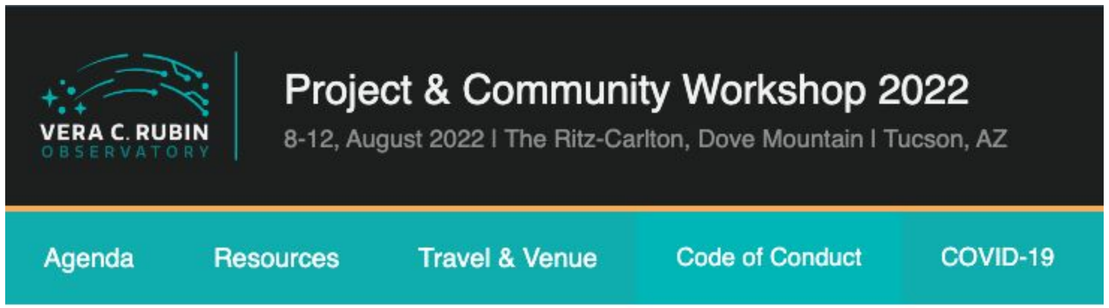
VERA C. RUBIN OBSERVATORY

Project & Community Workshop 2022

8-12, August 2022 | The Ritz-Carlton, Dove Mountain | Tucson, AZ

Welcome

Friendly Reminders - CoC & COVID

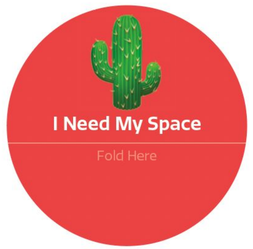


Home » Code of Conduct

Code of Conduct

Harassment and unprofessional conduct (including the use of offensive language) of any kind is not permitted at any time and should be reported.

Rubin Observatory adheres to the principles of kindness, trust, respect, diversity, and inclusiveness in order to provide a learning environment that produces rigor and excellence.



Check name-tags for these contact comfort level stickers.

Thank you for masking indoors!

Use the confidential email rubin2022-covid@lists.lsst.org to request a test, report your test results, or ask questions.

Reporting bullying, harassment, or aggression.

The Rubin 2022 Organizing Committee has appointed designated contacts:

- Ranpal Gill (rgill@lsst.org)
- Andrew Connolly (ajc@astro.washington.edu)
- Melissa Graham (mlg3k@uw.edu)

Contact via email, Slack, or the Community Forum.

COVID Specific

- Outdoor meals
- Hand sanitizer stations
- Posters to remind all to wear masks
- If you have covid symptoms don’t come to the conference area
- Respect people’s choice for space - wear a sticker

Arizona 101!

Stay hydrated

a. It’s dry here, avoid dehydration by drinking water throughout the day. Signs of dehydration: thirst, loss of appetite, fatigue or weakness, headaches and dry mouth. Alcohol increases risk of dehydration

Protect your skin

a. Arizona sun can burn unprotected skin after only minutes of exposure.
Apply adequate sunscreen and refresh it after exercising, swimming or sweating.

Let wildlife be

a. Arizona desert is full of wildlife that can be dangerous. Coyotes, javalinas, bobcats, rattlesnakes, deer and cougars are not uncommon. Most will try to avoid humans, but could attack if threatened.

Monsoon safety

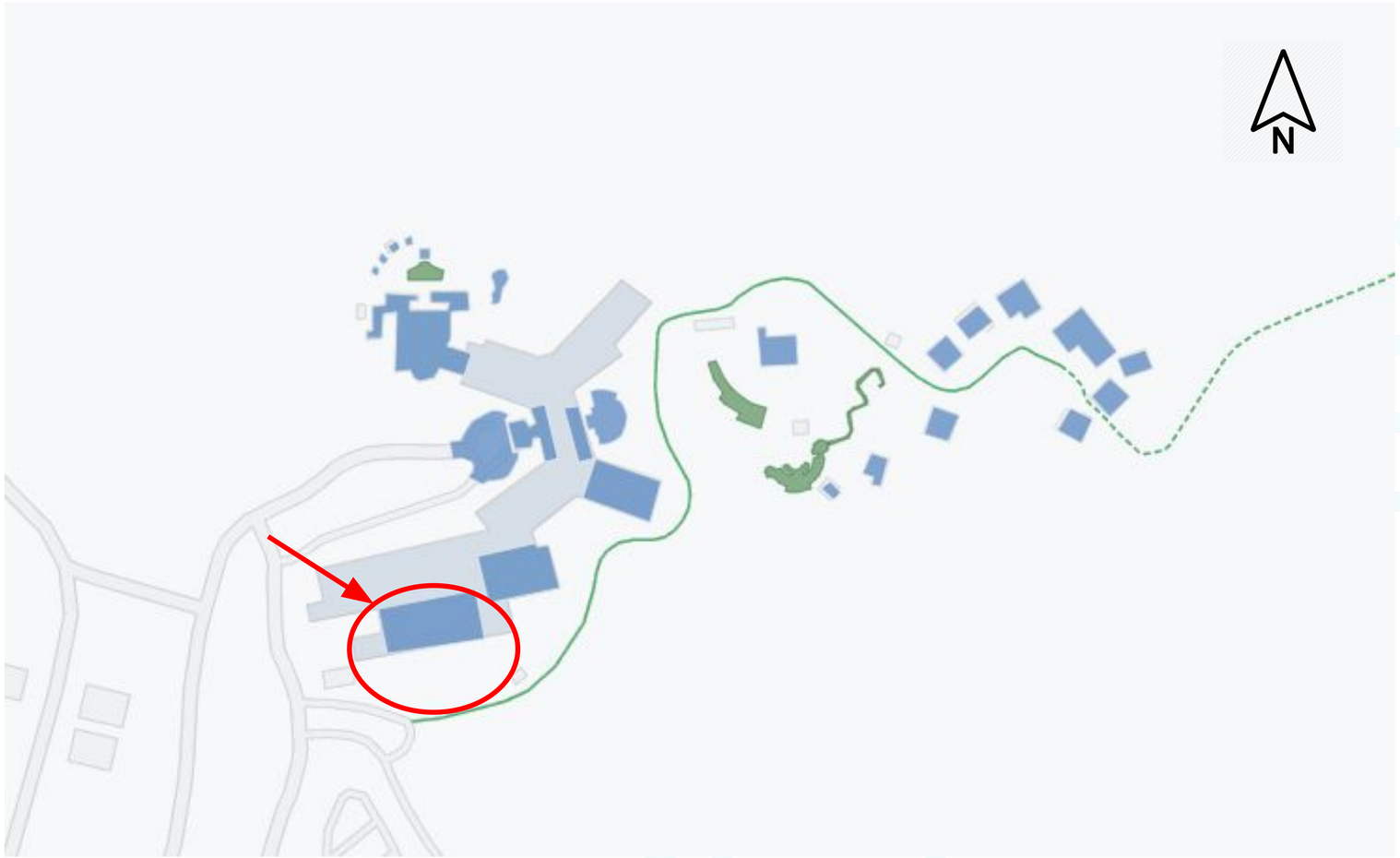
a. Now is summer monsoon season, rain can fall in the mountains and cause **flash flooding** in canyons miles away. Be aware of the weather, not just in your immediate area, but in the distance as well. Stay out of narrow canyons and dry washes where flash floods can occur.

b. Monsoon season often brings violent t**hunderstorms**, and **lightning** can strike miles from a cloud. Keep an eye on the sky and watch for storms if you’re going to be outside. Remember: if you can hear the thunder, you are not too far away to be struck by lightning.

In case of fire

Follow exit signs

Get familiar with where exits are



Friendly Reminders - Virtual Participation

Virtual participants should be muted when they're not speaking.

In-person participants should speak into the room microphone(s), or the chair should repeat all questions into the microphone, so that the virtual participants can hear what is said.

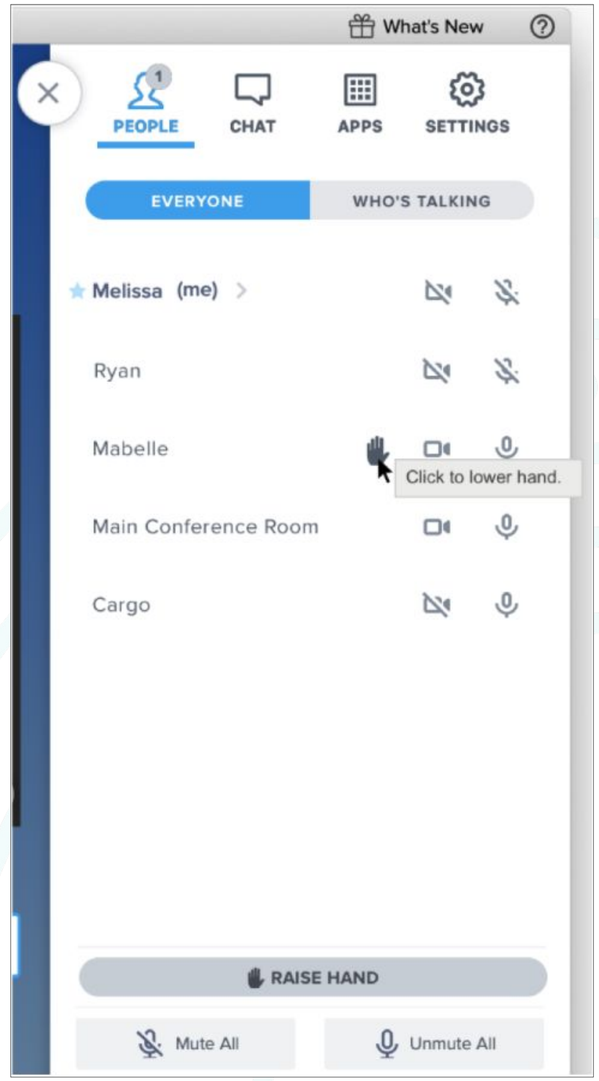
In the Rubin2022_PCW Slack Space, all participants can use the session's channel for Q&A and discussion.

The channel name convention is, e.g.: #day1-mon-slot4a-construction-plenary

Plenary virtual participants should:

Use the BlueJeans chat functionality to ask questions or make comments.

Staff are moderating the chat and will ask your question for you



VERA C. RUBIN OBSERVATORY

Directors' Welcome

Plenary - Monday Aug 8

Z. Ivezic, S Thomas, A. Roodman

NSF AURA U.S. DEPARTMENT OF ENERGY SLAC CHARLES AND LISA SIMONYI FUND FOR ARTS AND SCIENCES LSST CORPORATION

Welcome
Željko Ivezić - Director Rubin Construction

- 12th Rubin Project & Community Workshop
- Over 300 + attendees from all over the word
  - In-person interest way above expectations
- A full agenda that you all contributed to
- Lots of fun activities too!

Thank you Steve!

New leadership appointments

Rubin Director's Office Announcement

Sandrine Thomas
Deputy Director for Rubin Construction for AURA/NSF

Aaron Roodman
LSST Camera Program Lead and Deputy Director for Rubin Construction for SLAC/DOE

Steve Ritz
Project Scientist for Rubin Construction

Project Management Office

Project Manager
Victor Krabbendam

System Scientist
Chuck Claver

Deputy PM - Software & IT
William O'Mullane

Deputy PM - Camera Comm
Vincent Riot

LSST cadence optimization:
deputy Project Scientist Federica Bianco

We are regrouped and continuing with construction!

Some Recent Celebratory Achievements

- T&S work has been steady and productive
- TMA and Dome contractors are almost done (TMA and dome can move under power!)
- Electro-optical testing of the camera has made great progress
- Camera refrigeration: switched to an alternate, pumped coolant, cold system
- L3 lens installation on the cryostat was completed
- ComCam+Pathfinder have been running on Camera Support Cart since August 2021
- AuxTel is back online with monthly observing runs (including Imaging Survey data reduction)
- USDF ramping up and Multi site processing development advancing well (NCSA switch off Aug 15, 2022)
- 7 community brokers successfully connected to a production-ready alert streaming service using simulated data
- Automatic generation of QA plots during Gen3 Data Release Processing

Steady progress towards completion of the construction project: LSST will happen!

Future Major (Celebratory) Milestones

Updated monthly
https://ls.st/dates

Current Forecast	Name
29-Sep-2022	TMA Contract Complete
30-Sep-2022	EPO Construction Finish
20-Mar-2023	COMP: Camera Pre-Ship Review at SLAC
28-Mar-2023	Dome Complete
17-May-2023	3-Mirror Optical System Ready for Testing
19-Jul-2023	Engineering First Light w/ComCam
05-Sep-2023	Camera Ready for Full System AI&T
14-Feb-2024	**System First Light**
11-Jun-2024	Test report: Final Pipelines Delivery
11-Jun-2024	Mini-Survey 2 Complete
18-Jun-2024	Operation Readiness Review Complete

Rubin Operations Top Milestones

- **2021-06-30** Deliver Data Preview 0.1 (DP0.1) (L1-RO-0040)
- **2022-06-30** Complete Delivery of Data Preview Zero (L1-RO-0050)
- **Apr 2024 - Jul 2024** Complete Delivery of Data Preview One (DP1) (L1-RO-0060) (= Optical testing on TMA complete + 6 months)
- **Jun 2024 - Oct 2024** ("Survey"/"Full") Operations Begins (L1-RO-0100) (= Operation Readiness Review Complete + 1 day)
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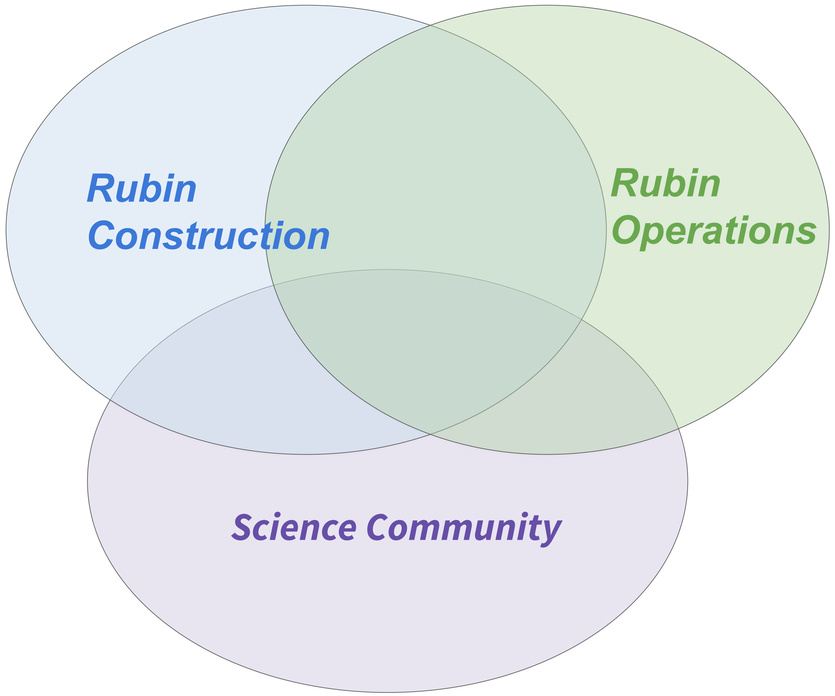
- **Oct 2025 - Jan 2026** Complete Delivery of Data Release One (DR1) (L1-RO-0120) (= Survey Start + 12 months)

Ops. milestones: more from Bob tomorrow…

Workplace Culture and IDEA Efforts



IDEA = Inclusion, Diversity, Equity and Accessibility

3 different IDEA sessions

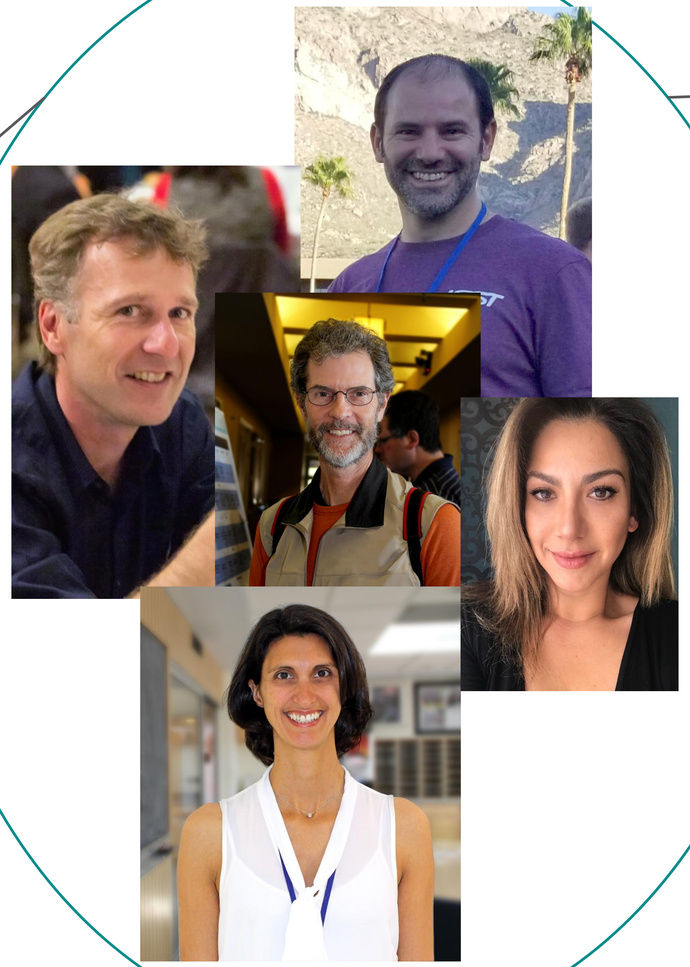
- *Tuesday 9am and 11am*
- *Thursday at 1:30pm*

Efforts on different fronts

- Workplace Culture Advocates (WCAs)
- IDEA embedded in the EPO program
  - Mostly data accessibility
- Science Collaboration DEI Council
  - Connected to the project and representant in AURA and SLAC institution diversity advocates.
- Science Collaboration Efforts (Clarkson, Bianco and others)
  - SCs DEI councils
  - Data accessibility and representation (sonification, 3D rendering)
  - Reaching Underserved Institutions
- Operation Data Previews efforts to reach out underserved institutions

Rubin's Workplace Culture Advocates

Safe Ear: we listen to you in case of any workplace issues/conflict



Promote **allyship**

Promote a **kind, welcoming and safe workplace culture**

- ✓Communication
- ✓Diversity
- ✓Stress management
- ✓Recognition
- ✓Make kindness the norm
  - #Be-kind channel
  - https://www.lsst.org/about/kindness

Connection to the directorate when need be

https://project.lsst.org/workplace-culture-advocate

Done with the Communication team and AURA DA

Construction progress is excellent,
Operations is gaining traction,
Community is engaging.

Let’s make this a great week!

Rubin Observatory’s mission is to build a well-understood system that will produce an unprecedented astronomical data set for studies of the deep and dynamic universe, make the data widely accessible to a diverse community of scientists, and engage the public to explore the Universe with us.

VERA C. RUBIN OBSERVATORY

Construction Update

Plenary - Monday Aug 8

Victor Krabbendam

NSF AURA U.S. DEPARTMENT OF ENERGY SLAC CHARLES AND LISA SIMONYI FUND FOR ARTS AND SCIENCES LSST CORPORATION

Executive Summary

Project is moving steadily toward completion:

- MREFC is 86% complete
- DOE MIE is 100% complete with ongoing support from DOE Commissioning funding
- Forecast Completion is June 2024 - Operations planned start is October 2024
- Budget and Schedule contingency is tight but sufficient
- Technical Margin remains toward science requirements

Challenges and Risks:

- Technical and programmatic challenges continue – all are being managed.
- Technical Activities have become highly compressed to further challenge System Integration and Commissioning
- Telescope Mount and Dome along with LSSTCam are competing for Project critical path
- Staffing is a challenge with departures and transitions to operations

Organizational changes

Updated 06/2022

- Project Office
- Advisory
- Project Support
- Sub-systems
- Rubin Operations

Ops Director's Office

Director of Operations
Robert Blum

Deputy Director (NOIRLab)
In Recruitment

Deputy Director (SLAC)
Phil Marshall

Communications

Manager
Ranpal Gill

Project Director's Office

Director
Željko Ivezić

Deputy Director (AURA/NSF)
Sandrine Thomas

Deputy Director (SLAC/DOE)
Aaron Roodman

Project Science

Project Scientist
Steve Ritz

Deputy Project Scientist
Federica Bianco

Project Science Team

Project Advisors

Chief Scientist
Tony Tyson

Science Advisory Committee
Michael Strauss

Project Science Team

Project Management Office

Project Manager
Victor Krabbendam

Project Scientist
Chuck Claver

Deputy PM - Software & IT
William O'Mullane

Deputy PM - Camera Comm
Vincent Riot

Project Administration

Compliance & Quality Administrator
Veronica Kinnison

Project Controls
Kevin Long

Performance & Safety

Head of Safety
Chuck Gessner

Site Safety Coordinator
Giovanni Corvetto

Information Security Officer
Iain Goodenow (Interim)

