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00	-19				COMP: ComCam re-Verification Complete					
COMC Summit-Base-Archive/Network Bandwidth Testing	26-Oct-20	16-Nov-20	0%	15	780.30	\$113,960.03	\$0.00	\$0.00	\$113,960.03	126				Summit-Base-Archive/Network Bandwidth Testing					
LSST ME 19-05.06C.02.03.02 Calibration System A&T	12-Mar-20	24-Jun-22		585	8955.77	\$1,192,134.17	\$0.00	\$0.00	\$1,192,134.17	-61									
COMC Aux. Tel. DAQ + DMS Interface Testing	12-Mar-20	25-Mar-20	0%	10	399.00	\$48,329.96	\$0.00	\$0.00	\$48,329.96	17				Aux. Tel. DAQ + DMS Interface Testing					
COMC Calibration Tel + OCS/Scheduler Verification	26-Mar-20	13-May-20	0%	35	2209.00	\$291,821.45	\$0.00	\$0.00	\$291,821.45	42				Calibration Tel + OCS/Scheduler Verification					
COMC Calibration Telescope Instrumental Signature Removal	26-Mar-20	17-Jun-20	0%	60	1672.44	\$290,599.40	\$0.00	\$0.00	\$290,599.40	17				Calibration Telescope Instrumental Signature Removal					
COMC Atmospheric Transmission Mapping Verification	14-May-20	05-Aug-20	0%	60	1354.00	\$192,793.16	\$0.00	\$0.00	\$192,793.16	42				Atmospheric Transmission Mapping Verification					
COMC Atmospheric Calibration Products Pipeline Testing	18-Jun-20	10-Sep-20	0%	60	1262.00	\$231,148.44	\$0.00	\$0.00	\$231,148.44	17				Atmospheric Calibration Products Pipeline Testing					
COMC COMP: Calibration Telescope Ready for Operations		10-Sep-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00	17				COMP: Calibration Telescope Ready for Operations					
COMC Atmospheric Transission/Emission Mapping Baseline	11-Sep-20	24-Jun-22	0%	455	2059.34	\$137,441.76	\$0.00	\$0.00	\$137,441.76	-61									
LSST ME 19-05.06C.02.03.03 LSSTCam Refrigeration Pathfinder	18-Jan-18 A	09-Mar-21		730	688.00	\$42,232.64	\$0.00	\$0.00	\$42,232.64	55									
COMC COMP: C_CDR - Pathfinder	18-Jan-18 A		100%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00					COMP: C_CDR - Pathfinder					
COMC COMP: C_PDR - Pathfinder		31-Jul-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00					COMP: C_PDR - Pathfinder					
COMC COMP: C_FDR - Pathfinder		26-Oct-18 A	100%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00					COMP: C_FDR - Pathfinder					
COMC AVAIL: Refrigeration Pathfinder to ship		28-Jun-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00	301									
COMC NEED: Refrigeration Pathfinder on summit		17-Sep-19	0%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00	266									
COMC NEED: MIE Chile (TMA) Compressors		03-Jan-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00	215									
COMC Prep Maintenance Refrig Lines	22-Jan-20	18-Feb-20	0%	20	160.00	\$7,931.20	\$0.00	\$0.00	\$7,931.20	178									
COMC Install TMA Compressors in Machine Room	19-Feb-20	21-Feb-20	0%	3	24.00	\$1,189.68	\$0.00	\$0.00	\$1,189.68	178									
COMC Install Cryo TMA Compressors in Machine Room	20-Mar-20	24-Mar-20	0%	3	24.00	\$1,189.68	\$0.00	\$0.00	\$1,189.68	178									

