



Large Synoptic Survey Telescope

Workforce and Diversity Report

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Diversity, Workforce Development, EPO

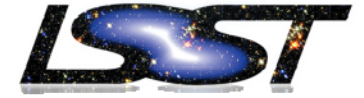


- All Topics Related, Broad, Complex
- Diversity: project wide – staff and users – gender and ethnicity
- Workforce development: climate, hiring practices
- EPO: construction vs. operations
 - Reviewers comments
 - OAB
 - Learning Experiences
- AURA Center in October of 2011
- Workforce & Diversity Committee
 - LSST active since June 2012





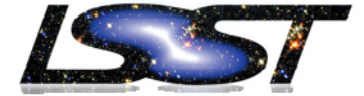
LSST PO is newest AURA Center



- Opportunity to start off right with *everything*, including our institutional culture and workforce climate.
- AURA Governance includes WDC Committee
 - Social scientists
 - <http://www.aura-astronomy.org/governance.asp?CouncilID=112>
- Charter includes AURA Center Workforce and STEM Careers
- There are “Diversity Advocates” at each Center
 - D. Norman (NOAO) - astronomer
 - S. Bruff (STScI) – HR
 - S. Jacoby (LSSTPO) - EPO
 - J. Leibacher (NSO) - astronomer
 - C. Yamasaki (Gemini) - electronics



Gender Diversity (STEM)



Closeout Slide from 2013 Joint Technical Meeting ...

I see a room full of hardworking, dedicated team members. What I don't see is a diverse project team; there are not many women in this group.

JTM: 6% STEM workforce is female (5 out of 88)

AURA Centers: 36% female

Comparable* Institutions: 41% female

2012 Science and Engineering indicators:

Fraction of female engineers: 13%

Fraction of female computer and mathematical sciences: 26%

AAS membership: 51% female

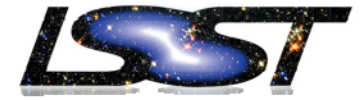
Physics PhDs awarded to women in 2008: 19%

By any metric, our project does not adequately reflect an appropriate level of gender diversity.

*AURA compares its demographic makeup to the set of organizations that are required by the Equal Employment Opportunity Commission to report under the classification NAIC 54171, Private Sector Physical, Engineering, and Life Sciences. There are over 287 thousand workers in this category, of whom AURA employs about a thousand.



Diversity Goal of LSST Project



- Increase participation of URM in LSST Project, workforce, and eventual EPO users. We have 14 LSST/AURA employees; a project team of several hundred, and a potential user community (science + EPO) of hundreds of thousands.
- *Our mission is “to build one of the most important scientific experiments in human history “*
- And to do it with a within a climate that promotes respect, communication, fairness, and inclusion for all employees.

~250 people at August 2012 AHM

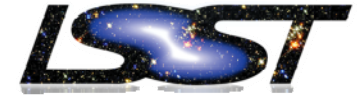


~80 people at 2013 JTM





Increasing Diversity on LSST Project



- With active support of LSST Director and Project Manager
 - “Want diversity climate to flow down through project”, S. Kahn
- “You can report to the committee that you and I will develop a plan that broadens our diversity efforts across the project and can report back at the next meeting. No promises just yet but a commitment to try to do better and broader.” V. Krabbendam (This needs to be written as a measurable goal with implementation plan. VK + SJ will develop this for next meeting.)
- Initial Ideas
 - A distributed project, ask for Diversity Reports from university subcontractors, try to get statistics
 - Put Diversity Advocate on hiring committees
 - Increase URM on review committees; OAB



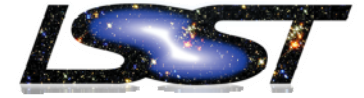
LSST Project is Distributed



- The LSST *Project* is much more than the relatively small number of employees in the AURA LSST Center.
- Now the LSST Project includes:
 - LSST AURA Center (Project Management Office, DM, EPO, SE)
 - Camera Team at SLAC
 - T&S Team at NOAO
 - Science Advisory Council & Collaborations
- During Operations it will include:
 - Science Users of LSST database
 - EPO participants
- To the extent possible, we look at the whole project, not just the Center



Summary of LSST Results

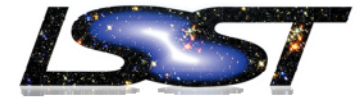


- AURA Climate Survey every two years
 - LSST participated for first time in 2012/2013
 - Small numbers
 - Summer AAS presentation Stassun / Bruff
- The survey had a 110% response rate; 13 responses, 11 center employees (LSST was only ~2% of those answering the AURA-wide survey)
- Overall, staff indicated that the climate is very positive.
- Nearly all – 98% of the questions received a positive (slightly to strongly agree) response from 100% of participating employees.
- 88% of the questions received a strongly positive (agree or strongly agree) response from 100% of participating employees
- So we're small and happy! Specific numbers on next slide:





LSST Survey Said ...