System Verification & Validation

Systems Engineering Manager
Austin Roberts

Science Validation
Keith Bechtol

Systems Integration

Observatory Scientist
Kevin Reil

Project Manager

System Commissioning

Commissioning Scientist
Robert Lupton

Project Manager

Data Management

Project Manager
William O'Mullane

Subsystem Scientist
Leanne Guy

Camera

Project Manager
Vincent Riot

Subsystem Scientist
Steve Ritz

Education & Public Outreach

Head of EPO
Lauren Corlies

EPO Deputy
Vacant

Telescope & Site

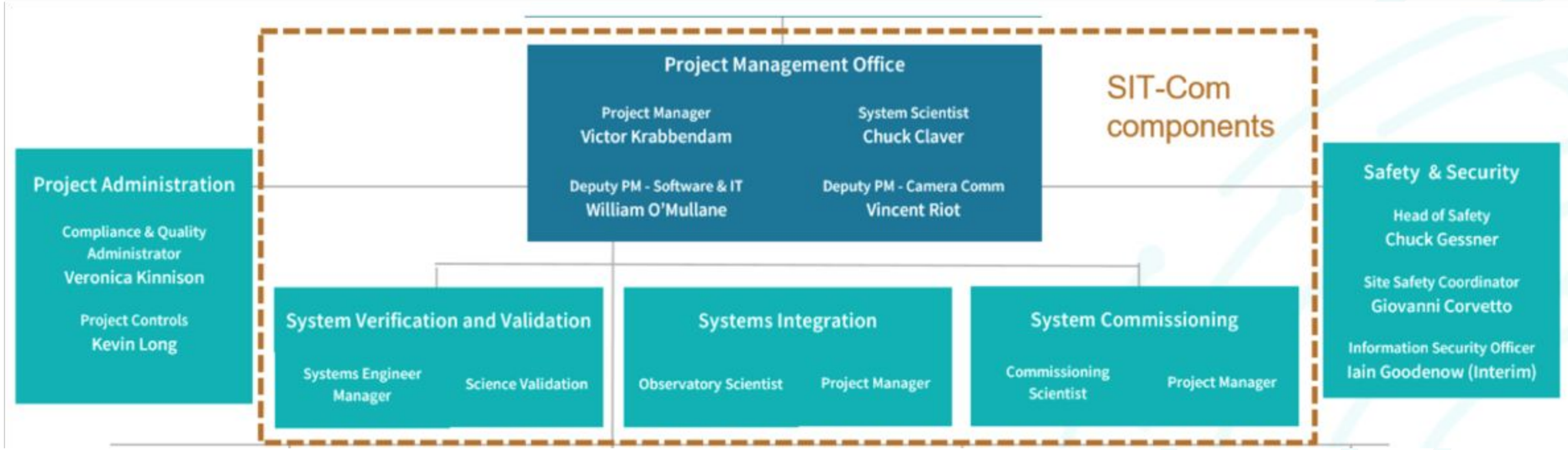
Project Manager
Jeff Barr

Subsystem Scientist
Sandrine Thomas

Enhanced structure to expand SIT-Com

SIT-Com consists of coordinated 3 teams:

- System Verification & Validation – SVV (including science validation)
- System Integration & Test – SIT (hardware – software focus in Chile)
- System Commissioning – Com (integration with science processing)



Project Construction Budget Projection

NSF MREFC: $ 541.1 M**

DOE MIE: $ 165.3 M

DOE Commissioning: $ 47.9 M**

Private Funding: $ 40.0 M

NSF Supplemental Funding Request Status :
Includes COVID and Data Secrutiy increases

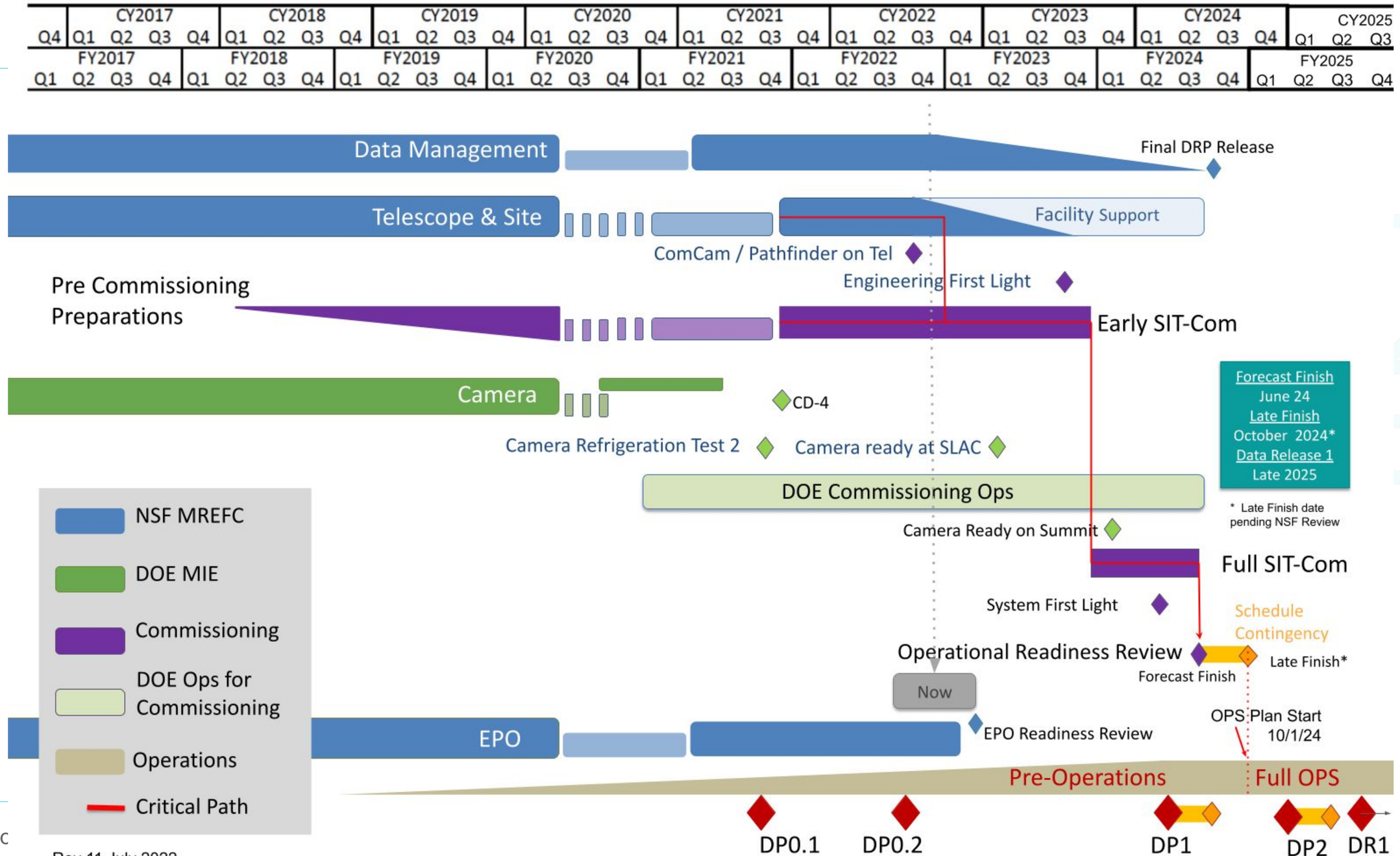
	Estimated Amount	Awarded Amount
SFR1	$ 1,533,913	$ 1,533,913
SFR2a *	$ 28,145,870	$ 28,145,870
SFR2b *	$ 37,124,846	
SFR3	$ 907,816	$ 907,816
SFR4	$ 967,656	
SFR5	$ 7,466,509	$ 7,466,509
SFR6	$ -	
Total	**$ 76,146,610**	**$ 38,054,108**

* SFRII includes updated NICRA Rates (Dec 2021)

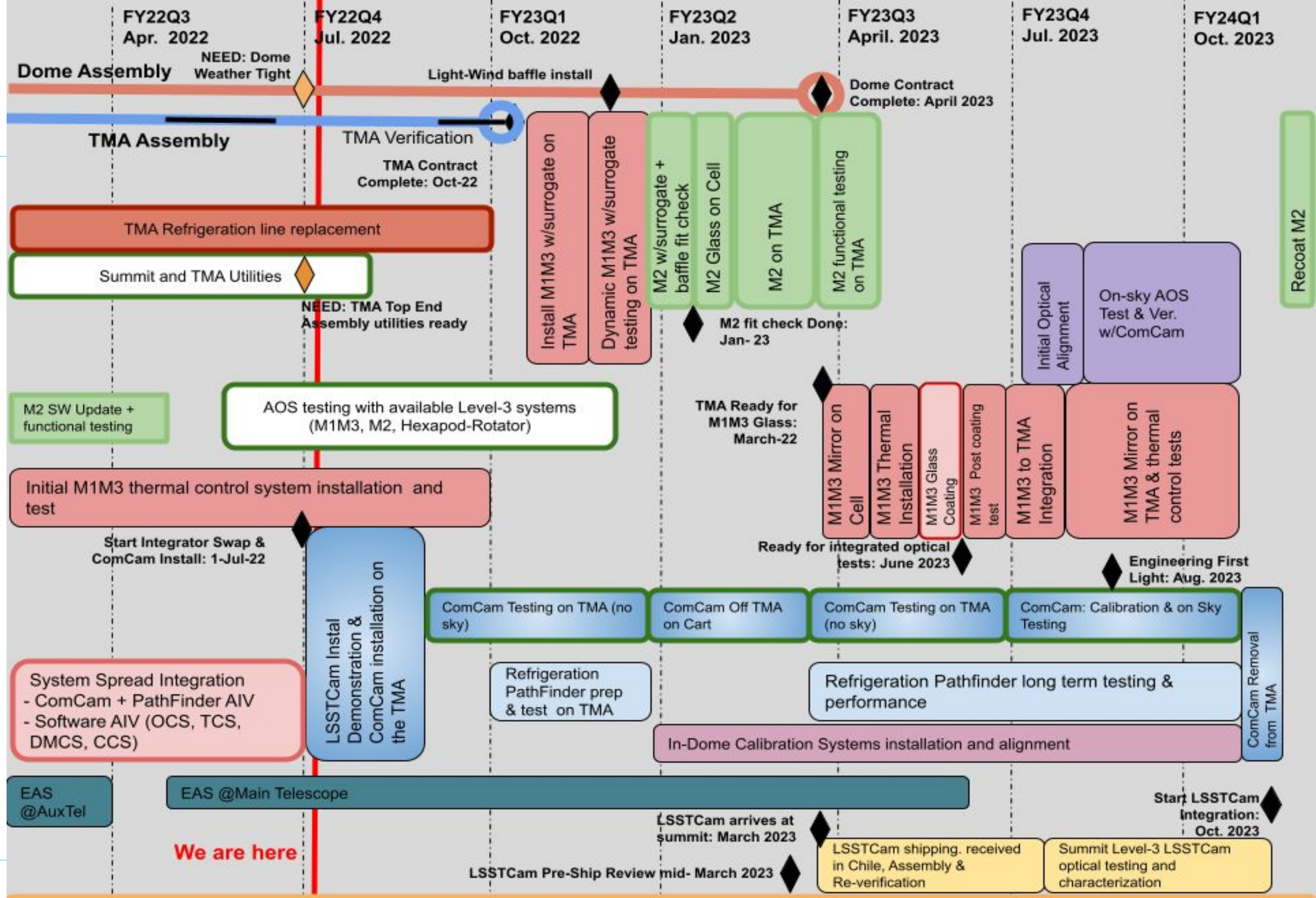
* EAC plus contingency
Values based on current requests and includes amounts still pending approval

.

Rubin Observatory Schedule



VERA C. RUBIN OBSERVATORY



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Same slide and dates as earlier in presentation

Ops. milestones: more from Bob tomorrow…

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Progress with DM Science Pipelines

- Completed Gen-3 Data Butler
- Science Pipelines are being used for data previews – currently with DESC simulated data (DP0.1 and DP0.2). Data previews are verifying data processing workflows
- New defaults on main code branch:
  - Scarlet Lite for deblending: order of mag faster and more memory efficient with no degradation in robustness
  - PIFF for PSF modeling
  - Tasks to generate HiPS trees for the DM Portal and EPO
- 7 community brokers successfully connected to a production-ready alert streaming service using simulated data (DMTN-210).
- A prototype of the Prompt Processing Framework is in operation at the interim data facility
- Tooling to automatically generate (matching and reproducible) plots and metrics to monitor pipeline quality during pipeline execution
- For more info, join session **Wednesday 11am for complete update on DM Science Pipelines**

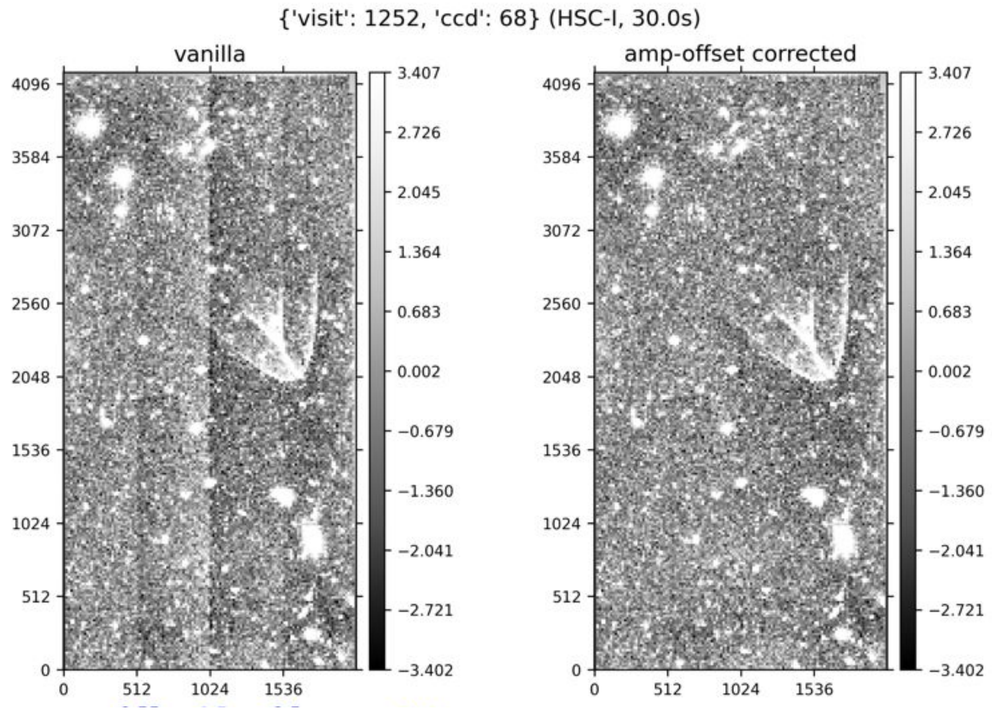
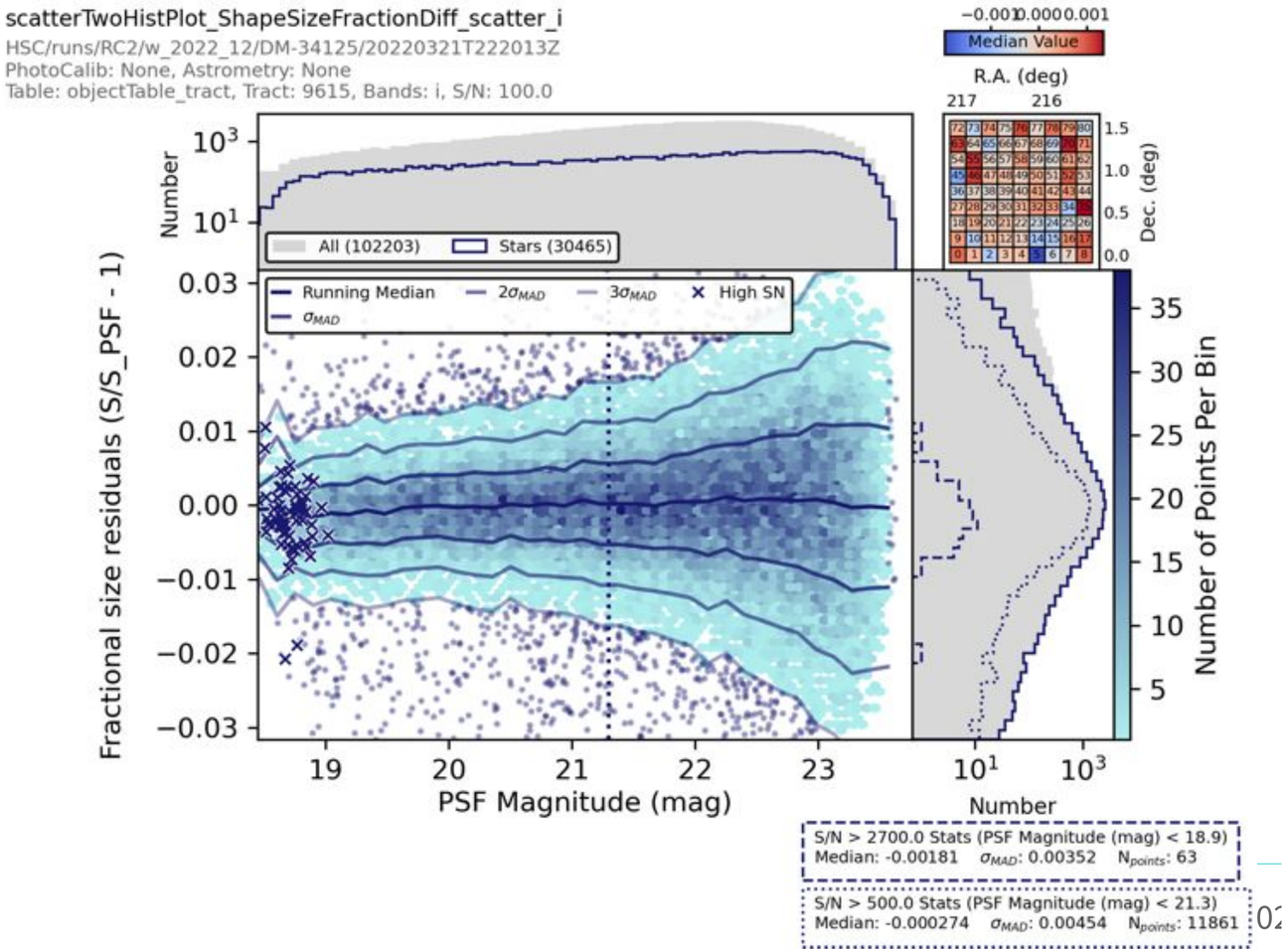


Figure credit: Lee Kelvin.
Pan-STARRS “pattern continuity” algorithm (a.k.a amp-to-amp matching) used on data releases with HSC precursor data

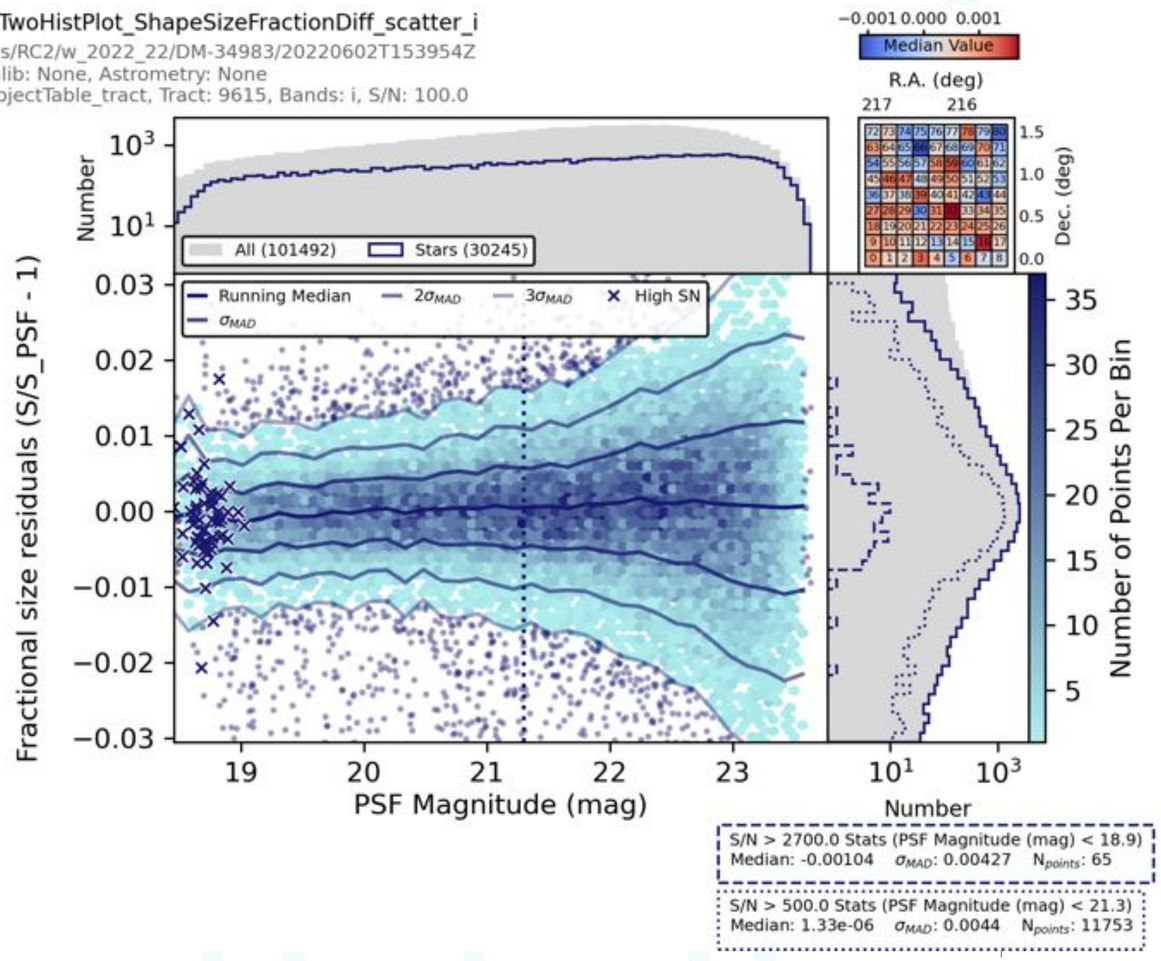
Improvements to PSF Estimation

Equivalent performance with PIFF demonstrated. PIFF is under active development with improvements coming.

w_2022_12: Last HSC rerun with PSFEx



w_2022_22: 3rd HSC rerun with PIFF

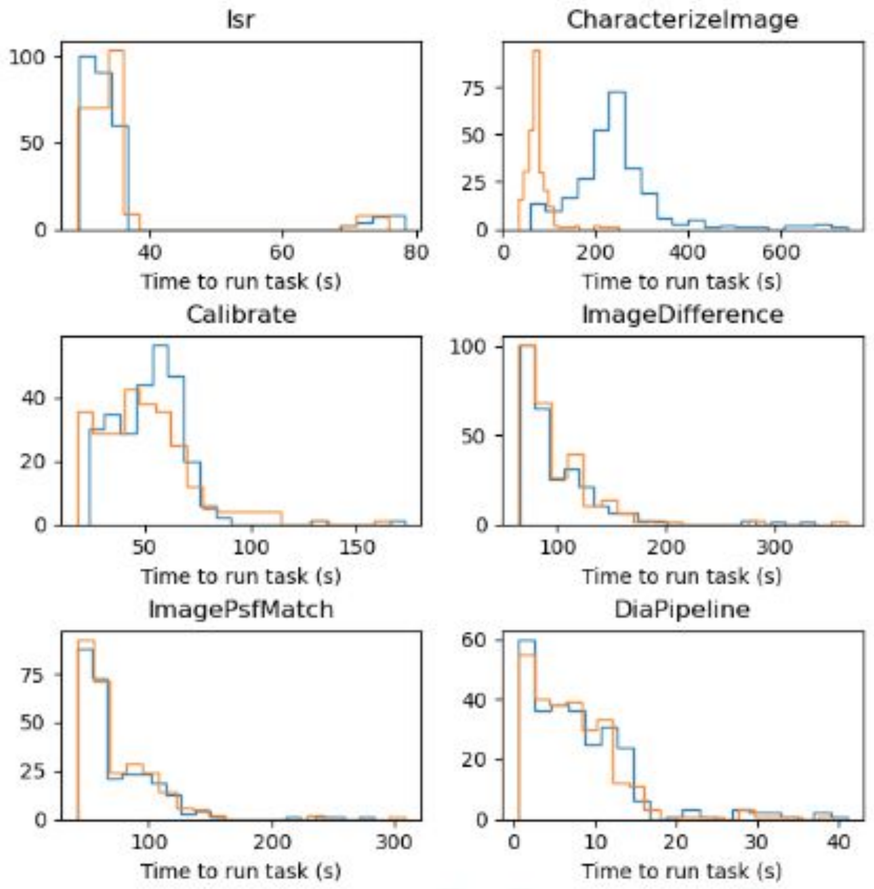


Performance optimization of the Alert Production Pipelines has begun.