## LSST May 2019 Month End Forecast

Activity ID	Activity Name	Start	Finish	Physical % Complete	Original Duration	Budgeted Labor Units	Budgeted Labor Cost	Budgeted Material Cost	Budgeted Total Cost no	Total Float	FY2015 2014-10-01	FY2016 2015-10-01	FY2017 2016-10-01	FY2018 2017-10-01	FY2019 2018-10-01	FY2020 2019-10-01	FY2021 2020-10-01	FY2022 2021-10-01
COMC	Install Pathfinder in Camera Maint. Area	24-Feb-20	25-Feb-20	0%	2	16.00	\$793.12	\$0.00	\$793.12	178								Install Pathfinder in Camera Maint. Area
	Connect, Purge, Evacuate & Charge WR Cryo and Cold Lines 1 & 2	26-Feb-20	05-Mar-20	0%	6	24.00	\$1,189.68	\$0.00	\$1,189.68	178								Connect, Purge, Evacuate & Charge WR Cryo and Cold Lines 1 & 2
	Performance Test WR Cryo and Cold Lines 1&2	06-Mar-20	18-Mar-20	0%	9	16.00	\$1,232.00	\$0.00	\$1,232.00	178								Performance Test WR Cryo and Cold Lines 1&2
	Disconnect & Seal WR Cryo Lines 1&2	19-Mar-20	19-Mar-20	0%	1	8.00	\$616.00	\$0.00	\$616.00	178								Disconnect & Seal WR Cryo Lines 1&2
	Connect, Purge, Evacuate & Charge WR Cryo Lines	25-Mar-20	01-Apr-20	0%	6	24.00	\$1,189.68	\$0.00	\$1,189.68	178								Connect, Purge, Evacuate & Charge WR Cryo Lines 3 & 4
	Performance Test WR Cryo 3 & 4 and Cold Lines 1&2	02-Apr-20	15-Apr-20	0%	9	16.00	\$1,232.00	\$0.00	\$1,232.00	178								Performance Test WR Cryo 3 & 4 and Cold Lines 1&2
	Disconnect & Seal WR Cryo Lines 3&4	16-Apr-20	16-Apr-20	0%	1	8.00	\$616.00	\$0.00	\$616.00	178								Disconnect & Seal WR Cryo Lines 3&4
	Connect, Purge, Evacuate & Charge WR Cryo Lines	17-Apr-20	24-Apr-20	0%	6	24.00	\$1,189.68	\$0.00	\$1,189.68	178								Connect, Purge, Evacuate & Charge WR Cryo Lines 5 & 6
	Performance Test WR Cryo Line 5 & 6 and Cold Lines 1&2	27-Apr-20	08-May-20	0%	9	16.00	\$1,232.00	\$0.00	\$1,232.00	178								Performance Test WR Cryo Line 5 & 6 and Cold Lines 1&2
	Disconnect & Seal WR Cryo Lines 5&6 and Cold Lines 1 & 2	11-May-20	12-May-20	0%	2	16.00	\$1,232.00	\$0.00	\$1,232.00	178								Disconnect & Seal WR Cryo Lines 5&6 and Cold Line 1 & 2
	AVAIL: White Room Refrigeration System Ready for ComCam		12-May-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00	185							AVAIL: White Room Refrigeration System Ready for LSST ComCam
	AVAIL: Pathfinder for ComCam		12-May-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00	190							AVAIL: Pathfinder for ComCam
	NEED: Access to TMA Refrigeration Lines		04-May-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00	171							NEED: Access to TMA Refrigeration Lines
	Preclean TMA lines with R123	05-May-20	02-Jun-20	0%	20	80.00	\$6,160.00	\$0.00	\$6,160.00	\$6,160.00	164							Preclean TMA lines with R123
	Install TMA Compressors on TMA	03-Jun-20	09-Jun-20	0%	5	40.00	\$1,982.80	\$0.00	\$1,982.80	\$1,982.80	176							Install TMA Compressors on TMA
	NEED: Pathfinder in ComCam on TMA		16-Nov-20	0%	0	0.00	\$0.00	\$0.00	\$0.00	\$0.00	57							NEED: Pathfinder in ComCam on TMA
	Connect, Purge, Evacuate & Charge TMA Cryo and Cold Lines 1&2	17-Nov-20	24-Nov-20	0%	6	24.00	\$1,231.44	\$0.00	\$1,231.44	\$1,231.44	54							Connect, Purge, Evacuate & Charge TMA Cryo and Cold Lines 1&2