68 questions, 10 categories

	LSST*	Strongly Disagree = 1	Disagree = 2	Slightly Disagree = 3	Slightly Agree = 4	Agree = 5	Strongly Agree = 6
Respect	5.71 +/- 0.47						
Gender	5.61 +/- 0.61						
Race/Ethnicity	5.28 +/- 1.21						
Age	5.48 +/- 0.72						
Bias	1.54 +/- 1.13						
Communication	5.44 +/- 0.70						
Fair Treatment	5.54 +/- 0.67						
Diversity	4.95 +/- 1.09						
Policies and Practices	5.41 +/- 0.67						
Organization and Leadership	5.44 +/- 0.77						

To preserve anonymity, LSST results were not broken down into categories like the other AURA Centers:
 gender (females and males)
 race/ethnicity (majority and minority members)
 nationality (Chilean and U.S. staff)
 seniority (0-5 years in position and 6+ years in position)
 scientist status (science staff and non-science staff)

* Numbers are for positively phrased questions only, except for the Bias category which asked only negatively phrased questions. A few negative questions did appear in 4 additional categories and they are not included in this table, just to simplify the table. The highest (best) a positive question could receive is 6.0 and the lowest (best) a negative question could get is 1.0



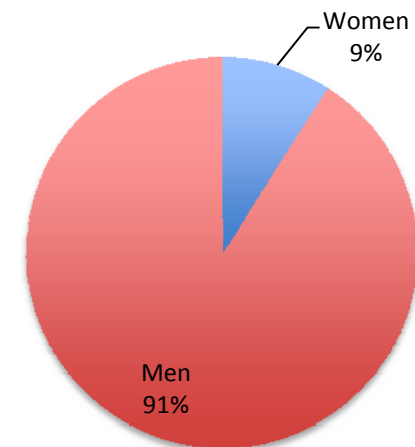
Update on Diversity of LSST Center (FY13)



- There are 14 Employees of the LSST/AURA Center FY13
- Of these 14 Employees, there are 2 minorities and 4 female

- 9 of these 14 LSST/AURA Employees are STEM
 - Graphic/Web Designer and EPO Manager are not considered STEM; both are female; same with AA, Document Specialist, etc.
- Of the 9 STEM Employees, there are no minorities and 1 female

Total STEM - Gender





LSST Hiring Opportunities



Two high-level STEM positions
in the LSST Project are being
advertised now:

Deputy Director

Telescope Scientist

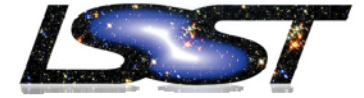
Hiring Campaign: ~40 new hires
at multiple locations