AP pipelines must execute within 60 seconds, but we have avoided premature optimization

A profiling sprint in May 2022 identified and eliminated nonessential processing, cutting execution time from >400 s to ~200 s on NCSA hardware.

Further optimization is ongoing.



Initial run w.2022.21

New run after improvements w.2022.22

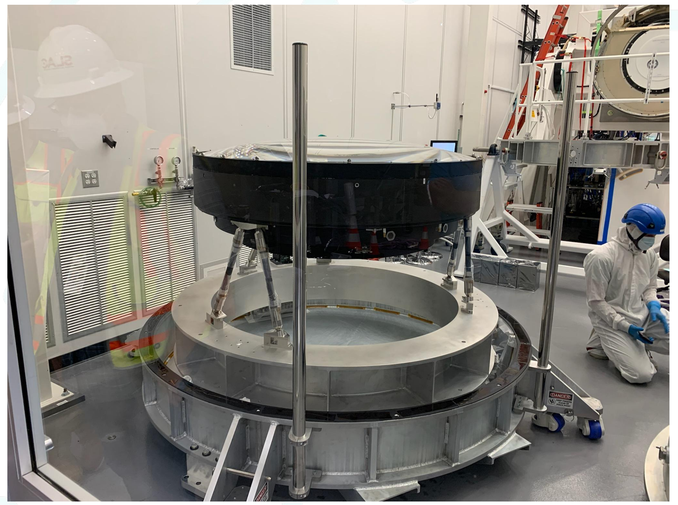
Camera Integration has gone well

Filter Exchange integration and testing at SLAC

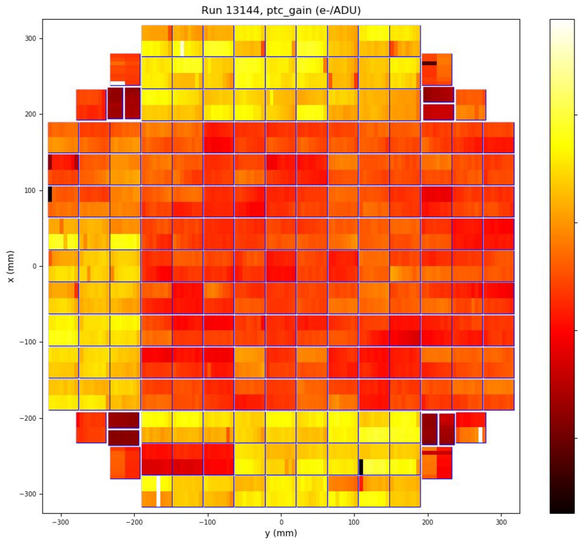
Cryostat and Utility trunk mated

All filters in the IR2 clean room

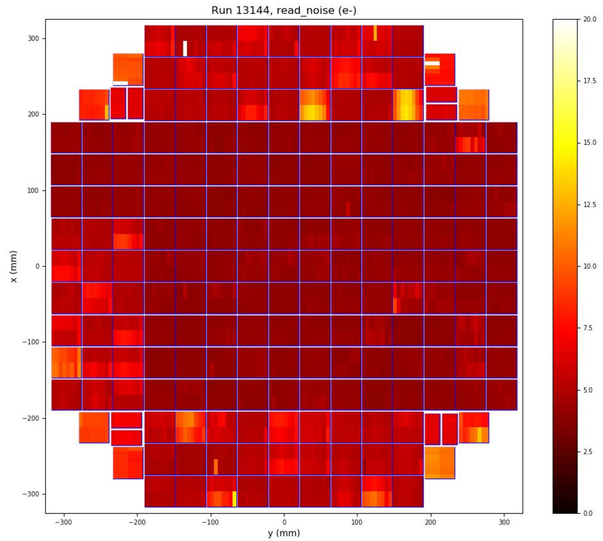
L1-L2 assembly ready for install



LSSTCam has had its first (of several) incremental verification & acceptance reviews

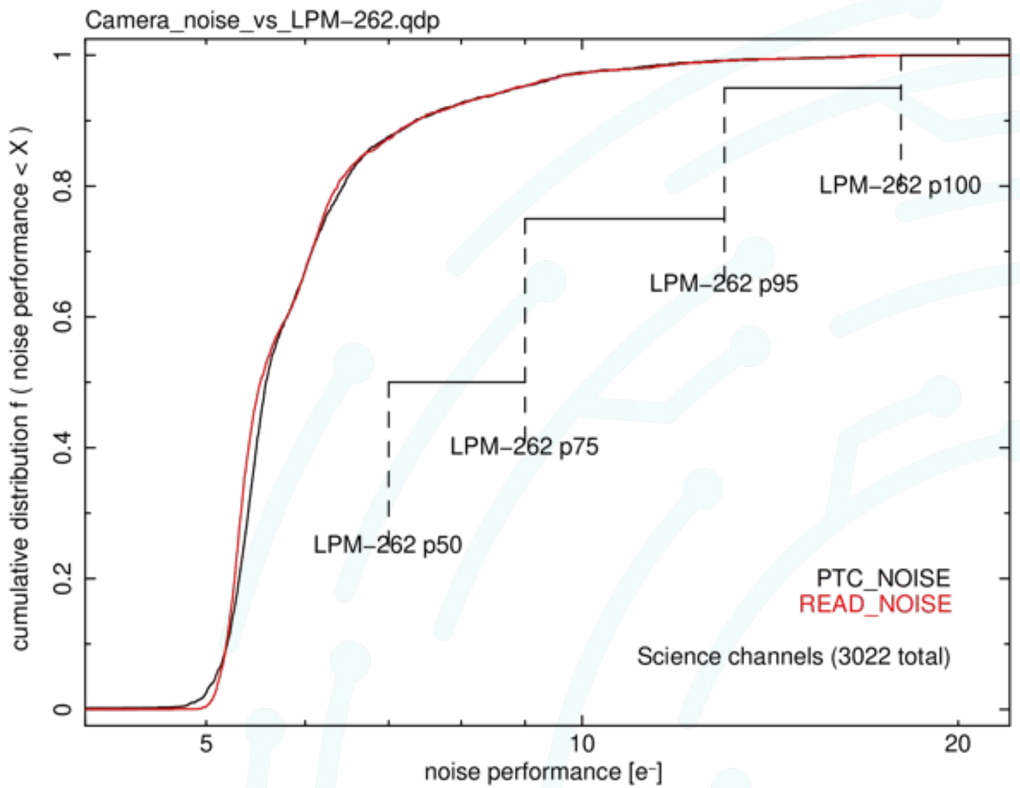


Gain map



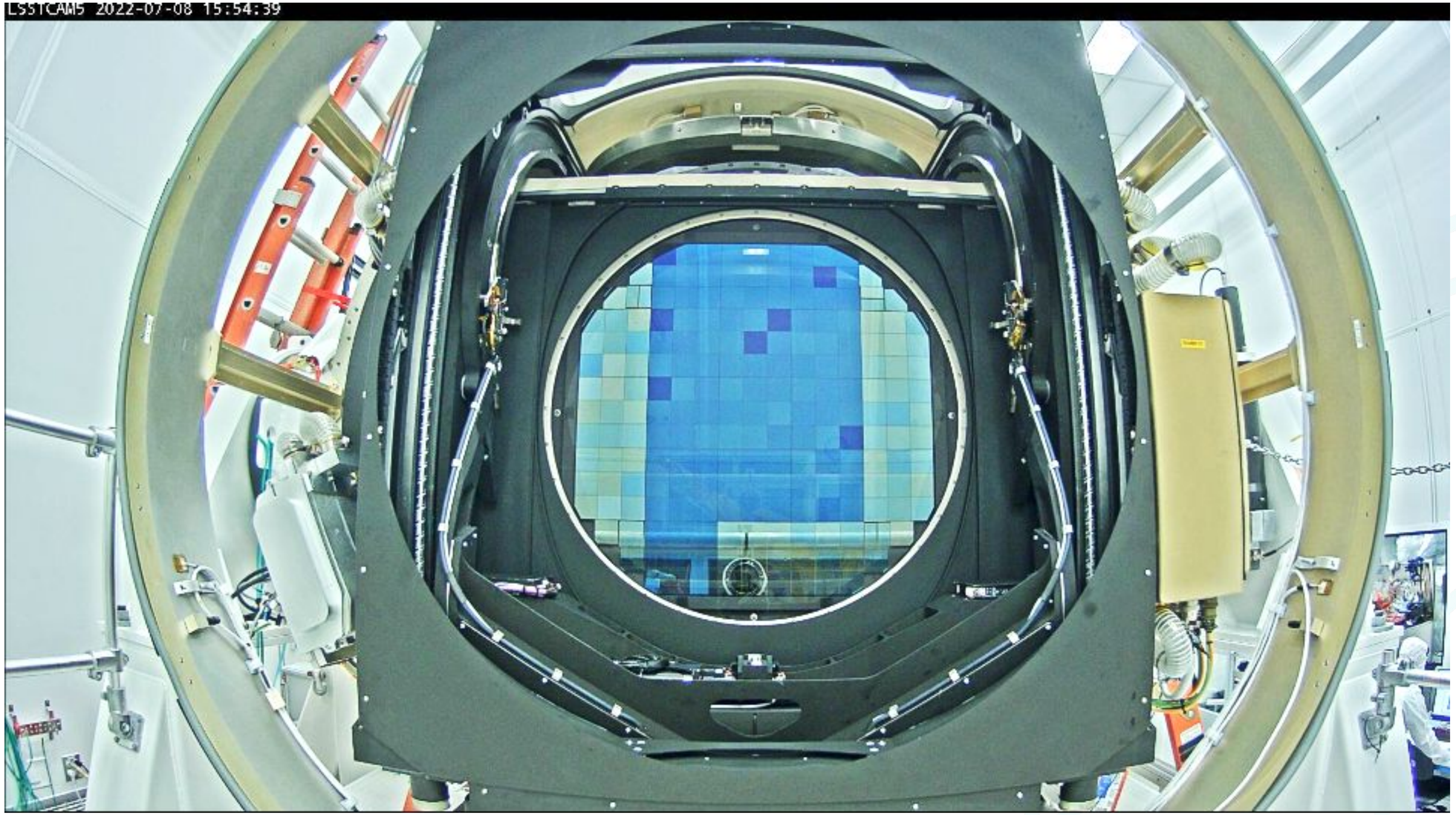
Read noise map

June 1, 2022 review was focused on electro-optical FPA performance



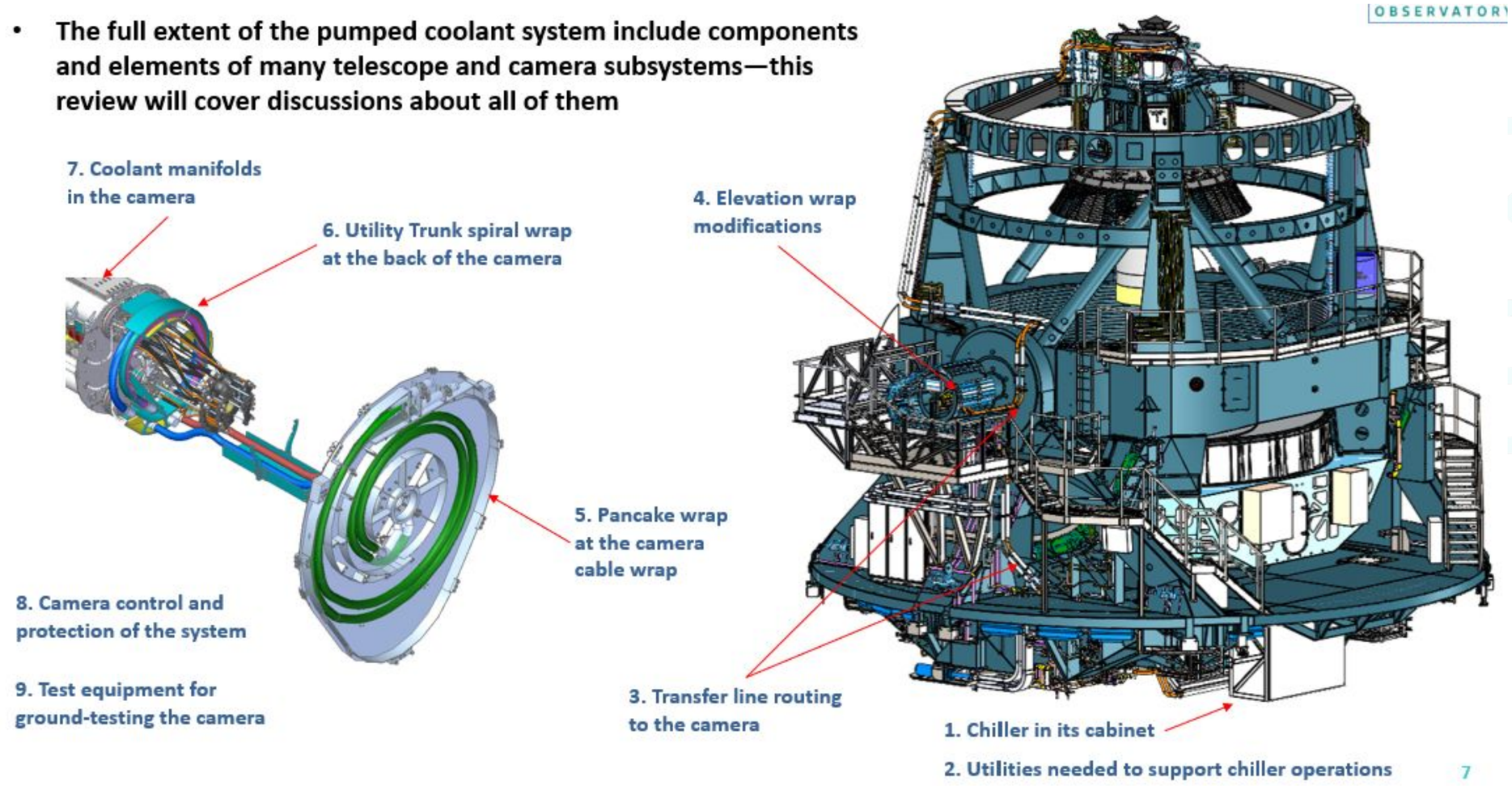
LSSTCam FPA read noise cumulative distribution with allowed limits

Next up - L1-L2 Integration starting Aug. 15



Camera refrigeration system change this year

- “Cold” refrigeration system on Camera was not performing reliably.
- Project Decision to Replace compressed vapor system with a pumped coolant system
- Successful FDR held 2 - 4 August.

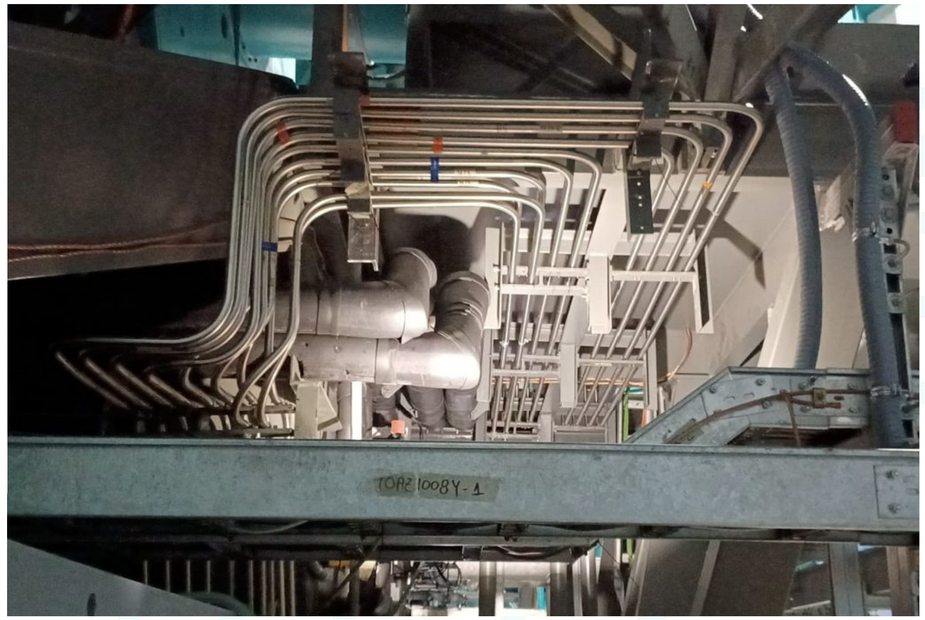


Telescope Mount (TMA) is nearing completion

TMA vendor started control system integration back in March.
Mount control and performance verification to resume this September.

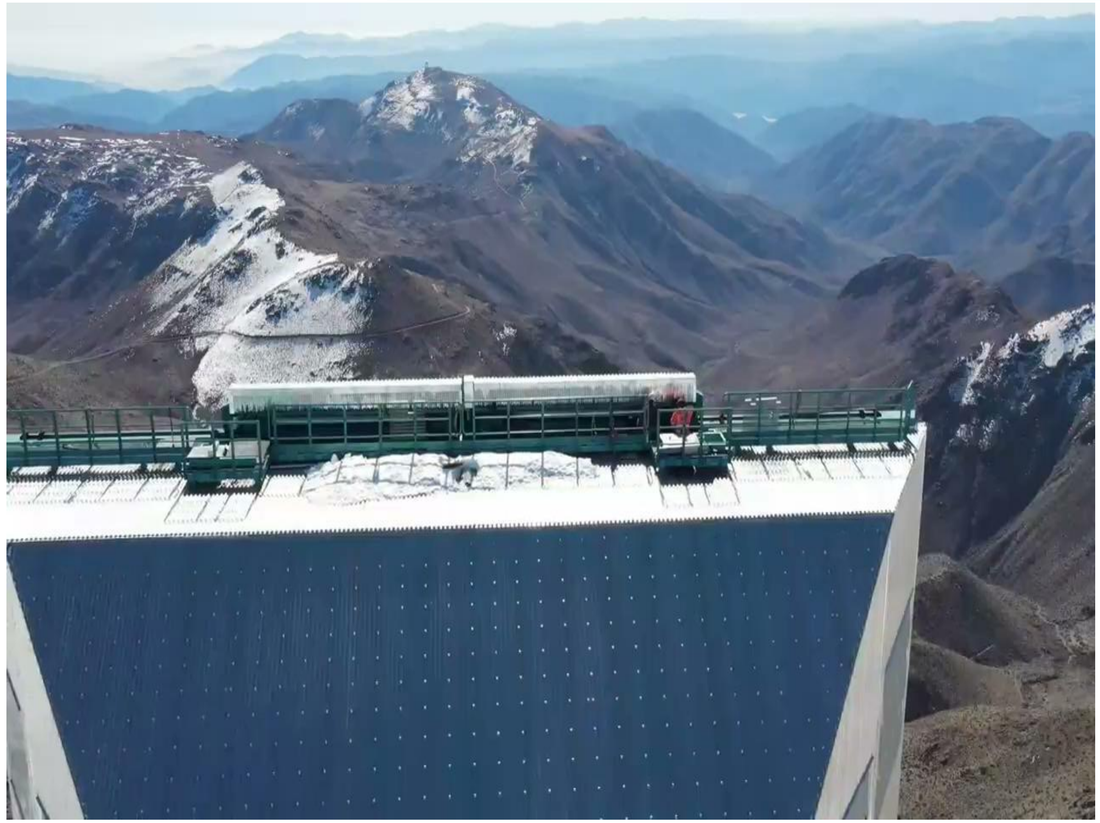
Complex Coordination and Unexpected Retrofits add to Site complications

Initial procedure verification for LSSTCam integration on the TMA top end assembly has been conducted - refinments and additional tests pending



Refrigeration line replacement continues - progress is taking longer than expected, but attention to detail is good

Dome Integration in last phases of work



- Motion controls, inner structures and outer aluminum sheeting installation are priority.
- Preparing for active control to enable TMA verification.
- Light Wind screen fabrication in Italy threatening Critical Path