	Performance Test TMA Cryo and Cold Lines 1&2	25-Nov-20	18-Dec-20	0%	15	16.00	\$1,275.04	\$0.00	\$1,275.04	\$1,275.04	54							Performance Test TMA Cryo and Cold Lines 1&2
	Disconnect & Seal TMA Cryo Lines 1&2	21-Dec-20	22-Dec-20	0%	2	16.00	\$1,275.04	\$0.00	\$1,275.04	\$1,275.04	54							Disconnect & Seal TMA Cryo Lines 1&2
	Connect, Purge, Evacuate & Charge TMA Cryo Line 3 & 4 and Cold Lines 1&2	23-Dec-20	05-Jan-21	0%	6	24.00	\$1,231.44	\$0.00	\$1,231.44	\$1,231.44	54							Connect, Purge, Evacuate & Charge TMA Cryo Line 3 & 4 and Cold Lines 1&2
	Performance Test TMA Cryo 3 & 4 and Cold Lines 1&2	06-Jan-21	27-Jan-21	0%	15	16.00	\$1,275.04	\$0.00	\$1,275.04	\$1,275.04	54							Performance Test TMA Cryo 3 & 4 and Cold Lines 1&2
	Disconnect & Seal TMA Cryo Lines 3&4	28-Jan-21	29-Jan-21	0%	2	16.00	\$1,275.04	\$0.00	\$1,275.04	\$1,275.04	54							Disconnect & Seal TMA Cryo Lines 3&4
	Connect, Purge, Evacuate & Charge TMA Cryo Line 5 & 6 and Cold Lines 1&2	01-Feb-21	08-Feb-21	0%	6	24.00	\$1,231.44	\$0.00	\$1,231.44	\$1,231.44	54							Connect, Purge, Evacuate & Charge TMA Cryo Line 5 & 6 and Cold Lines 1&2
	Performance Test TMA Cryo Line 5 & 6 and Cold Lines 1&2	09-Feb-21	02-Mar-21	0%</														



LSST May 2019 Month End Forecast													FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022
Activity ID	Activity Name	Start	Finish	Physical % Complete	Original Duration	Budgeted Labor Units	Budgeted Labor Cost	Budgeted Material Cost	Budgeted Total Cost no	Total Float	2014-10-01	2015-10-01	2016-10-01	2017-10-01	2018-10-01	2019-10-01	2020-10-01	2021-10-01		
	COMC	DRP: raft-Scale Caodd Processing Tests	17-May-21	03-Aug-21	0%	55	442.00	\$129,036.56	\$0.00	\$129,036.56	162								DRP: raft-Scale Caodd Proces	
	COMC	DRP: raft-Scale Overlap Resolution Tests	17-May-21	03-Aug-21	0%	55	442.00	\$129,036.56	\$0.00	\$129,036.56	162								DRP: raft-Scale Overlap Resol	
	COMC	DRP: raft-Scale Multi-Epoch Object Characterization	17-May-21	03-Aug-21	0%	55	442.00	\$129,036.56	\$0.00	\$129,036.56	162								DRP: raft-Scale Multi-Epoch O	
	COMC	DRP: raft-Scale Post Processing Tests	17-May-21	03-Aug-21	0%	55	442.00	\$129,036.56	\$0.00	\$129,036.56	162								DRP: raft-Scale Post Processin	
	COMC	COMP: DMS: Pipeline Testing w/ComCam Complete		03-Aug-21	0%	0	0.00	\$0.00	\$0.00	\$0.00	162								COMP: DMS: Pipeline Testing	
LSST ME 19-05.06C.02.04 Full System A1&T		12-Jan-21	07-Feb-22		273	24869.05	\$3,643,181.54	\$0.00	\$3,643,181.54	-43										
LSST ME 19-05.06C.02.04.01 LSSTCam Re-Verification		12-Jan-21	24-May-21		92	48.00	\$2,462.88	\$0.00	\$2,462.88	1										
COMC	LSSTCam Body Unpack - Inspect	13-Jan-21	21-Jan-21	0%	6	48.00	\$2,462.88	\$0.00	\$2,462.88	-3									LSSTCam Body Unpack - Inspect	
COMC	Cryostat Metrology in BOT	22-Jan-21		0%	1	0.00	\$0.00	\$0.00	\$0.00	1									Cryostat Metrology in BOT	
COMC	COMP: L1/L2 received at summit		12-Jan-21	0%	0	0.00	\$0.00	\$0.00	\$0.00	3									COMP: L1/L2 received at summit	
COMC	COMP: Camera Reverification Complete		24-May-21	0%	0	0.00	\$0.00	\$0.00	\$0.00	1									COMP: Camera Reverification Com	