June 2014 AAS Boston Meeting

FY2015 (Multiple Items)				
Institution	Assignee	Resource Description	Values	
			Hours FY2014	Hours FY2015
IPAC	IPAC New Hire IP1 Local	DM Sr. Software Engineer		1800
	IPAC New Hire IP2 Local	DM Scientist		1440
IPAC Total				3240
LSST	New Hire PMO 1 Relo	PMO Deputy Director		750
	New Hire PMO 2 Relo	PMO QA Manager		1800
	New Hire A	PMO Project Controls Specialist		1800
	New Hire EPO 1 Relo	EPO Education Specialist		900
	New Hire LS2 Local	DM Sr. Software Engineer		1800
	New Hire LS4 Relo	DM Technical Writer		1800
	New Hire LS5 Local	DM Assistant System Architect	23.22	900.78
	New Hire PMO 10 Local	PMO Site Safety Engineer		900
	New Hire PMO 11 Local	PMO Computer System Admin 2		1250
	New Hire PMO 3 Relo	Communications Manager		900
	New Hire PMO 5 Local	PMO Contracts Specialist		1800
	New Hire PMO 6 Local	PMO Business Services		900
	New Hire PMO 7 Local	PMO Sr. Administrator		900
	New Hire SE 1 Local	COM Simulation Support		1800
LSST Total			23.22	18200.78
NOAO	New Hire TS 1 Relo	TS Project Scientist	183.35	1440.08
	New Hire TS 10 Relo	TS Optical Engineer		1812.61
	New Hire TS 11 Relo	TS M1 Electrical Engineer		1462.8
	New Hire TS 12 Relo	TS M1 Mech Tech		1461.08
	New Hire TS 13 Relo	TS M1 Elec Tech		1461.08
	New Hire TS 14 Local	TS Procedures Doc Mgr		1461.08
	New Hire TS 15 Relo	TS Coating Engineer		1333.97
	New Hire TS 16 Local	TS Optics/Coating Tech		1333.97
	New Hire TS 17 Relo	TS OCS Developer		944.12
	New Hire TS 19 Relo	TS ROS Developer		1413.88
	New Hire TS 2 Local	TS Procurement Administrator		1800
	New Hire TS 23 Relo	TS Data Analyst		900
	New Hire TS 3 Relo	TS Computer System Admin		1800
	New Hire TS 4 Local	TS Logistics / Export Mgr		900
	New Hire TS 7 Local	TS Site Construction Inspector		1285.2
	New Hire TS 9 Relo	TS Mount Contract Mgr	451.39	1785.06
NOAO Total			634.74	22594.89
Princeton	New Hire PR1 Relo	DM Applications Manager	227.7	900.45
	New Hire PR2 Relo	DM Scientist		1440
	New Hire PR3 Relo	DM Scientist		1440
Princeton Total			227.7	3780.45
SLAC	New Hire SL1 Local	DM Sr. Software Engineer		1800
	New Hire SL2 Local	DM Software Engineer		1800
	New Hire SL3 Local	DM Software Engineer		1800
SLAC Total				5400
UW	New Hire UW1 Relo	DM Applications Manager	227.7	900.45
	New Hire UW2 Relo	DM Scientist		1440
	New Hire UW3 Relo	DM Scientist		1440
UW Total			227.7	3780.45
Grand Total			1113.36	56996.57



LSST Training



- On June 12, 2013 we held an “LSST Meet Yourself” staff meeting, 26 people including Victor, Sidney Wolff and Steve Kahn.
 - Climate survey results
 - Team building
 - Presentation and results emailed to all

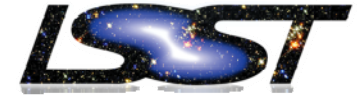
- Reminded staff of communication options:
 - Sign up for LSST E-News (<http://www.lsst.org/lsst/news/enews>); the July issue included a story on the LSST climate survey
 - Check <https://www.lsstcorp.org/> frequently; the blog is updated weekly.
 - The Thursday management meeting notes are available here <https://www.lsstcorp.org/private/project-management>

- Dara Norman met with six LSSTPO staff members on hiring committees to discuss Unconscious Bias. This has been expanded to all hiring committees.

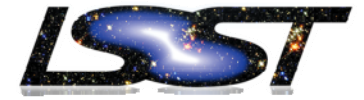
- Six LSSTPO staff members attended the AURA-HR mentoring training on 7/16.
- AURA Best Practices guidelines – recruitment, applicant pool, hiring
- Maintain list of Diversity programs at Member Intuitions



Workforce and Diversity Issues at LSST



- Participating, not initiating public or K-college outreach programs now; successful 3-year FaST program during D&D
- Interest in hosting IINSPIRE student; participating in Keivan's latest PAARE proposal
- As hiring increases, training on issues of unconscious bias is incorporated into process, diverse applicant pool
- Workplace culture includes high level of awareness of diversity and climate issues
- LSST addresses these issues as a full project, not just the LSST AURA Center portion of the project, even though we have less control and access to other portions of the project.



EXTRA SLIDES



Status of LSST Center Diversity (FY13)



AURA Demographics as of 12/6/2013
 (Managers are not included in other categories)

ALL (14) LSST Center Employees

Category	Male Non-Minority	Female Non-Minority	Male Minority	Female Minority	Male	Female
Senior and Middle Management	1				1	
Managers	3	1			3	1
Science research staff	2				2	0
Engineering	2	1			2	1
IT	1				1	0
Science Support						
Administration	1			2	1	2
Totals	10	2		2	10	4



Status of LSST Center Diversity (FY13)



AURA Demographics as of 12/6/2013
(9) **STEM** LSST Center Employees

Category	Women	Men	Total Population
Science Research staff		2	2
Engineering	1	5	6
IT		1	1
Science Support			0
Total STEM	1	8	9

5 Non-STEM employees: EPO Manager, Document Specialist, Business Administrator, Administrative Assistant, Graphic/Web Designer.