Winter Challenges - Excellent team response

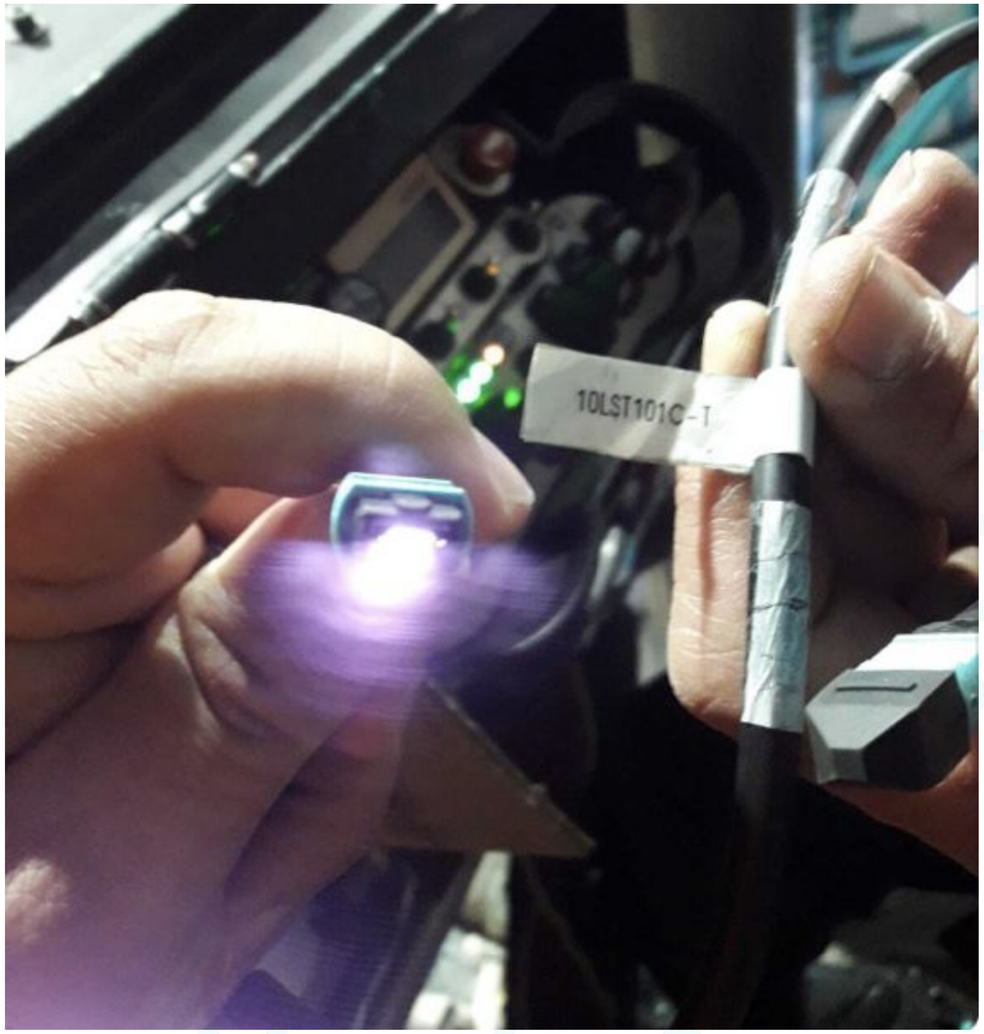
- Site Access delayed for a week
- Snow Removal
- Frozen pipes and water leaks
- Generator failure and no commercial power
- Weather tower failure

But,

- Building and dome held up with minor additional damage
- Lessons learned now

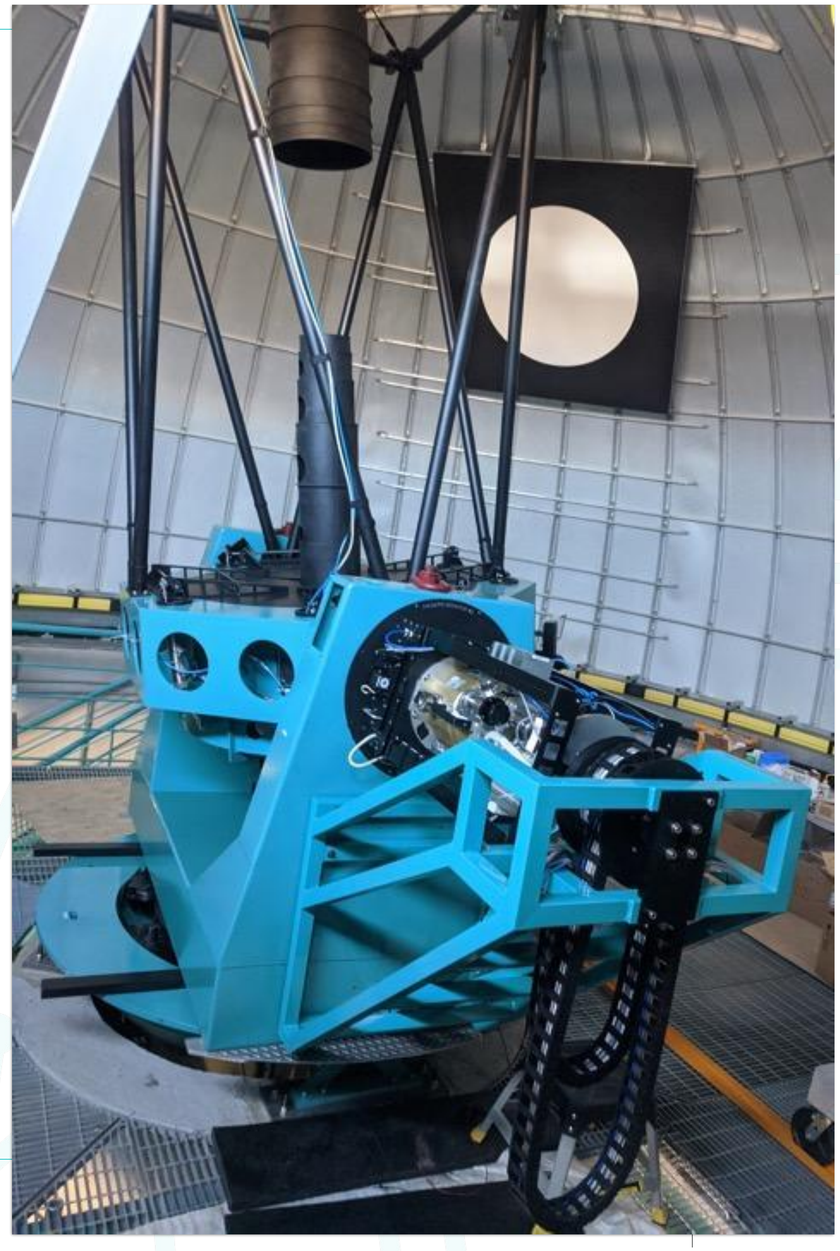
IT infrastructure deployment has enabled end-to-end testing to start

- Fibers lit from DAQ in Summit computer room to top of TMA!
- Several unplanned summit link outages had some knock on effects which have been resolved.
- System test stands have been stood up in Tucson and are being established in Chile
- Long-Haul network testing with ComCam and AuxTel data.
- Network and Data security requirements have changed and are upgrades have started.



Early Integration with AuxTel

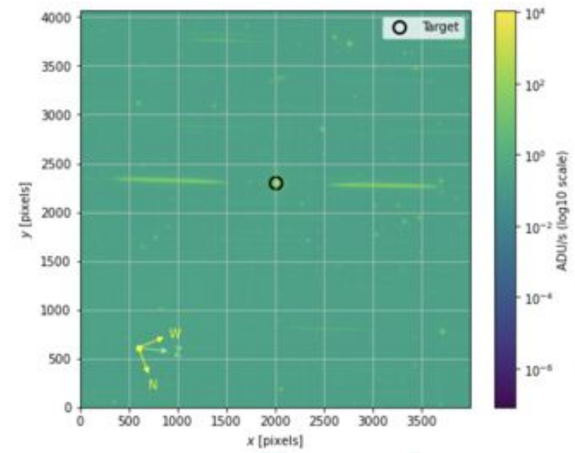
- AuxTel serves as commissioning pathfinder for software development and cross-subsystem interactions
  - Rolling out new software releases ~monthly
  - Helping to develop UI's, data flows, observer tooling etc.
  - Training observers and commissioning personnel
- Bi-Monthly commissioning runs are have restarted after a >2-year shutdown
- AuxTel system verification now underway, construction deliverables are nearly complete
  - Minor (low-priority) items outstanding including building painting and ventilation fans
- During recent commissioning run(s), a failure in the instrument cable wrap occurred
  - LCR-2720 was filed requesting contingency to against risk RM-871 to diagnose and resolve this issue
  - Repairs were conducted by the T&S subsystem
  - Entered into Project FRACAS database

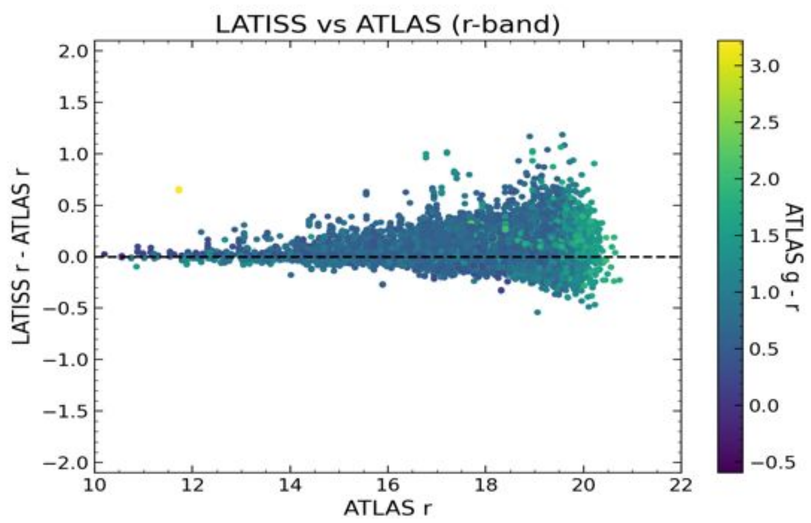


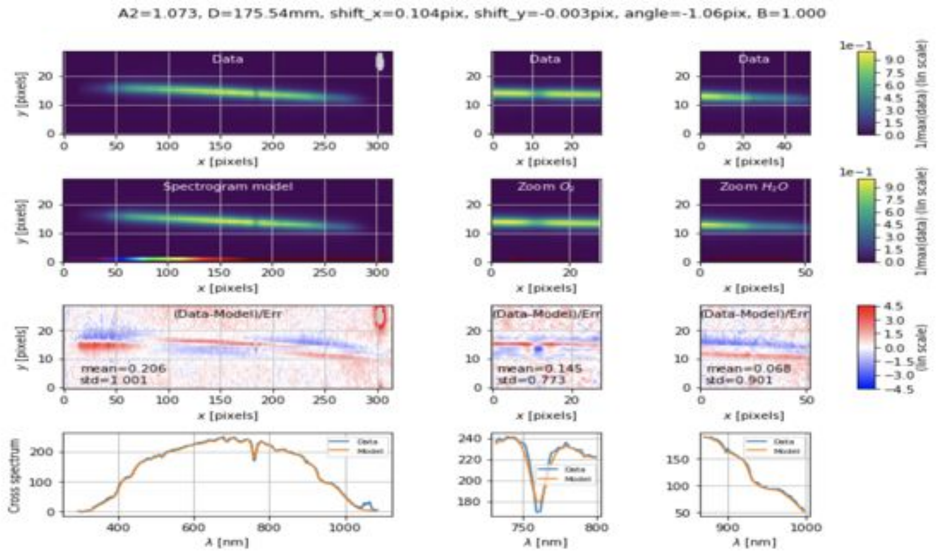
AuxTel Integration Milestones: IM_{3a} 2021-06

Rubin AuxTel Standard Star Campaign

- Align/focus AuxTel using analysis of out-of-focus images
- Observe sequence of star fields
  - Acquire field using LATISS (AuxTel's single-LSST CCD camera)
  - Move target star to the "sweet spot" and take direct and dispersed exposures
  - Run ISR , Photometry and Spectral reduction with DM code
  - Provide displays for observers
- Offline reduction of spectra to give atmospheric transmission parameters







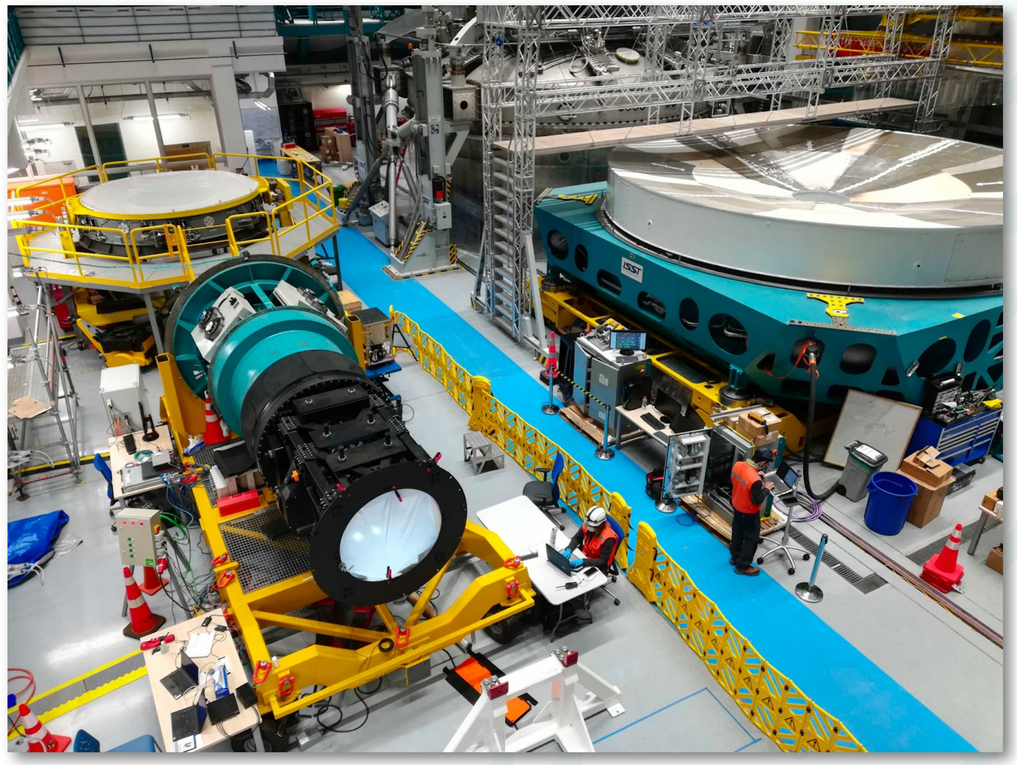
Integration hall on Summit is busy and full

ComCam and Refrigeration Pathfinder have been functional on Integration structure for many months.

Currently dow due to recent weather events at the summit, Technical servicingis required, expected to back on line within the next few weeks.

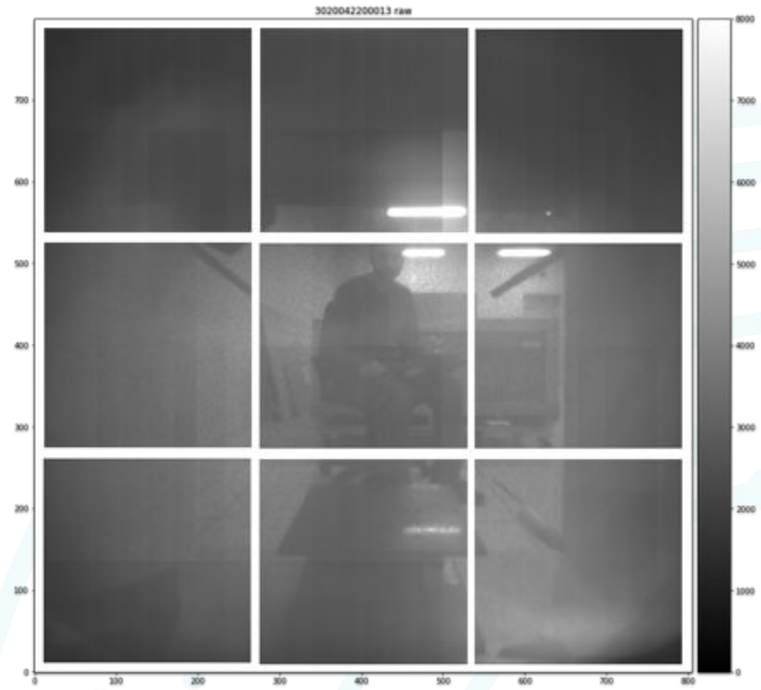
M2 system: part of the system spread software testing. M2 glass mirror has been coated and is awaiting integration in its protected storage container.

M1M3 System with coating tests on surrogate mirror. Also part of the system software testing



ComCam is now fully integrated and operating at the Summit Facility!!!

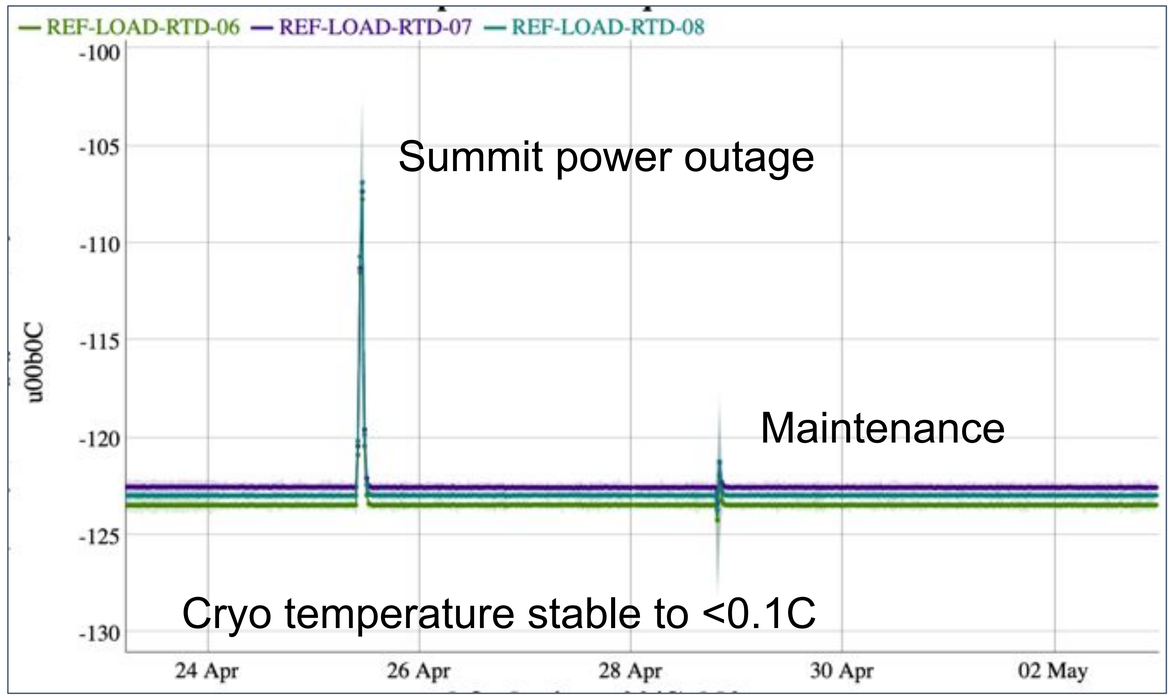
ComCam fully integrated on the camera transport cart.

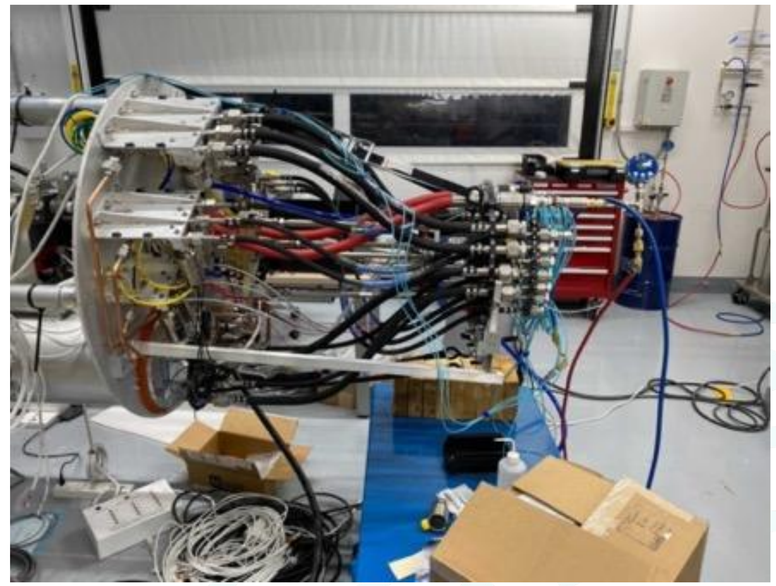


“First light” w/ComCam in Chile - near science grade will become LSSTCam spare

LSSTCam Refrigeration Pathfinder I&T

- Verification of on-site compressor systems. These are transferred to the TMA for LSSTCam.
- Verification of refrigeration lines (from below azimuth deck to topend) and compressors on TMA



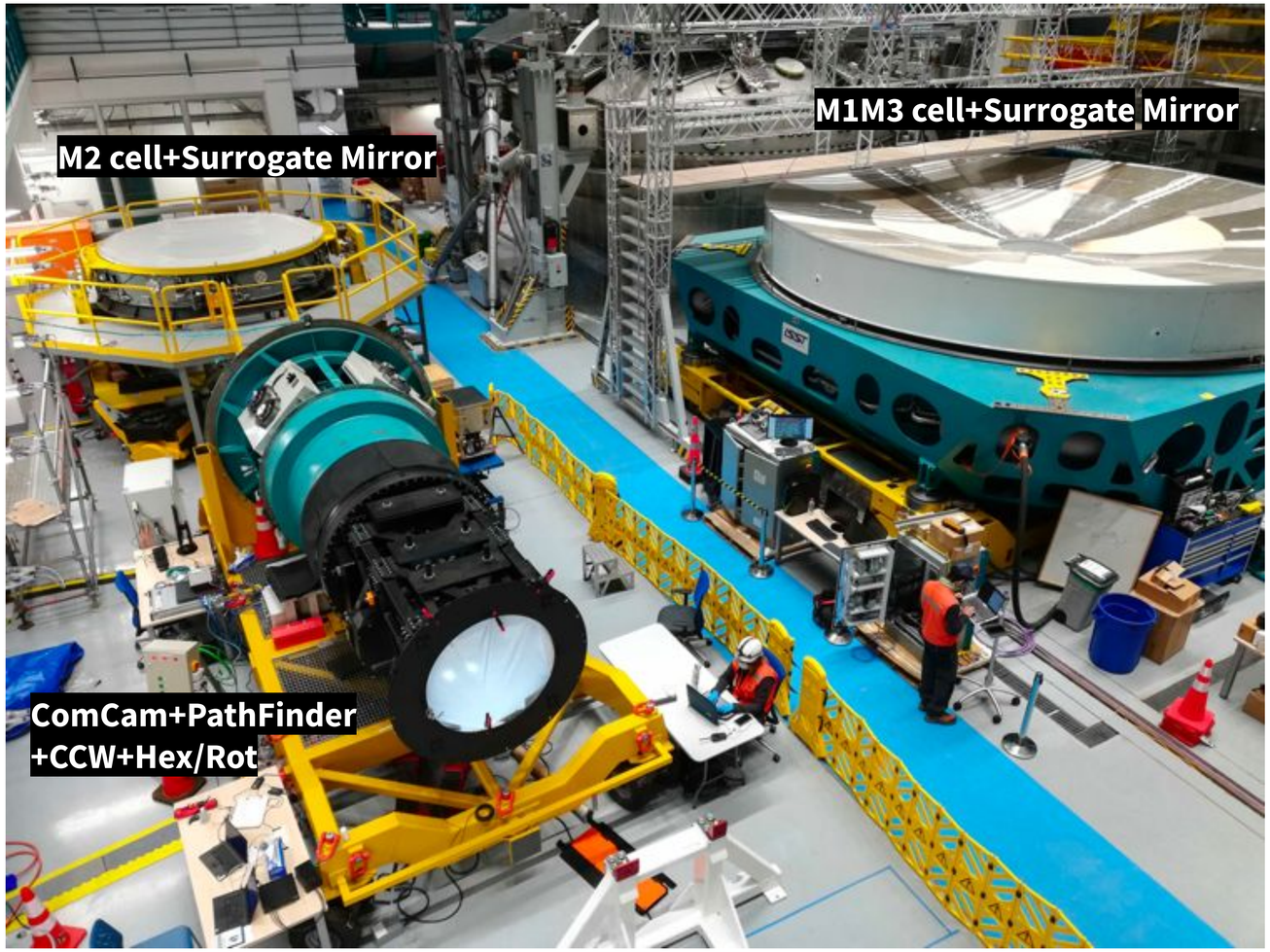


Refrigeration pathfinder plumbed and ready at Summit Facility Level-3. The pathfinder replicates LSSTCam utility interfaces.