LSST ME 19-05.06C.02.04.02 LSSTCam - Telescope A1&T		14-Jul-21	02-Feb-22		142	17883.05	\$2,437,053.36	\$0.00	\$2,437,053.36	-61										
COMC	Pre-LSSTCam Install Engineering	14-Jul-21	03-Aug-21	0%	15	1213.43	\$143,612.23	\$0.00	\$143,612.23	-58									Pre-LSSTCam Install Engineer	
COMC	Remove ComCam + Integrating Structure from TMA	14-Jul-21	20-Jul-21	0%	5	601.73	\$75,337.39	\$0.00	\$75,337.39	-58									Remove ComCam + Integrating	
COMC	Remove ComCam & Camera Surrogate Mass from	21-Jul-21	03-Aug-21	0%	10	857.16	\$116,092.02	\$0.00	\$116,092.02	-58									Remove ComCam & Camera S	
COMC	LSSTCam-Telescope Fixtures and Handling Checko	04-Aug-21	10-Aug-21	0%	5	601.73	\$75,337.39	\$0.00	\$75,337.39	-58									LSSTCam-Telescope Fixtures	
COMC	Install LSSTCam on Hexapod/Rotator	18-Aug-21	24-Aug-21	0%	5	601.73	\$75,337.39	\$0.00	\$75,337.39	-59									Install LSSTCam on Hexapod	
COMC	LSSTCam CCS+OCS Functional Tests	25-Aug-21	07-Sep-21	0%	10	770.86	\$111,136.16	\$0.00	\$111,136.16	-59									LSSTCam CCS+OCS Func	
COMC	Install LSSTCam+Hexapod/Rotator on TMA	08-Sep-21	14-Sep-21	0%	5	601.73	\$75,337.39	\$0.00	\$75,337.39	-59									Install LSSTCam+Hexapod	
COMC	Connect, Purge & Charge LSSTCam Cryo TMA Line	15-Sep-21	05-Oct-21	0%	15	591.25	\$97,690.22	\$0.00	\$97,690.22	-59									Connect, Purge & Charge	
COMC	Vacuum Pump LSSTCam Cryostat	15-Sep-21	28-Sep-21	0%	10	685.73	\$100,952.19	\$0.00	\$100,952.19	-54									Vacuum Pump LSSTCam	
COMC	LSSTCam Deflection Tests w/TMA at Horizon	15-Sep-21	21-Sep-21	0%	5	400.00	\$59,442.80	\$0.00	\$59,442.80	-49									LSSTCam Deflection Tests	
COMC	LSSTCam CCS+OCS on-Telescope Functional Test	15-Sep-21	27-Sep-21	0%	9	374.93	\$49,351.42	\$0.00	\$49,351.42	-53									LSSTCam CCS+OCS on-	
COMC	LSSTCam Cool Down	06-Oct-21	13-Oct-21	0%	5	330.00	\$55,556.60	\$0.00	\$55,556.60	-59									LSSTCam Cool Down	
COMC	LSSTCam Deflection vs Elevation Tests	06-Oct-21	13-Oct-21	0%	5	485.43	\$69,055.35	\$0.00	\$69,055.35	-59									LSSTCam Deflection vs E	
COMC	LSSTCam DAQ+DMS Connectivity Verification	06-Oct-21	12-Oct-21	0%	5	365.43	\$57,515.99	\$0.00	\$57,515.99	-58									LSSTCam DAQ+DMS Co	
COMC	Engineering Punchlist Resolution LSSTCam 1	06-Oct-21	12-Oct-21	0%	5	696.30	\$92,543.19	\$0.00	\$92,543.19	-58									Engineering Punchlist Res	
COMC	LSSTCam Electro-Optical Tests 1	14-Oct-21	27-Oct-21	0%	10	991.73	\$145,709.30	\$0.00	\$145,709.30	-59									LSSTCam Electro-Optic	
COMC	WFS-FPA & Reconstruct or Calibration	14-Oct-21	27-Oct-21	0%	10	1010.00	\$135,048.50	\$0.00	\$135,048.50	-59									WFS-FPA & Reconstruct	
COMC	LSSTCam Electro-Optical Test 2	28-Oct-21	19-Nov-21	0%	15	1031.25	\$158,004.23	\$0.00	\$158,004.23	-59									LSSTCam Electro-Opt	
COMC	Build Operational LSSTCam-Tel AOS Look-up Table	28-Oct-21	19-Nov-21	0%	15	1271.25	\$156,505.43	\$0.00	\$156,505.43	-59									Build Operational LSS	
COMC	Engineering Punchlist Resolution LSSTCam 2	22-Nov-21	30-Nov-21	0%	5	686.30	\$90,951.19	\$0.00	\$90,951.19	-61									Engineering Punchlist	