The pathfinder is part of the ComCam assembly

Completed Integration Milestones: IM_4 2021-08-05

Slew and Tracking simulation with real hardware on level 3



Integrating on one side:

- Pointing Model
- Mount Simulator
- MTAOS
- M1M3
- M2
- Cam Hexapod
- CCW/Rotator

And integrating on the other side:

- ComCam (CCS)
- OCS
- DMCS (Archiver, Header service, OOCS…)

System Hardware & Software Verification Status

Details in tomorrow's breakout

- M2 Mirror Cell
  - Initial re-verification [**Complete**]
  - Formal re-verification [**in progress**]
- M1M3 Mirror Cell
  - Re-verification [**in Progress**]
- M2 Hexapod
  - Re-verification with Mass Simulator [**Complete**]
- Camera Hexapod
  - Re-verification unloaded [**Complete**]
  - Re-verification with ComCam [**in Progress**]
- Camera Rotator
  - Re-verification unloaded [**Complete**]
  - Re-verification with ComCam [**in Progress**]
- TMA
  - Under development at Summit
- Dome
  - Under development at Summit
- Coating Plant
  - Initial verification at vendor [**Complete**]
  - Verification on Summit [**In Progress**]
- GIS
  - Initial verification at vendor [**Complete**]
  - Under development at Summit
- ComCam
  - Imager Re-verification [**Complete**]
  - Pathfinder verification [**In Progress**]
- LSSTCam
  - Verification at SLAC [**In Progress**]
  - Re-verification on Summit [**Scheduled**]
- CCW/Camera Rotator Synchronization
  - Verification unloaded [**Complete**]
  - Verification with ComCam [**in Progress**]
- Level 3 Spread Configuration
  - Prerequisite verifications [**Complete**]
  - Formal verification [**in Progress**]

Assessment of predicted survey performance

The effective survey speed:

normalized etendue: fE = fS * fA * fO * “ops. efficiency”

fS: **sensitivity factor**: defined for fiducial observing conditions and based on the knowledge of throughput (optics) and sensor properties (QE, read-out noise); all factors normalized by their nominal (design) values

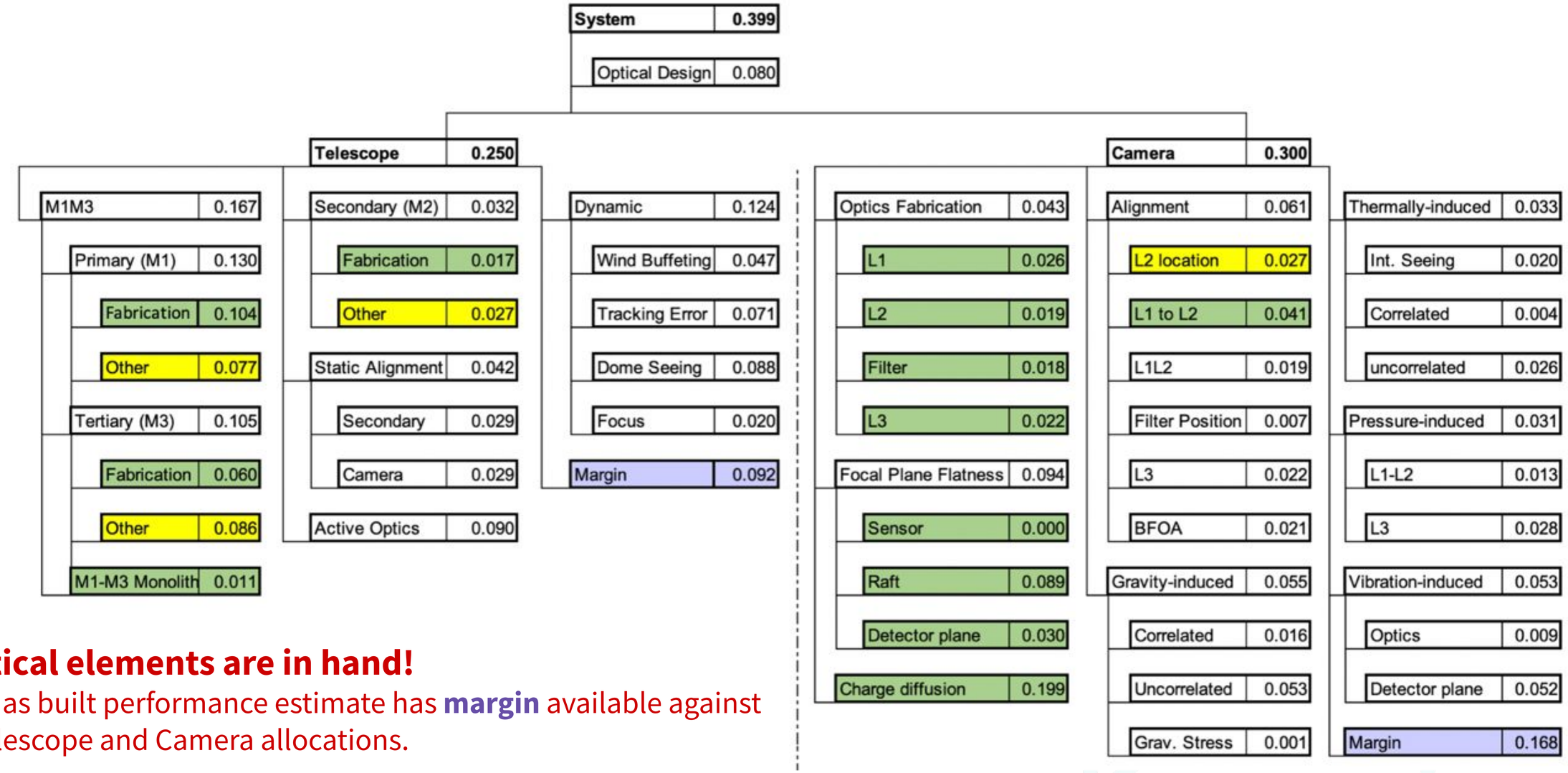
fA: **the FOV fill factor**: the total effective area of all live science pixels.

fO: **observing efficiency factor**: ability to schedule available obs. time

”**ops. efficiency**”: the total data taking time normalized by the nominal available observing time (which takes into account weather and system downtime)

Tracking technical system performance: Image quality FWHM

Basis documents for terms:
T&S - LTS-124
LSSTCam - LCA-17

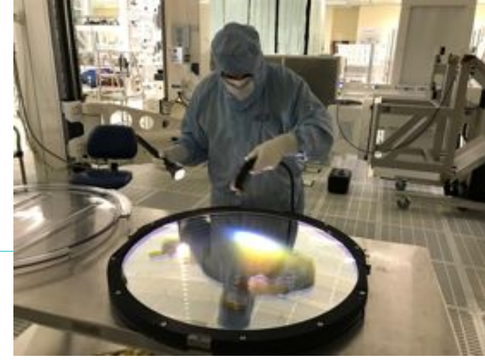


All optical elements are in hand!

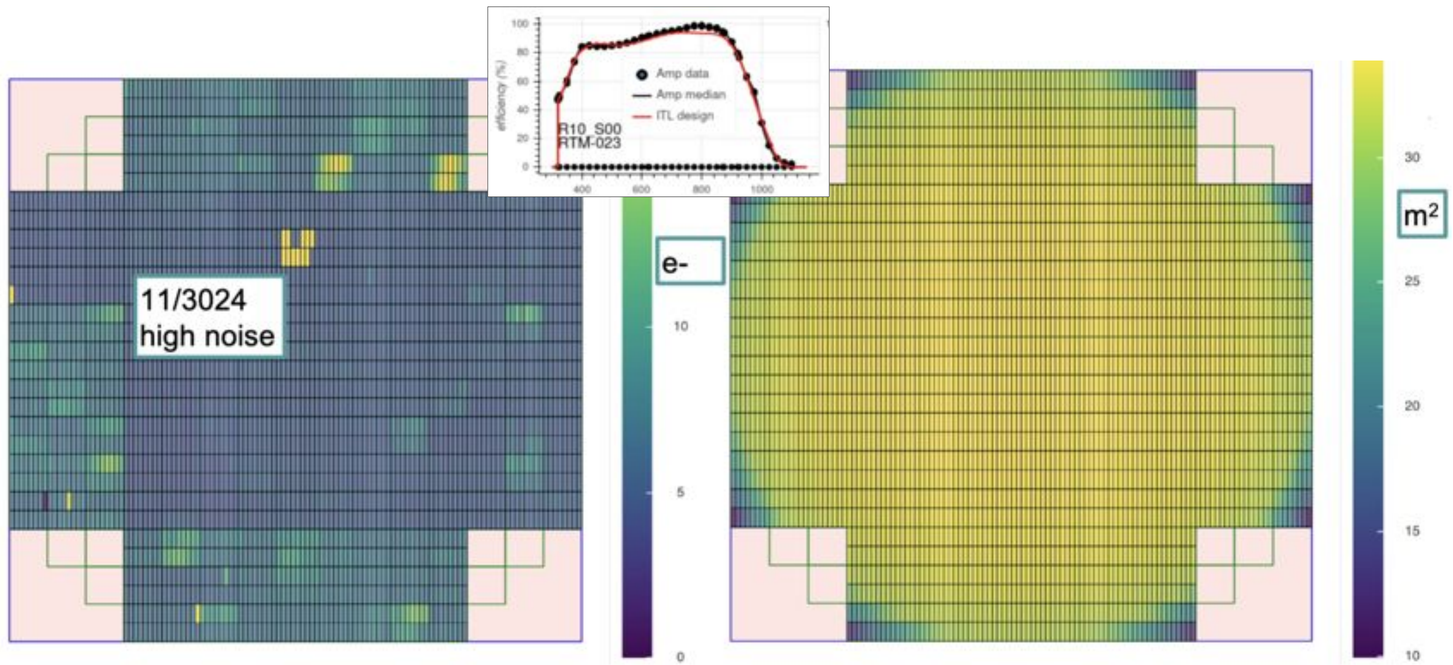
Current as built performance estimate has **margin** available against both Telescope and Camera allocations.

Tracking technical system performance: System Sensitivity

Last filter *(u-band)* delivered and accepted



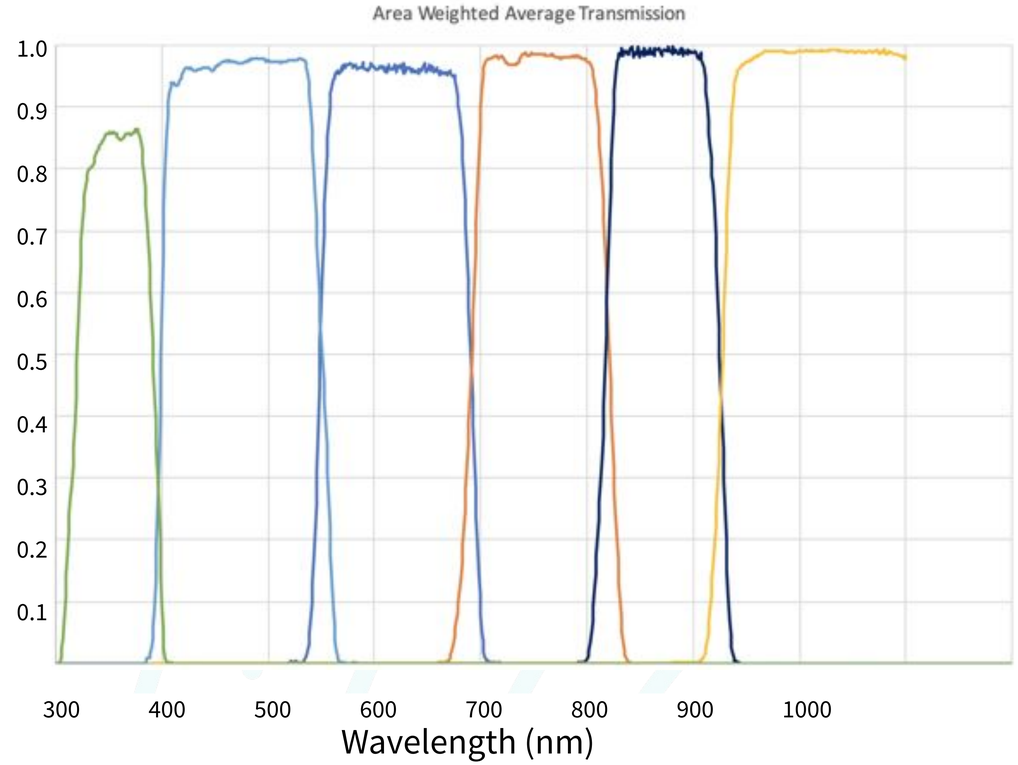
System sensitivity has been updated with as-built system performance - SRD m5 limits met w/margin



Sensor Noise & QE piecewise by amplifier (3000)

Effective Optical Throughput

Measured filter responses of delivered articles

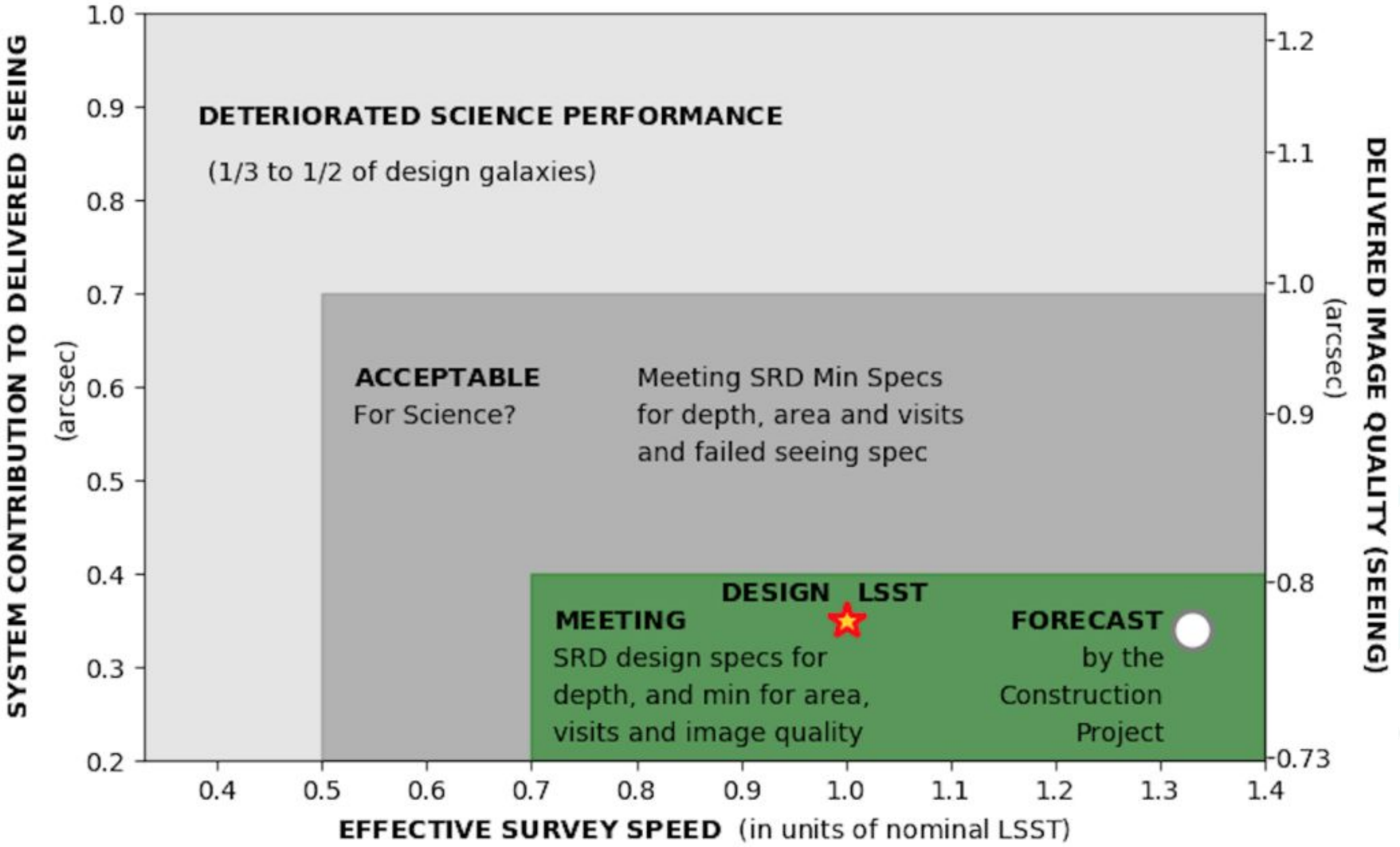


$m_5 = C_m + 2.5*\log[0.7"/(\theta^2_{atm} + \theta^2_{sys})^{1/2}] + 1.25*\log(t_{vis} / 30\ sec) + 0.50*(m_{sky}-21) - k_m(X-1)$

$$f_S = \sum_b w^b\, 10^{0.8\Delta m^b}$$

Estimated fS=1.15

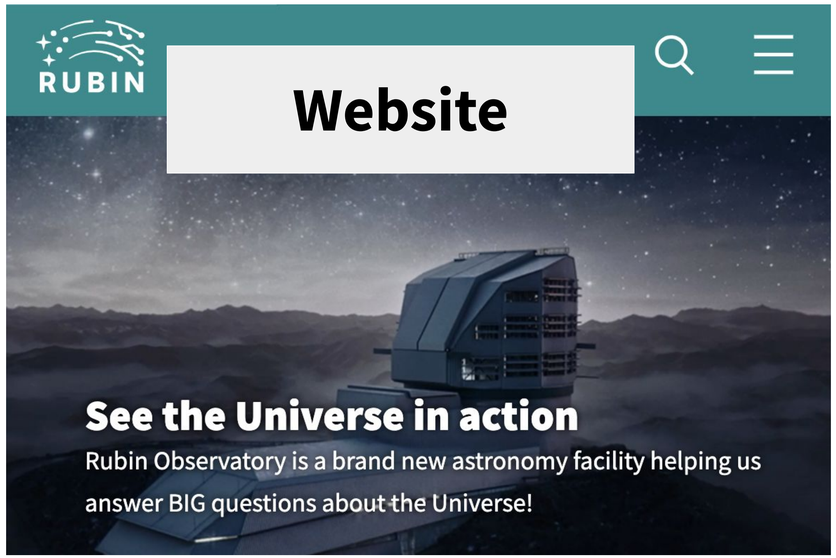
Survey Requirements Diagram

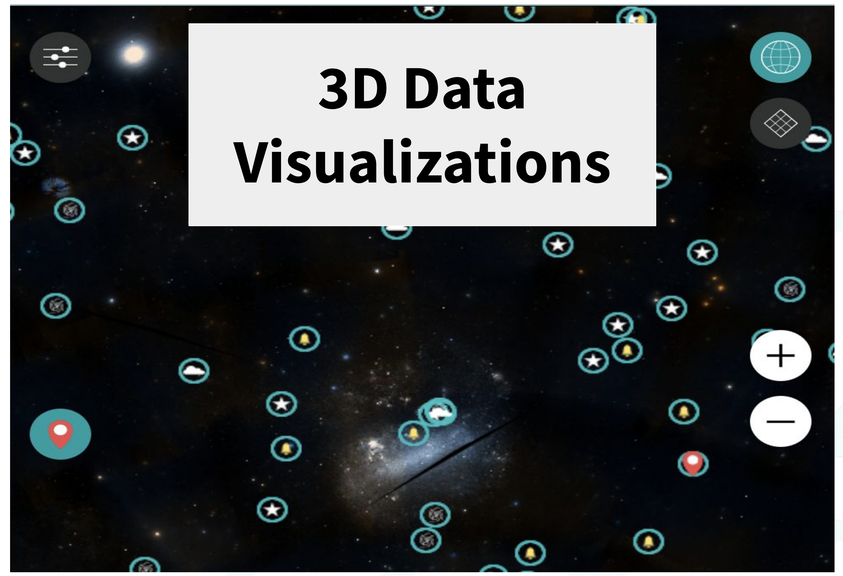


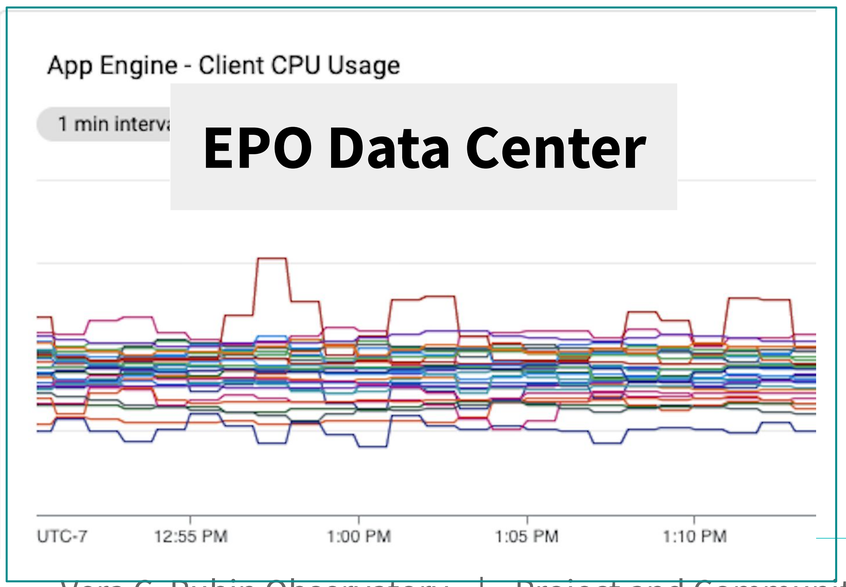
- broadly: “quantity and quality of data”
- based on the Science Requirements Document (SRD)
- relatively simple but quantitative, meaningful, comprehensive, and comprehensible
- estimated from data kept in a GitHub repo
- addresses broad range of science goals
- **fE ~ 1 is necessary but not sufficient to achieve LSST goals!**

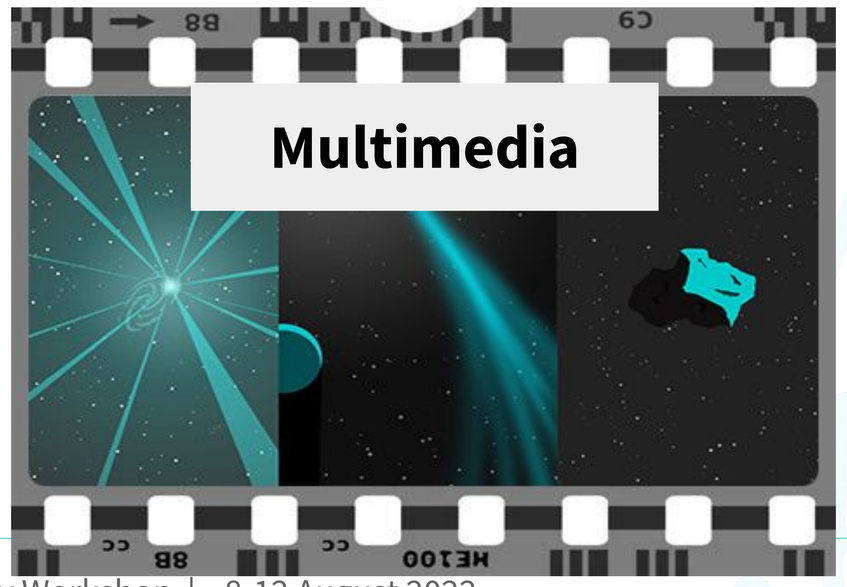
EPO Program

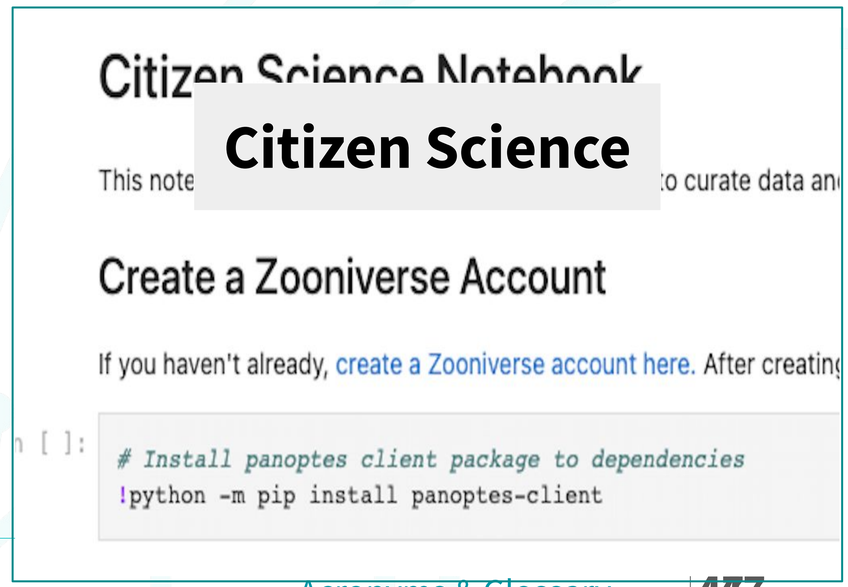
Thursday Plenary: EPO Launch - Lauren Corlies



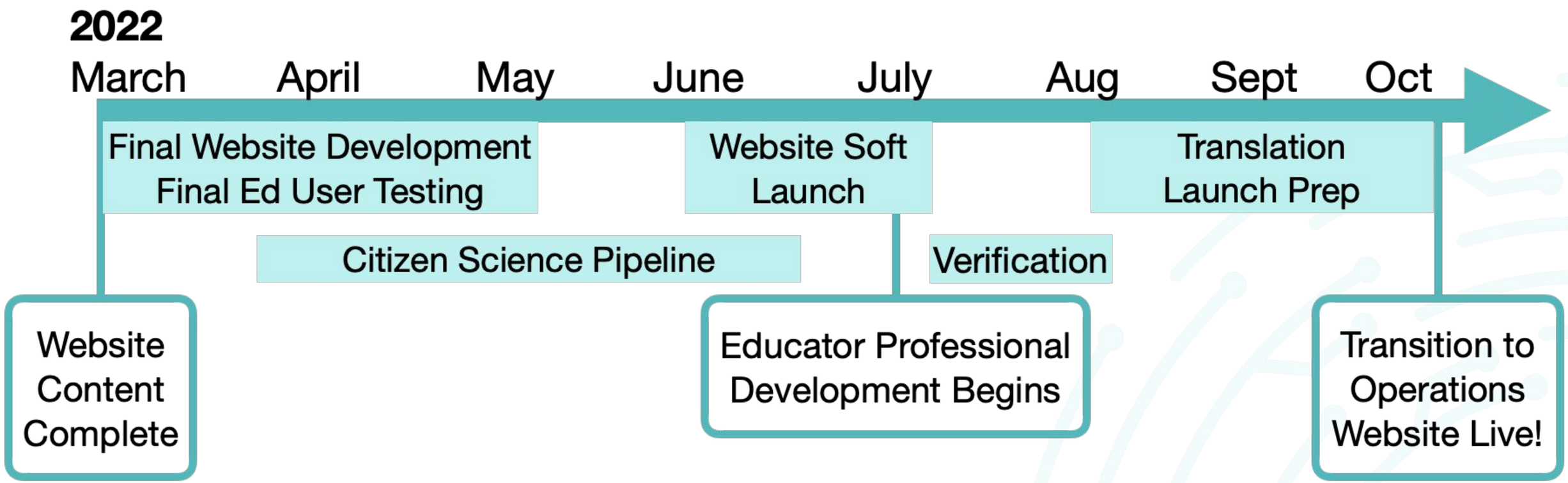








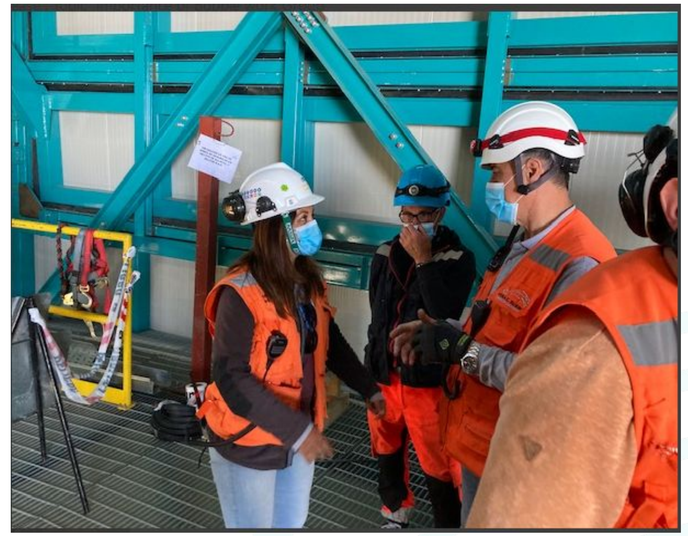
Upcoming Milestones lead to Completion



We have clearly defined the scope of the remaining Construction work and are on track to complete this work by the end of FY22.

Safety: Staying Vigilant and Cooperative

- We have Incidents / Accidents - enough to remind us of the danagers
- Safety Team is working hard on training, communication, and processes
- A safe workplace starts with you!
- Complex time on site
  - Industrial contractors
  - Rubin summit team
  - Extended Rubin team/visitors
  - Night operations
- Let’s keep up the good work.



Tuesday at 2:30

Tortolita B

Safety & Environmental Compliance During Commissioning and Operation

Giovanni Corvetto

Outstanding Progress Continues

- Look at recent quarterly Review Presentations:

  https://docushare.lsst.org/docushare/dsweb/View/Collection-11415

- Watch for highlights in Digest

  https://www.lsst.org/news/digest

- Monthly Reports capture on going progress and issues

  https://docushare.lsst.org/docushare/dsweb/View/Collection-3648

We are Hiring

Open Positions

Computing

Rubin Observatory/LSST Computational Physics Developer | Fermilab | Batavia IL | Operations
Rubin Observatory/LSST Cosmological Survey - Applications Physicist I | Fermilab | Batavia IL | Operations

Administrative

System Integration Manager | AURA/Rubin Observatory | La Serena, Chile | System Integration, Testing & Commissioning
System Commissioning Manager | AURA/Rubin Observatory | Tucson AZ | System Integration, Testing & Commissioning
Executive Assistant | AURA/Rubin Observatory | Tucson AZ | Project Office

Science

System Performance Scientist | AURA/Rubin Observatory | Tucson AZ | Systems Engineering

Technical

Rubin Software Developer | SLAC | Menlo Park CA | Operations

Engineering

Scientific Computing Storage Engineer | SLAC | Menlo Park CA | Operations

https://www.lsst.org/hiring/

Conclusion - Challenges on way to Success

- We are building an awesome Observatory in unprecedented times
- It was always going to be a challenge and we are living it with every emerging issue
- More work now in parallel
  - Major systems still being completed and Software tested
  - Verification planned as early as possible
  - System integration intensity increasing with significant priority
  - System Commissioning planning and executing
- Team showing continued diligence, patience and creativity in resolving our technical, logistics, and management issues
- We will succeed!
  - We forecast June 2024 for Construction Completion
  - Operations is planning to start in October of 2024

Logistics

Plenary - Monday Aug 8

Victor Krabbendam

Organizing Committee (POC/LOC)

Emily Acosta

Daniel Calabrese

Erin Carlson

Glenaver Charles-Emmerson

Carol Chirino

Stephanie Deppe

Ranpal Gill

Carola Gonzalez

Iain Goodenow

Veronica Kinnison

Victor Krabbendam

Angela Lewis

Regina Matter

Rob McKercher

Kristen Metzger

M. Eugenia Ortiz

David Rathfelder

Cheri Winfield

Organizing Committee (SOC)

Christina Adair

Jim Annis

Keith Bechtol

Federica Bianco

Jeff Carlin

Will Clarkson

Melissa Graham
Chair SOC

Nandini Hazra

Matthew Holman

Bryce Kalmbach

Grzegorz Madejski

Brian Nord

Steve Ritz

Matthew Rumore

Monday

PDT	DOVE MOUNTAIN	TORTOLITA A	TORTOLITA B
8:00 AM			
8:45 AM			
9:00 AM	SAC MEETING Part One		
9:15 AM			
9:30 AM			
9:45 AM			
10:00 AM			
10:15 AM			
10:30 AM	REGISTRATION OPENS @ 10:30 Ritz-Carlton Ballroom Pre-Function 3 & 4		
10:45 AM			
11:00 AM	SAC MEETING Part Two	Meeting Rooms Available No A/V or Logistical Support Provided	
11:15 AM			
11:30 AM			
11:45 AM			
Noon			
12:15 PM			
12:30 PM			
12:45 PM	No Meal Provided Lunch on Your Own		
1:00 PM			
1:15 PM			
1:30 PM	TRAVEL TO & WITHIN CHILE Reil	DM TEAM ALL HANDS MEETING O'Mullane	INTRO TO RUBIN: SYSTEMS, JARGON & ACRONYMS Graham
1:45 PM			
2:00 PM			
2:15 PM			
2:30 PM			
2:45 PM			
3:00 PM	BREAK Ritz-Carlton Ballroom Pre-Function 1 & 2		
3:15 PM			
3:30 PM	PLENARY Ritz-Carlton Ballroom Welcome, WorkshopThemes, Status		
3:45 PM			
4:00 PM			
4:15 PM			
4:30 PM			
4:45 PM			
5:00 PM	Undergraduate Student Poster Session Tortolita Pre-Function		
5:30 PM			
6:00 PM	No Meal Provided Dinner on Your Own		
6:30 PM			
7:00 PM			
7:30 PM			
8:00 PM			
8:30 PM			

Tuesday

PDT	DOVE MOUNTAIN	TORTOLITA A	TORTOLITA B	TORTOLITA C	TORTOLITA D
8:00 AM	BREAKFAST CORE Kitchen & Wine Bar				
8:45 AM					
9:00 AM	PLENARY Ritz-Carlton Ballroom Operations Updates Lightning Stories				
9:15 AM					
9:30 AM					
9:45 AM					
10:00 AM					
10:15 AM					
10:30 AM	BREAK in Ritz-Carlton Ballroom Pre-Function 1 & 2 Contributed Posters in Tortolita Pre-Function				
10:45 AM					
11:00 AM	DIFFERENCE IMAGE ANALYSIS Wood-Vasey	SATELLITE CONST. Tyson	EQUITY & INCLUSION WORKSHOP Shugart	THERE'S AN APP FOR THAT: GOOD UX & HOW IT HELPS COMPLICATED IDEAS FEEL APPROACHABLE Mason	SCIENCE VERIFICATION AND VALIDATION Bechtol
11:15 AM					
11:30 AM					
11:45 AM					
Noon	LUNCH CORE Kitchen & Wine Bar				
12:15 PM					
12:30 PM					
12:45 PM					
1:00 PM					
1:15 PM					
1:30 PM	LOW SURFACE BRIGHTNESS SCIENCE W/RUBIN: UNLOCKING LSST'S DISCOVERY DOMAIN I Watkins	MULTI-MESSNGER ASTRONOMY WITH RUBIN OBSERVATORY Bellm	HOW TO FOSTER TRUST IN THE WORKPLACE Thomas	SIMULATING THE RUBIN OPTICAL SYSTEM IN IMSIM Walter	ONBOARDING FOR SIT-COM IN-KIND CONTRIBUTIONS Bechtol
1:45 PM					
2:00 PM					
2:15 PM					
2:30 PM					
2:45 PM					
3:00 PM	BREAK Ritz-Carlton Ballroom Pre-Function 1 & 2				
3:15 PM					
3:30 PM	(ELAsTiCC) Gagliano	EARLY SCIENCE WITH RUBIN Guy, L.	SAFETY & ENV DURING COMMISSIONING & OPERATIONS Covertto	INTERACTING WITH THE RUBIN OBSERVATORY CONTROL SYSTEM: AN OVERVIEW Ribeiro	LOW SURFACE BRIGHTNESS SCIENCE W/RUBIN Watkins
3:45 PM					
4:00 PM					
4:15 PM					
4:30 PM					
4:45 PM					
5:00 PM					
5:30 PM	GROUP PHOTO				
6:00 PM					
6:30 PM	RECEPTION 6:30-8:30 Brisa Lawn				
7:00 PM					
7:30 PM					
8:00 PM					
8:30 PM					

Wednesday

PDT	DOVE MOUNTAIN	TORTOLITA A	TORTOLITA B	TORTOLITA C	TORTOLITA D	COCHIE SPRINGS
8:00 AM	BREAKFAST CORE Kitchen & Wine Bar					
8:45 AM						
9:00 AM	PLENARY Ritz-Carlton Ballroom Science Collaborations Updates Graduate Student Poster Pitches					
9:15 AM						
9:30 AM						
9:45 AM						
10:00 AM						
10:15 AM						
10:30 AM	BREAK in Ritz-Carlton Ballroom Pre-Function 1 & 2 Graduate Student Poster Session in Tortolita Pre-Function					
10:45 AM						
11:00 AM	UPDATE FROM SCIENCE PIPELINES AlSayyad	SURVEY STRATEGY I Jones	INTRO TO THE AUXILIARY TELESCOPE (AUXTEL), ITS DATA & COMMISSIONING Fisher-Levine	CAMERA PUMPED COOLANT WORKING SESSION Riot	ACTIVE OPTICS COMMISSIONING Meyers	
11:15 AM						
11:30 AM						
11:45 AM						
Noon	LUNCH CORE Kitchen & Wine Bar					
12:15 PM						
12:30 PM						
12:45 PM						
1:00 PM						
1:15 PM						
1:30 PM	FOLLOW-UP FACILITIES FOR TIME-DOMAIN ASTRONOMY Corsi	OPSIM & MAF: IN-PERSON DROP-IN DISCUSSION Jones		INSTRUMENT SIGNATURE REMOVAL & CHARACTERIZATION OF THE LSST CAMERA Fisher-Levine		
1:45 PM						
2:00 PM						
2:15 PM						
2:30 PM						
2:45 PM						
3:00 PM	BREAK Ritz-Carlton Ballroom Pre-Function 1 & 2					
3:15 PM						
3:30 PM	UNCONFERENCE Topic TBD Earlier in the Day					
3:45 PM						
4:00 PM						
4:15 PM						
4:30 PM						
4:45 PM						
5:00 PM						
5:30 PM	No Meal Provided Dinner on Your Own					
6:00 PM						
6:30 PM						
7:00 PM						
7:30 PM						
8:00 PM						
8:30 PM						

Thursday

PDT	DOVE MOUNTAIN	TORTOLITA A	TORTOLITA B	TORTOLITA C	TORTOLITA D
8:00 AM	BREAKFAST CORE Kitchen & Wine Bar				
8:45 AM					
9:00 AM	PLENARY Ritz-Carlton Ballroom Project Keynote: EPO Launch - Lauren Corlies (TBC) Science Keynote: JWST & Rubin Observatory Engineering, Commissioning & Science - Prof. Marcia Rieke				
9:15 AM					
9:30 AM					
9:45 AM					
10:00 AM					
10:15 AM					
10:30 AM	BREAK in Ritz-Carlton Ballroom Pre-Function 1 & 2 Contributed Posters in Tortolita Pre-Function				
10:45 AM					
11:00 AM	FROM DATA TO SOFTWARE TO SCIENCE Hosted by LINCC Connolly	SOURCE INJECTION IN THE RUBIN PIPELINES Reed	CAMERA RE-ASSEMBLY ON THE SUMMIT Riot	THE DARK ENERGY SPECTROSCOPIC INSTRUMENT (DESI): LSST SYNERGIES Guy, J.	EXPLORING THE SOLAR SYSTEM WITH RUBIN EPO I Herrold
11:15 AM					
11:30 AM					
11:45 AM					
Noon					
12:15 PM					
12:30 PM					
12:45 PM					
1:00 PM					
1:15 PM					
1:30 PM	CONNECTING THE COMMUNITY TO IDAC & SPC RESOURCES Olsen	BOOTSTRAPP-ING PHOTOMETRIC CALIBRATION Rykoff	CAMERA REMOVAL FROM THE TELESCOPE DURING OPERATIONS Riot	RUBIN- RELATED INITIATIVES TOWARD DIVERSITY, EQUITY AND INCLUSION Bianco	EXPLORING THE SOLAR SYSTEM WITH RUBIN EPO II Herrold
1:45 PM					
2:00 PM					
2:15 PM					
2:30 PM					
2:45 PM					
3:00 PM					
3:15 PM					
3:30 PM	RUBIN IN-KIND PROGRAM COMMUNITY SESSION Verma	DEBLENDING: PLANS AND CHALLENGES Buchanan	CAMERA VERIFICATION & RE-VERIFICATION ACTIVITIES Riot	LEANING INTO THE DARK: RUBIN OBS AS CULTURAL METAPHOR McKean	ALL ABOUT NOIRLAB CEE Kocz
3:45 PM					
4:00 PM					
4:15 PM					
4:30 PM					
4:45 PM					
5:00 PM					
5:30 PM					
6:00 PM					
6:30 PM					
7:00 PM					
7:30 PM					
8:00 PM					
8:30 PM					

Friday

PDT	DOVE MOUNTAIN	TORTOLITA A	TORTOLITA B	TORTOLITA C	TORTOLITA D
8:00 AM					
8:45 AM					
9:00 AM	USERS COMMITTEE MEETING Graham	COMPUTERIZED MAINTENANCE MANAGEMENT SYSTEM WORKSHOP Barr / Drass	DYNALENE SYSTEM: FROM PRELIM DESIGN TO START-UP Jiménez	EARLY CAREER ASTROS: NETWORKING & TOOLS Annis	COFFEE WITH THE RUBIN SCIENCE PLATFORM DEVELOPERS Economou
9:15 AM					
9:30 AM					
9:45 AM					
10:00 AM					
10:15 AM					
10:30 AM	BREAK 10:30-11:00 in Ritz-Carlton Ballroom Pre-Function 1 & 2				
10:45 AM					
11:00 AM	PLENARY Ritz-Carlton Ballroom Breakout Summaries & Workshop Close-out				
11:15 AM					
11:30 AM					
11:45 AM					
Noon					
12:15 PM					
12:30 PM					
12:45 PM					
1:00 PM					
1:15 PM					
1:30 PM					
1:45 PM					
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6:00 PM					
6:30 PM					
7:00 PM					
7:30 PM					
8:00 PM					
8:30 PM					

Virtual Access

All plenary sessions are in Ritz-Carlton ballroom - accessible remotely

Breakout sessions which are remotely accessible are those in:

- Dove Mountain Ballroom
- Tortolita A

Only registered attendees can see BlueJeans links

General Information (1)

Slack us on **#help** or email rgill@lsst.org

- Dietary needs - communicated to hotel, buffet has lots of options
- If you need flip charts, markers etc
- IT needs/requests
- Nursing room - access and location
- Anything else!