COMC	COMP: LSSTCam Ready for Bulk Data Production	08-Dec-21		0%	0	0.00	\$0.00	\$0.00	\$0.00	-61									COMP: LSSTCam R	
COMC	Technical Operations Optimization w/LSSTCam 1	08-Dec-21	28-Dec-21	0%	15	1141.25	\$153,694.53	\$0.00	\$153,694.53	-61									Technical Operati	
COMC	Engineering Punchlist Resolution LSSTCam 3	29-Dec-21	04-Jan-22	0%	5	706.30	\$93,366.39	\$0.00	\$93,366.39	-61									Engineering Punch	
COMC	Technical Operations Optimization w/LSSTCam 2	05-Jan-22	26-Jan-22	0%	15	1161.25	\$156,109.73	\$0.00	\$156,109.73	-61									Technical Operati	
COMC	Engineering Punchlist Resolution LSSTCam 4	27-Jan-22	02-Feb-22	0%	5	706.30	\$93,366.39	\$0.00	\$93,366.39	-61									Engineering Punc	
COMC	COMP: LSSTCam-Tel Integration Complete		26-Jan-22	0%	0	0.00	\$0.00	\$0.00	\$0.00	-56									COMP: LSSTCam	
LSST ME 19-05.06C.02.04.03 DMS+ TCS/OCS + LSSTCam A		13-Oct-21	07-Feb-22		81	6938.00	\$1,203,665.30	\$0.00	\$1,203,665.30	-43										
COMC	OCS: Scheduler Driven Observing w/LSSTCam 1	01-Dec-21	22-Dec-21	0%	15	370.00	\$34,686.90	\$0.00	\$34,686.90	-26									OCS: Scheduler Dri	
COMC	OCS: Scheduler Driven Observing w/LSSTCam 2	05-Jan-22	26-Jan-22	0%	15	370.00	\$34,686.90	\$0.00</												

LSST May 2019 Month End Forecast																				
Activity ID		Activity Name		Start	Finish	Physical % Complete	Original Duration	Budgeted Labor Units	Budgeted Labor Cost	Budgeted Material Cost	Budgeted Total Cost no	Total Float	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022
													2014-10-01	2015-10-01	2016-10-01	2017-10-01	2018-10-01	2019-10-01	2020-10-01	2021-10-01
<div><div></div><div></div><div></div><div></div><div></div></div>	COMC	ORR mini-Survey 2 Level 2 Data Release Processin	04-Mar-22	26-May-22	0%	60	1298.75	\$283,499.50	\$0.00	\$283,499.50	-45									<div><div></div><div></div>ORR mi</div>
	COMC	COMP: mini-Survey 2 Data Release Complete		26-May-22	0%	0	0.00	\$0.00	\$0.00	\$0.00	-45									<div><div></div><div></div>COMP:</div>
	COMC	COMP: Calibration Products Production Verified		26-May-22	0%	0	0.00	\$0.00	\$0.00	\$0.00	-40									<div><div></div><div></div>COMP:</div>
	COMC	COMP: Data Release Production Verified		26-May-22	0%	0	0.00	\$0.00	\$0.00	\$0.00	-40									<div><div></div><div></div>COMP:</div>
	LSST ME 19-05.06C.02.05.03 Operation Readiness Prepara		27-Jan-22	24-Jun-22		106	3092.28	\$407,064.29	\$0.00	\$407,064.29	-61									
	COMC	Pre-OR Survey Engineering	27-Jan-22	09-Feb-22	0%	10	1007.59	\$140,057.18	\$0.00	\$140,057.18	-61									<div><div></div><div></div>Pre-OR Survey</div>
	COMC	Pre-ORR Engineering	15-Apr-22	22-Jun-22	0%	49	1291.49	\$138,493.76	\$0.00	\$138,493.76	-61									<div><div></div><div></div>Pre-O</div>
	COMC	ORR Preparation	15-Apr-22	17-Jun-22	0%	46	475.20	\$77,196.90	\$0.00	\$77,196.90	-61									<div><div></div><div></div>ORR#</div>
	COMC	Operations Readiness Review	20-Jun-22	24-Jun-22	0%	5	318.00	\$51,316.45	\$0.00	\$51,316.45	-61									<div><div></div><div></div>Opera</div>
	COMC	Operation Readiness Review Complete		24-Jun-22	0%	0	0.00	\$0.00	\$0.00	\$0.00	-61									<div><div></div><div></div>Opera</div>