General Information (2)

Filming is taking place on site
Don’t want to be on camera?
> Then wear a red dot available at main desk

- Plenary room does not have power cords
- Use the Twitter hashtag #Rubin2022

Presenter Responsibilities

Reminder on the presenters responsibilities:

- Bring your own laptop & video dongle - unless in a remote ready room
- If in a remote ready room ensure you stay connected, moderate the chat, share your screen, speak clearly etc–ask for help on slack #help
- Presentations and Agendas should be uploaded before the talk
- Take notes –Add output to Closeout Slides for Friday plenary (https://ls.st/r4g)

Travel and Transportation - Erin Carlson

Desk Availability this Week

Monday: 1pm-3pm

Tuesday: 9am- 12pm | 2pm- 4pm

Wednesday: 9am- 12pm | 2pm- 3pm

Thursday: 9am- 12pm | 2pm- 4pm

Friday: 10am- 12pm

Slack: #ecarlson

Whatsapp & Text: +1 520 490 9831

Daily Poster Session

Monday

@5pm - LSST Corporation supported undergraduate students

Tuesday

@10:30 onwards - contributed posters

Wednesday

@10:30 - LSST Corporation supported graduate students

Thursday

@10:30 onwards - contributed posters

Rubin Research Bytes (RRB)

This year the RRBs are *virtual and asynchronous* contributions about your Rubin-related work or research, posted in the Rubin Community Forum.

Find **instructions** and contributed RRBs from PCW attendees in the Rubin Community Forum: community.lsst.org/c/sci/pcw-2022

no deadline

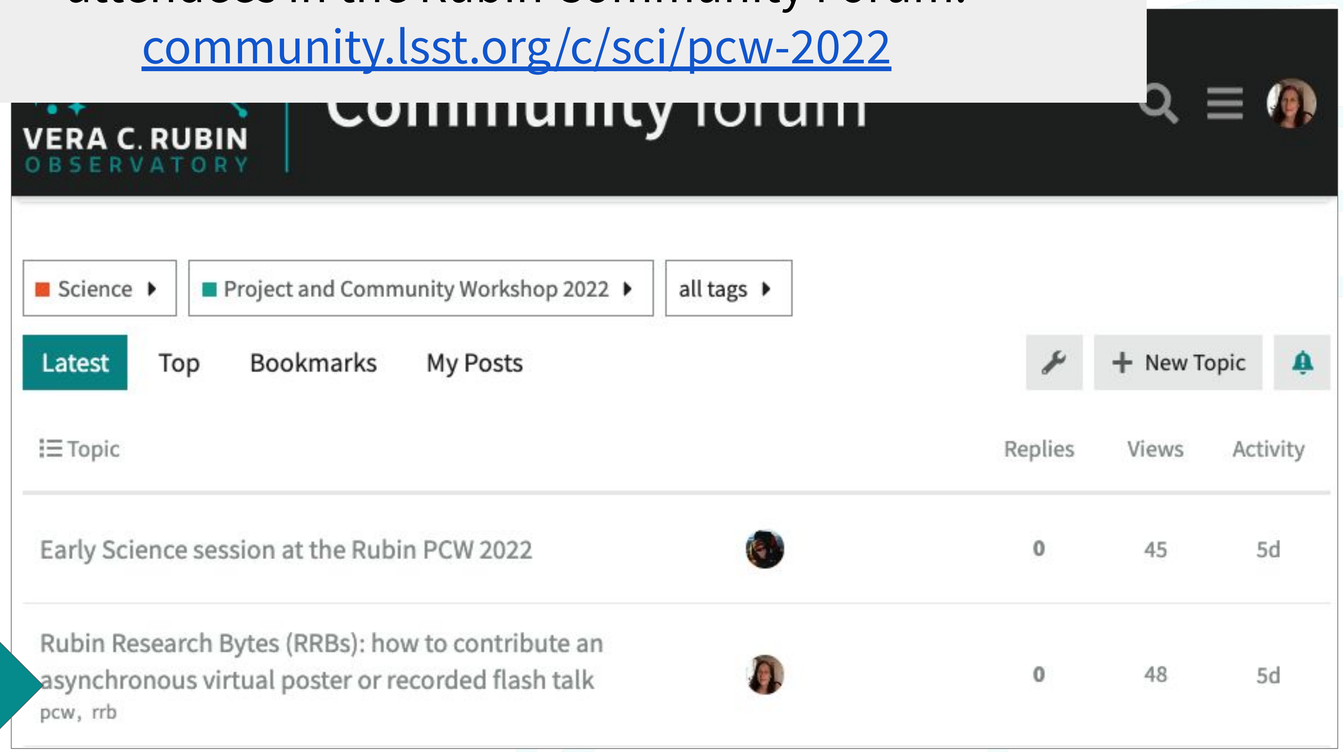
no live virtual session

anyone may contribute

all may view the RRBs at any time

Contributions could be a pre-recorded flash talk, a poster PDF, a slide deck, or a blog-post style Topic posted in the Community Form. Up to you!

instructions

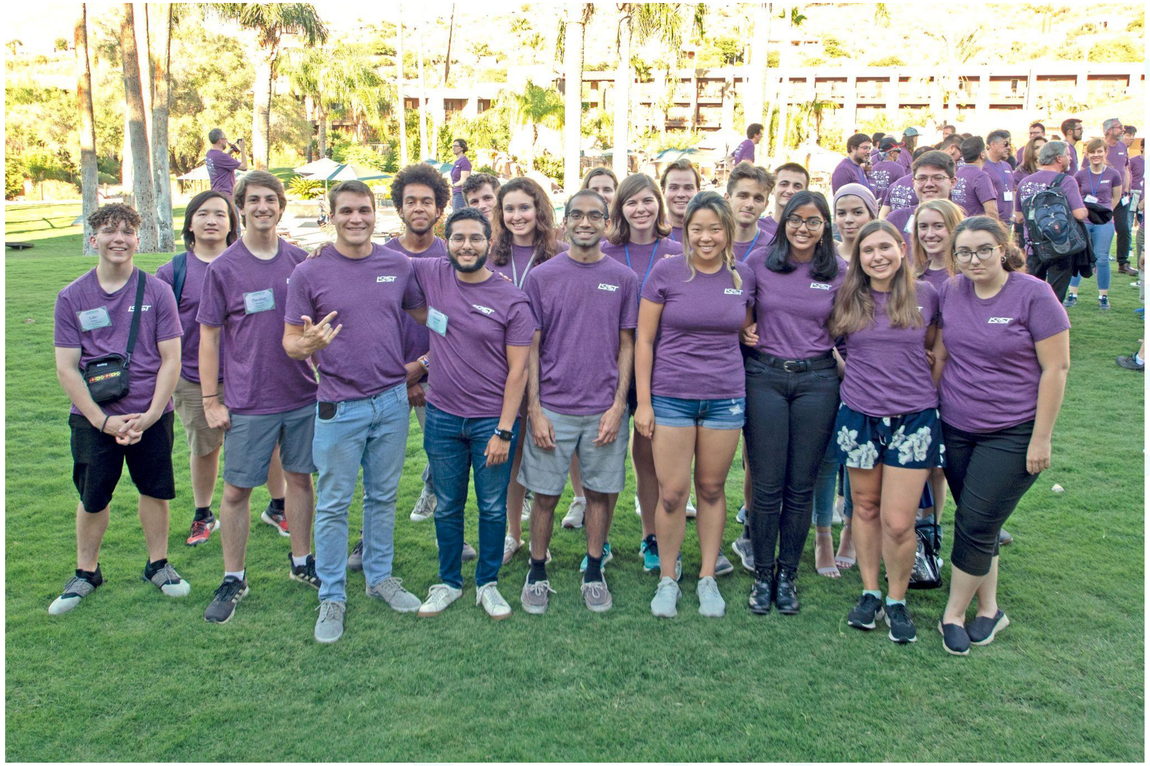


Monday

Hope you got to attend some of the earlier sessions.

Poster session 5-6pm

- Straight after this session in the common area
- Interact with the LSST Corporation-sponsored undergraduate researchers
- Talk about their Rubin LSST-related summer research projects



2019 student cohort

Tuesday

Group photo @5:30pm

In-person attendees:

- Outdoors masks optional
- Wear your t-shirt
- ***Those with accessibility issues –Slack #help, someone will assist you in arriving earlier to the photo location***

In-person & Virtual attendees

- Send in your photos: https://ls.st/rubin2022photo

Lightning stories! @10am

- Jeff Carlin
- Alexandra Goff
- Alysha Shugart
- Hernan Stockebrand

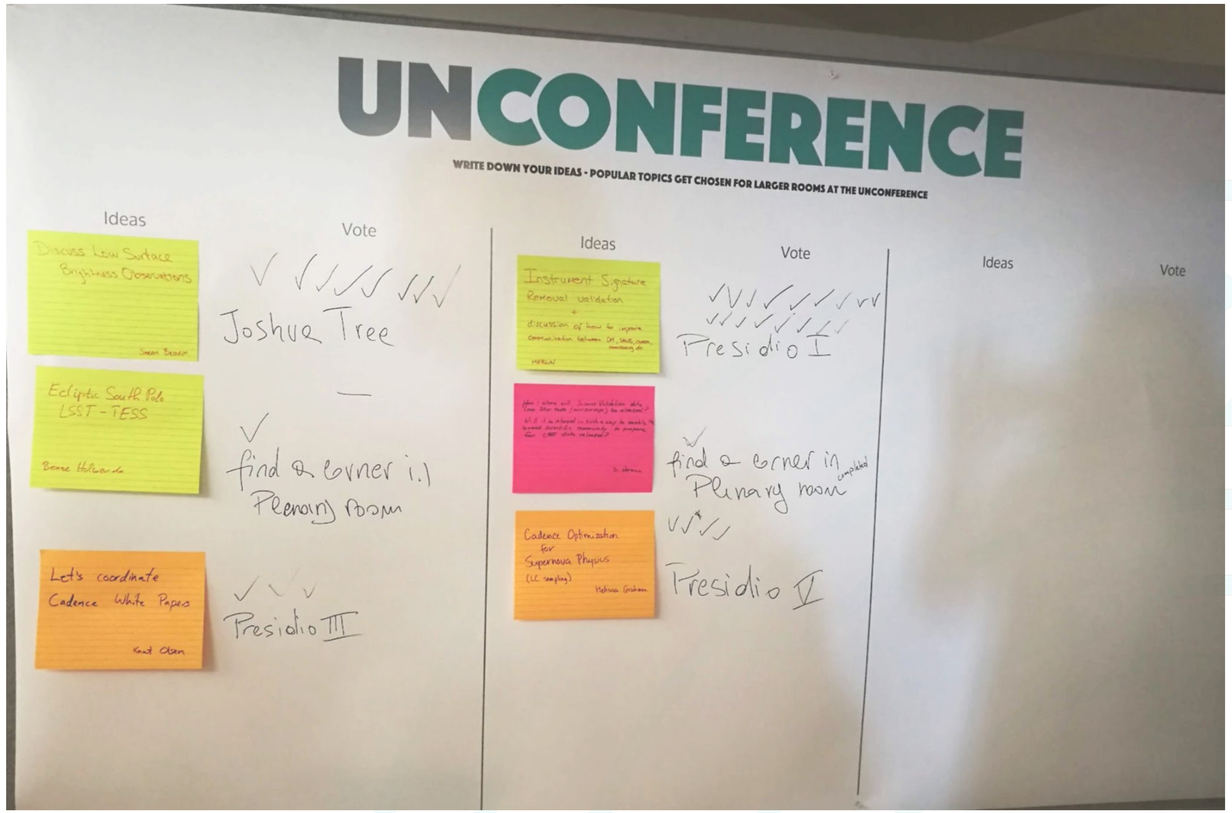
Evening reception @6:30pm

- Outdoor seating
- Selection of foods
- Drinks ticket per person
- Live band entertainment
- Farewell to Steve!

Wednesday

Unconference held Wednesday afternoon

- Proposed topics starting Monday (deadline afternoon break on Wednesday)
- Poster board with blank poster paper –titled “unconference” in the registration area
- Write down your ideas
- Indicate which topic interests you



Thursday

Rubin 2022 PCW Keynotes

Thursday 11th August 9am PDT

Project Keynote:

"Celebrating the Completion of the Rubin Education & Public Outreach Program"

Dr. Lauren Corlies

Head of Rubin Observatory Education and Public Outreach

Science Keynote:

"JWST & Rubin Observatory: Engineering, Commissioning, and Science"

Prof. Marcia Rieke

Regents Professor of Astronomy at the University of Arizona

Friday

- 12 years ago today @ LSST2010 we received top ranking in the Astro2010 Decadal Survey

- Break out report out - a rapid summary from each session rep on main points

- Grab and go lunch available

RUBIN2022 Daily Themes!

VERA C. RUBIN OBSERVATORY

MONDAY
AUG. 8

#RubinPets

Show off your pets!
Bonus points for
#InternationalCatDay
celebrations

TUESDAY
AUG. 9

#RubinRollCall

Introduce yourself!
Include something
people might not know
about you

WEDNESDAY
AUG. 10

#RubinBreakTime

How do you recharge
during breaks?
Let us see those
coffee/tea orders!

THURSDAY
AUG. 11

#RubinOutreach

Tell us about your favorite
public engagement effort
you've been part of!

FRIDAY
AUG. 12

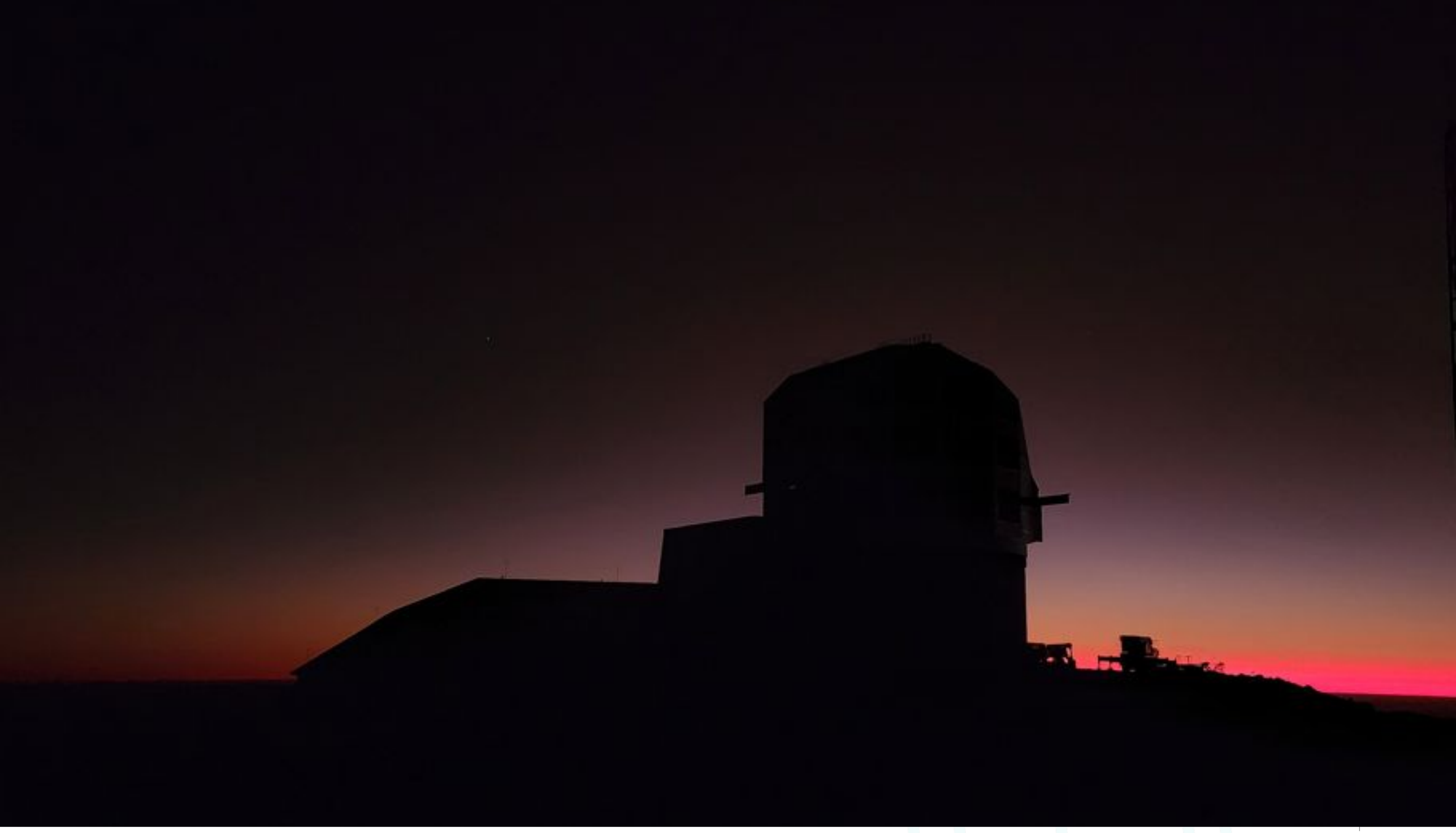
#RubinCelebration

Happy end of PCW 2022!
Tell us about something
you're celebrating

#Rubin2022

Rubin 2022 Patch & Swag

Write your name on the teal strip on the back



LSST @ Europe 4

Replaced Charts

Project Rebaseline Status

- Rebaseline Schedule Submitted in September 2021 – SFR#3
  - Changed forecast finish from 6 May 2022 to 19 December 2023
  - With schedule contingency: late finish changed from 30 September 2022 to 27 July 2024
  - Schedule Baseline change was approved in February and fresh forecast being finalized
- Schedule continues to adjust to conditions
  - Schedule changed since Rebaseline was submitted Now forecast March / April 2024
  - Changes are slowing but many issues complicating System Integration: Telescope Completion, Camera refrigeration, Dome…..
- Schedule forecast today remains within Rebaseline Contingency envelope
  - February forecast with Camera refrigeration schedule still has 3 - 4 months contingency
  - Emerging issues are significant and eroding that buffer
- Continued COVID impact since Rebaseline: expecting to restore additional 2 to 3 months contingency with October 2024 late Finish date (stay tuned)

SFR #2 Status

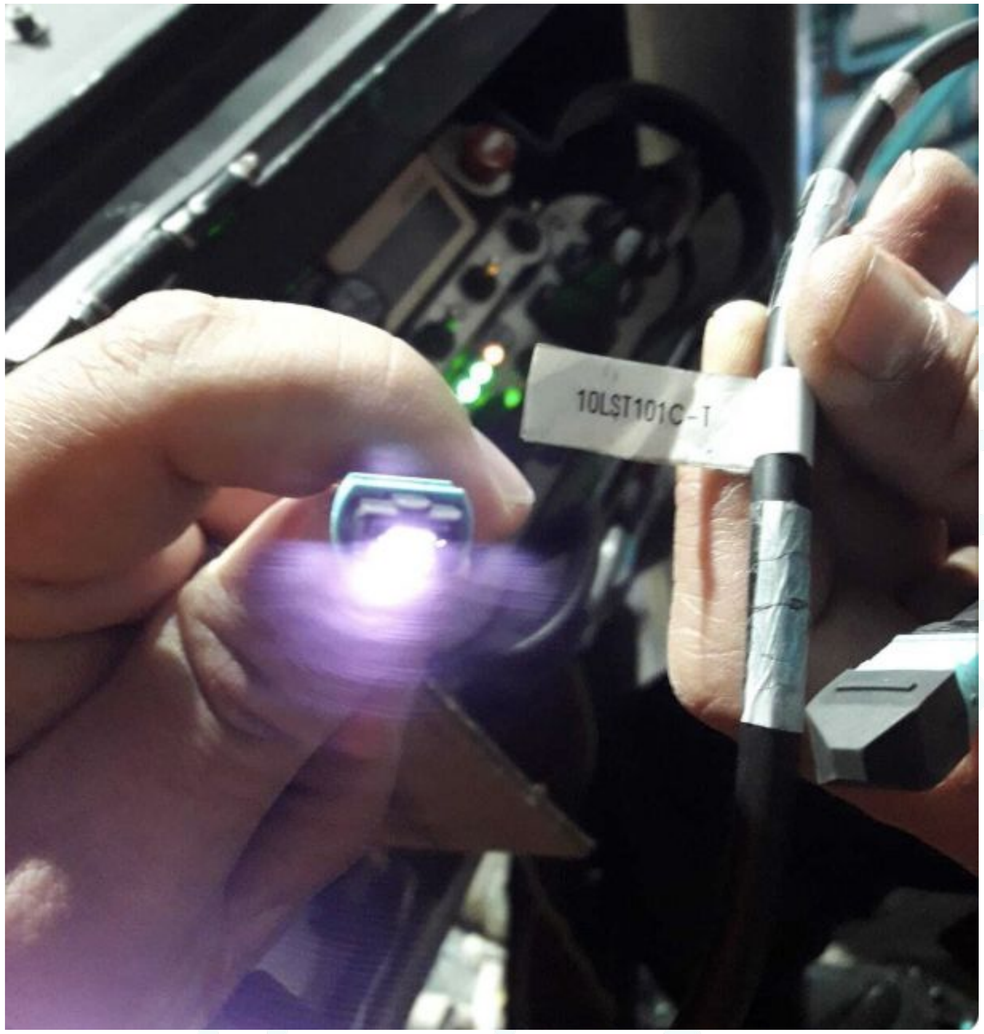
- This is the $68M budget that goes with the Rebaseline

- Rubin is engaged with NSF Cost Analyst Group
  - 2 RFI / Sample requests
  - 1 RFI for Contingency analysis
  - All parties working diligently – goal is to finish in April

- Original Plan was a clean implementation of SFR#2 Proposal in February
  - “just” add the new budgets as proposed
  - Audit changes, Rate changes, Variance changes, more COVID impacts
  - Heading toward a full updated to proposal and full Reprogram (“forget” past – fresh plan to end)

Fibers to the Telescope and Data Facilities

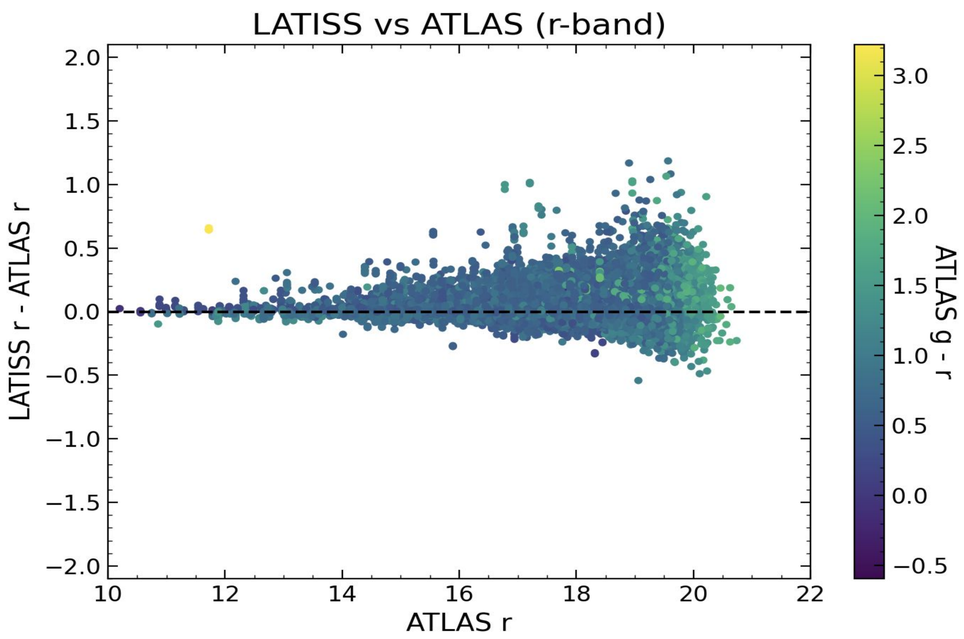
- Fibres lit from DAQ to top of TMA ! —->
- Several unplanned summit link outages had some knock on effects which we are working on.
- Test stands moving to Tucson and Chile
- Long Haul network testing with ComCam and AuxTel data
- Security upgrade proposal submitted to NSF

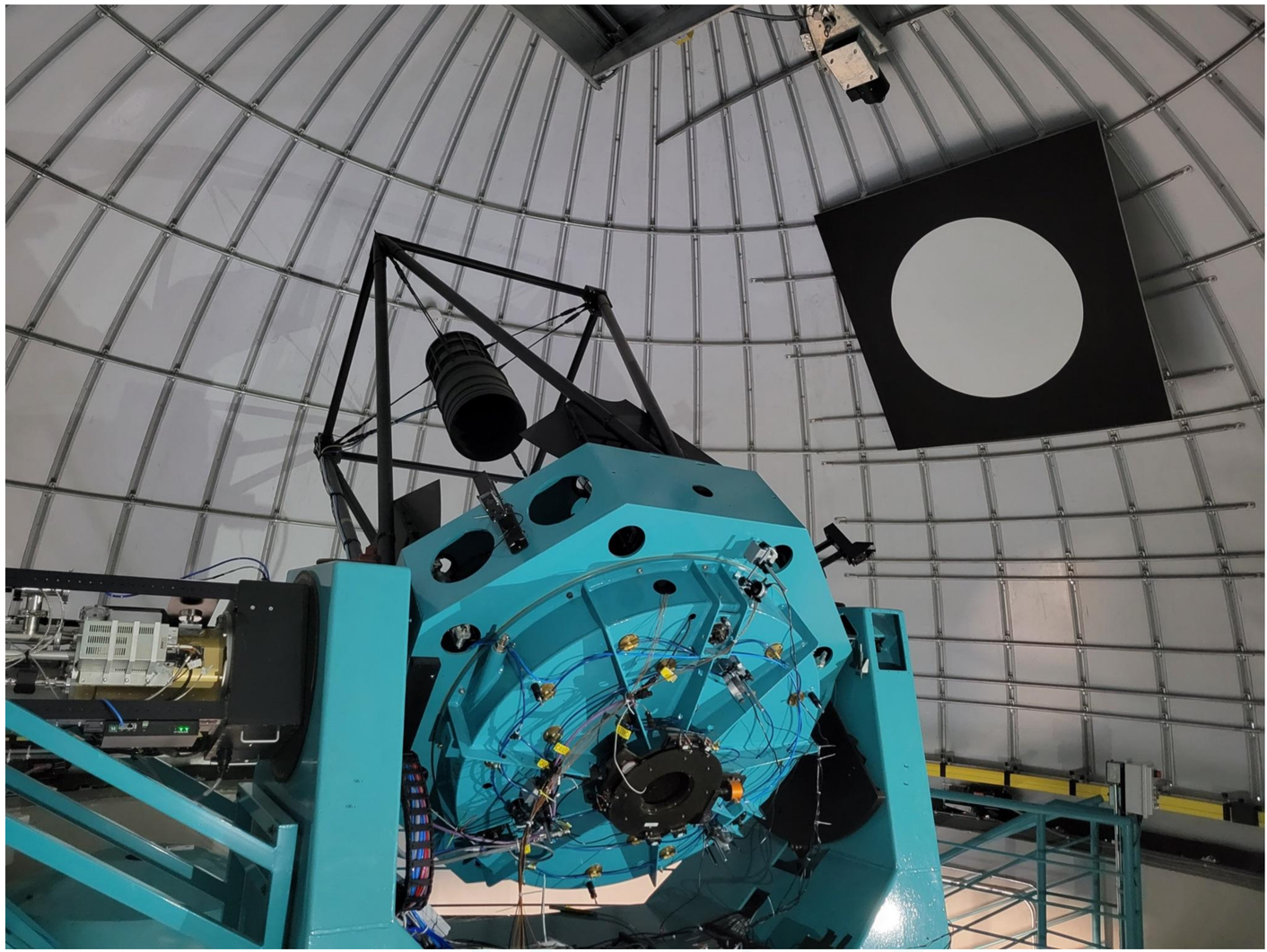


Auxiliary Telescope Status

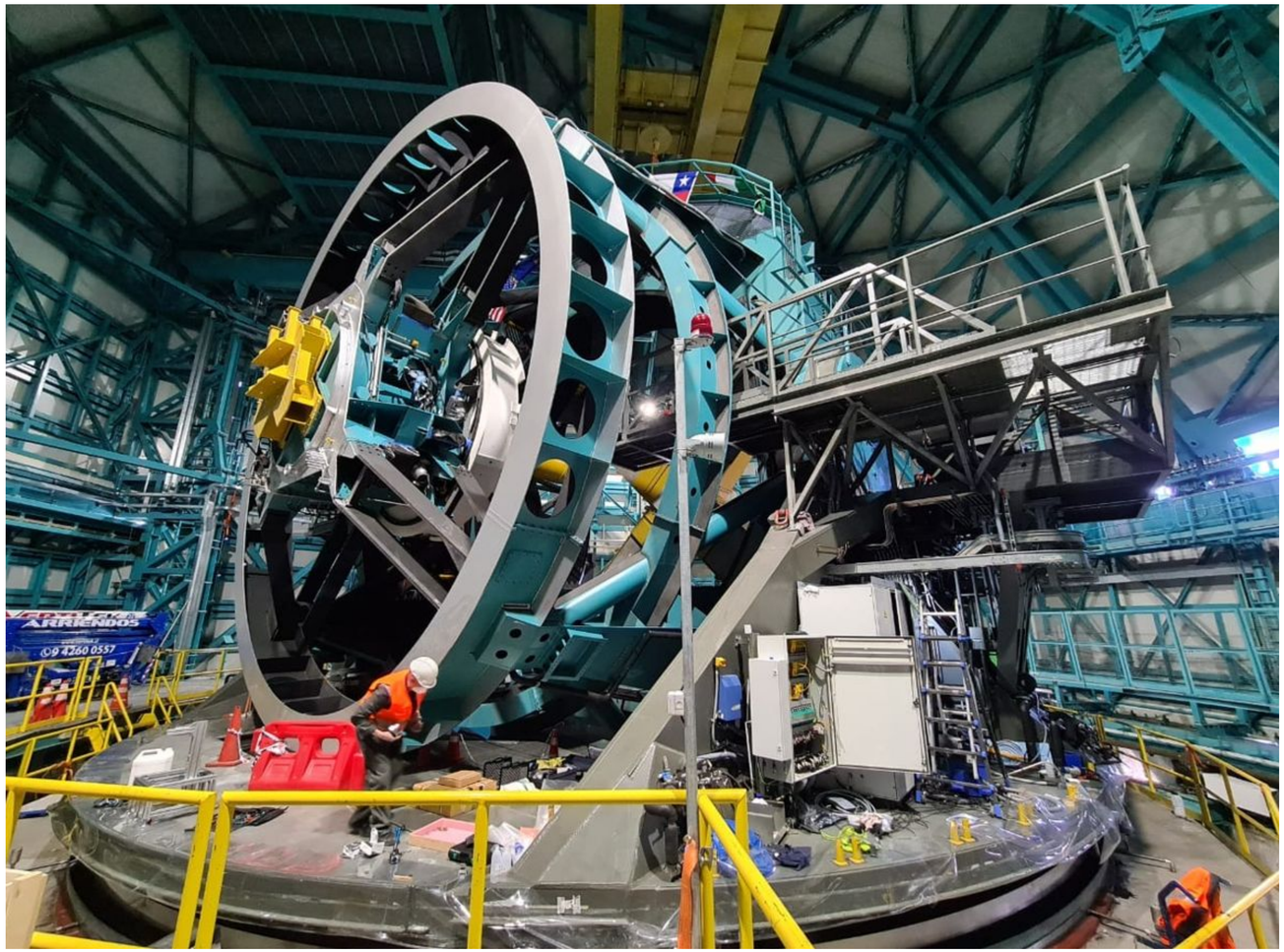
Telescope is back online with monthly observing runs.

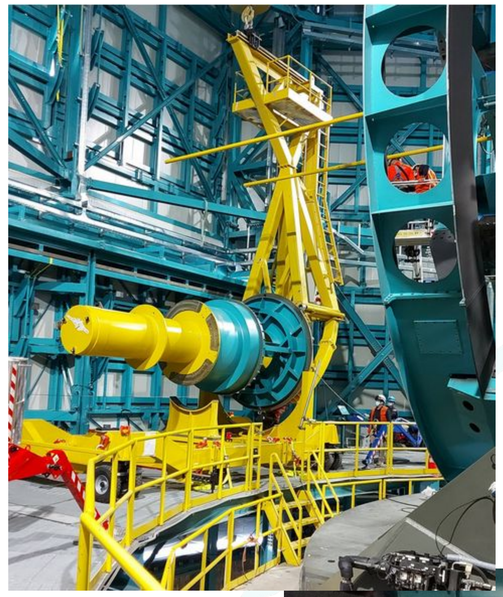
Continue with Technical Commissioning with data transfer and pipeline processing tests





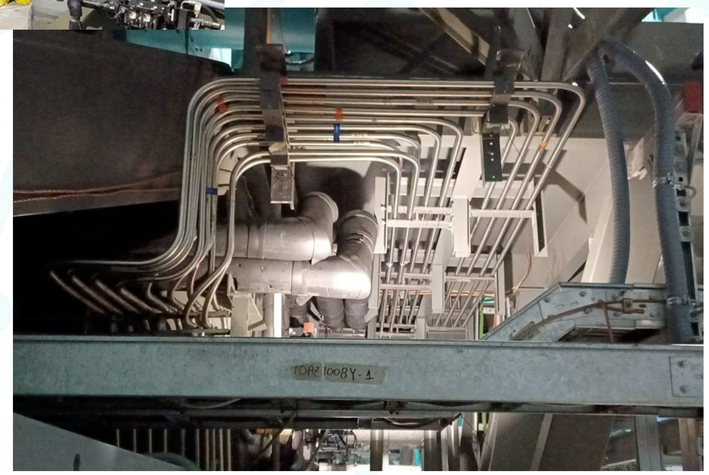
Telescope Mount (TMA) is nearing completion





Initial procedure verification for LSSTCam integration on the TMA top end assembly has been conducted - refinments and additional tests pending

Refrigeration line replacement continues - progress is taking longer than expected, but attention to detail is good



Vera C Rubin Observatory is well on its way to becoming reality!

Significant progress has been and is being made on all fronts – in spite of COVID and other challenges.

For each comment of achievement I could have mentioned an issue or problem. It is the nature of the beast.

Planned start of the Legacy Survey of Space and Time: June 2024.

Rubin Observatory’s mission is to build a well-understood system that will produce an unprecedented astronomical data set for studies of the deep and dynamic universe, make the data widely accessible to a diverse community of scientists, and engage the public to explore the Universe with us.

DEI & Culture Sessions

PDT	Monday			Tuesday					Wednesday					Thursday					Friday				
	DOVE MOUNTAIN	TORTOLITA A	TORTOLITA B	DOVE MOUNTAIN	TORTOLITA A	TORTOLITA B												TORTOLITA D	DOVE MOUNTAIN	TORTOLITA A	TORTOLITA B	TORTOLITA C	TORTOLITA D
8:00 AM																							
8:45 AM																							
9:00 AM	SAC MEETING Part One			PLENARY Ritz-Carlton Ba					Graduate Student Poster Pitches					(TBC) Science Keynote: JWST & Rubin Observatory Engineering, Commissioning & Science - Prof. Marcia Rieke					USERS COMMITTEE MEETING Graham	COMPUTERIZED MAINTENANCE MANAGEMENT SYSTEM WORKSHOP Barr / Drass	DYNALENE SYSTEM: FROM PRELIM DESIGN TO START-UP Jiménez	EARLY CAREER ASTROS: NETWORKING & TOOLS Annis	COFFEE WITH THE RUBIN SCIENCE PLATFORM DEVELOPERS Economou
9:15 AM																							
9:30 AM																							
9:45 AM				Operations Up																			
10:00 AM				Lightning Stories																			
10:15 AM																							
10:30 AM	REGISTRATION OPENS @ 10:30 Ritz-Carlton Ballroom Pre-Function 3 & 4			BREAK in Ritz-Carlton Ballroom Pre-Function 1 & 2 Contributed Posters in Tortolita Pre-Function					BREAK in Ritz-Carlton Ballroom Pre-Function 1 & 2 Graduate Student Poster Session in Tortolita Pre-Function					BREAK in Ritz-Carlton Ballroom Pre-Function 1 & 2 Contributed Posters in Tortolita Pre-Function					BREAK 10:30-11:00 in Ritz-Carlton Ballroom Pre-Function 1 & 2				
10:45 AM																							
11:00 AM	SAC MEETING Part Two	Meeting Rooms Available No A/V or Logistical Support Provided		DIFFERENCE IMAGE ANALYSIS Wood-Vasey	SATELLITE CONST. Tyson	**EQUITY AND INCLUSION WORKSHOP Shugart**	THERE'S AN APP FOR THAT: GOOD UX AND HOW IT HELPS COMPLICATED IDEAS FEEL APPROACHABLE Mason	SCIENCE VERIFICATION AND VALIDATION Bechtol	UPDATE FROM SCIENCE PIPELINES AlSayyad	SURVEY STRATEGY I Jones	INTRO TO THE AUXILIARY TELESCOPE (AUXTEL), ITS DATA AND COMMISSIONING Fisher-Levine	CAMERA PUMPED COOLANT WORKING SESSION Riot	ACTIVE OPTICS COMMISSIONING Meyers		FROM DATA TO SOFTWARE TO SCIENCE Hosted by LINCC Connolly	SOURCE INJECTION IN THE RUBIN PIPELINES Reed	CAMERA RE-ASSEMBLY ON THE SUMMIT Riot	THE DARK ENERGY SPECTROSCOPIC INSTRUMENT (DESI): LSST SYNERGIES Guy, J.	EXPLORING THE SOLAR SYSTEM WITH RUBIN EPO I Herrold	PLENARY Ritz-Carlton Ballroom Breakout Summaries & Workshop Close-out				
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12:45 PM	No Meal Provided Lunch on Your Own			LUNCH CORE Kitchen & Wine Bar																			
1:00 PM																							
1:15 PM																							
1:30 PM	TRAVEL TO & WITHIN CHILE Reil	DM TEAM ALL HANDS MEETING O'Mullane	INTRO TO RUBIN: SYSTEMS, JARGON & ACRONYMS Graham	LOW SURFACE BRIGHTNESS SCIENCE W/RUBIN: UNLOCKING LSST'S DISCOVERY DOMAIN I Watkins	MULTI-MESSNGER ASTRONOMY WITH RUBIN OBSERVATORY Bellm	**HOW TO FOSTER TRUST IN THE WORKPLACE Thomas**	SIMULATING THE RUBIN OPTICAL SYSTEM IN IMSIM Walter	ONBOARDING FOR SIT-COM IN-KIND CONTRIBUTIONS Bechtol	LSST PHOTOMETRIC REDSHIFTS Malz	FOLLOW-UP FACILITIES FOR TIME-DOMAIN ASTRONOMY Corsi	OPSIM & MAF: IN-PERSON DROP-IN DISCUSSION Jones		INSTRUMENT SIGNATURE REMOVAL & CHARACTERIZATION OF THE LSST CAMERA Fisher-Levine		CONNECTING THE COMMUNITY TO IDAC AND SPC RESOURCES Olsen	BOOTSTRAPP-ING PHOTOMETRIC CALIBRATION Rykoff	CAMERA REMOVAL FROM THE TELESCOPE DURING OPERATIONS Riot	RUBIN- RELATED INITIATIVES TOWARD DIVERSITY, EQUITY AND INCLUSION Bianco	**EXPLORING THE SOLAR SYSTEM WITH RUBIN EPO II Herrold**				
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3:00 PM	BREAK Ritz-Carlton Ballroom Pre-Function 1 & 2																						
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3:30 PM	PLENARY Ritz-Carlton Ballroom Welcome, WorkshopThemes, Status			(ELAsTiCC) Gagliano	EARLY SCIENCE WITH RUBIN Guy, L.	SAFETY & ENV DURING COMMISSIONING & OPERATIONS Covertto	INTERACTING WITH THE RUBIN OBSERVATORY CONTROL SYSTEM: AN OVERVIEW Ribeiro	LOW SURFACE BRIGHTNESS SCIENCE W/RUBIN Watkins	UNCONFERENCE Topic TBD Earlier in the Day							RUBIN IN-KIND PROGRAM COMMUNITY SESSION Verma	DEBLENDING: PLANS AND CHALLENGES Buchanan	CAMERA VERIFICATION & RE-VERIFICATION ACTIVITIES Riot	LEANING INTO THE DARK: RUBIN OBS AS CULTURAL METAPHOR McKean	ALL ABOUT NOIRLAB CEE Kocz				
3:45 PM																							
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5:00 PM	Undergraduate Student Poster Session Tortolita Pre-Function																						
5:30 PM				GROUP PHOTO										No Meal Provided Dinner on Your Own									
6:00 PM	No Meal Provided Dinner on Your Own																						
6:30 PM				RECEPTION 6:30-8:30 Brisa Lawn																			
7:00 PM																							
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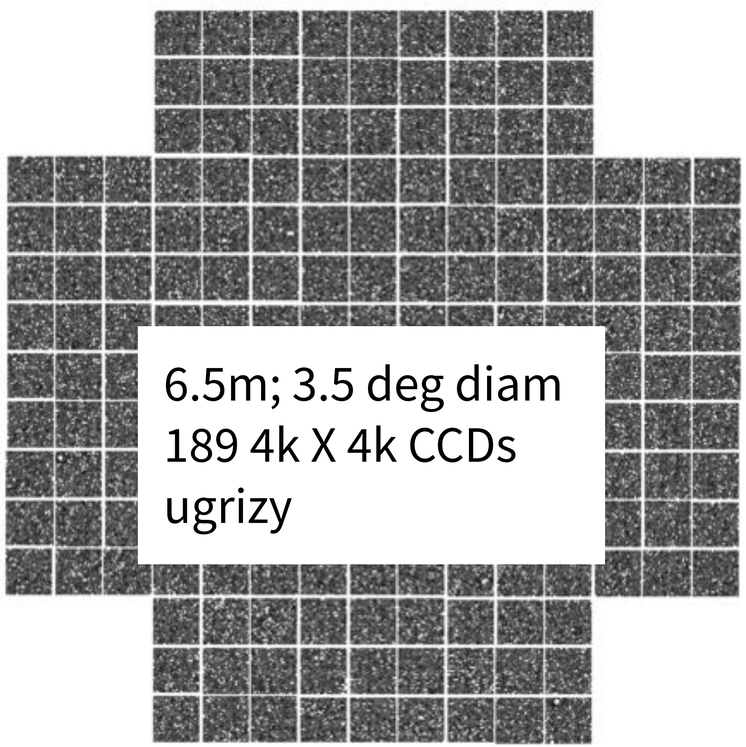
DM Pipelines are tested with data sets from 3 wide field cameras

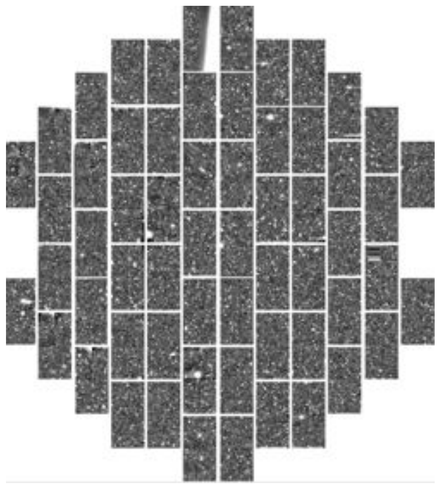
1 simulated; 2 precursor surveys – each data set has characteristics expected from the LSST data

SIMULATIONS LSST
ImSim



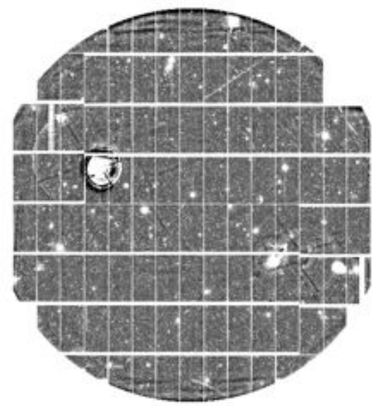
6.5m; 3.5 deg diam
189 4k X 4k CCDs
ugrizy

Dark Energy Camera (DECam)



3.9m; 2.2 deg diam
62 2k X 4k CCDs

Hyper Suprime-Cam (HSC)
Subaru Strategic Program



8.2m; 1.5 deg diam
103 2k X 4k CCDs
grizy

Kindness Program

Goal: Make kindness the norm

Why:

- Stress Reduction (especially as the project is getting into the intense phase of commissioning)
- positive reinforcement of happiness among our workforce,
- positive outcomes for both individuals and our organization including safety

How:

- Monthly guidance on how to promote kindness at work
- #Be-kind channel
- https://www.lsst.org/about/kindness