

Workforce and Diversity Committee Report Bernice Durand, Chair bdurand@wisc.edu

AURA Annual Meeting, Washington April 18-21, 2012



Workforce and Diversity Committee http://www.aura-astronomy.org/diversity website, history, membership

Referred to as the WDC, founded by Bill Smith in 2009

Meetings 2009 Tucson, Baltimore; 2010 Tucson, Hilo; 2011 Sunspot; 2012 La Serena, Baltimore

- 12 Members*: Bill Smith AURA ex officio;
- 5 Diversity Advocates (DAs) at the 4 Centers: NOAO Dara Norman Astro, Katy Garmany Astro*; NSO Mark Giampapa Astro**; Gemini Neil Barker HR; STScl Sheryl Bruff HR;
- 6 profs: Lotte Bailyn MIT Management & Organization Studies, Bernice
 Durand U of Wisconsin Physics, Aaron Evans U of Virginia/NRAO Astro,
 Margaret Hanson U of Cincinnati Astro***, Keivan Stassun Vanderbilt/Fisk
 Astro, Abigail Stewart U of Michigan Psych & Women's Studies

*No AURA S member, *thru 4/13/12, **2012 John Leibacher succeeding, *** succeeded Jay Gallagher U of WI 7/1/10



Workforce and Diversity Committee http://www.aura-astronomy.org/diversity 3-year summary report

This talk has turned into the outline of a 3-year report for AURA & Centers on Broadening Participation progress

- Goals
- Progress toward goals
- Current and future needs and actions

Data come from Bill's annual reports and the Centers' Diversity Advocates, and some external sources. The Centers' contributions are not in a uniform format.

Note the link at the top of this slide: AURA site/diversity



Workforce and Diversity Committee http://www.aura-astronomy.org/diversity
4-page site includes 2009 Action Plan

- 2009 14-page AURA Action Plan for Broadening Participation at above website
- pp 1-3 AURA's commitment, principles, and 4-part top-level goal*
- pp 11-14 both AURA's and the Centers' short-term and long-term goals, all of which are in process of 3year update

*There's some redundancy of pp 1-3 with 11-14



Workforce and Diversity Committee http://www.aura-astronomy.org/diversity AURA progress toward goals

AURA's progress toward commitment, principles, top-level goals

commitment to broadening participation

AURA leadership buy-in, DAs, WDC appointed and continuing the discussion, raising internal and external awareness

culture of excellence

AURAs diversity will enhance its excellence; trainings, talks, mentoring; leadership sets example

workplace climate

survey 2009, 2012; anti-harassment training, staff mentoring

diverse/inclusive cross-section of well-qualified individuals employed as AURA staff

broader staff searches, gradual increase in female, minority employees



Workforce and Diversity Committee http://www.aura-astronomy.org/diversity AURA progress toward goals

AURA's progress toward commitment, principles, top-level goals continued

build more diverse future workforce (pipeline)

outreach and mentoring students & teachers through schools and summer programs (REU,RET, etc.), interns, partner with IA, IL, NE LSAMP program

engage institutions historically uninvolved with AURA (those smaller and/or serving underrepresented)

new member 2010: Fisk U (~700 students, MSI)

establish greater presence in geographic regions that have not had the opportunity to contribute to AURA mission and overall field of astronomy

2010: Fisk U and Vanderbilt U (12,859 students) in Tennessee

[Also added 2010: New Jersey Institute of Technology (9558 students)]



Progress toward AURA's short-term goals (p 11 in Action Plan)

1. Align AURA, Centers, governing bodies and member reps in the pursuit of these objectives.

There is definite progress, with DAs the core group for alignment within AURA. Bill, directors, WDC members, others talk about these issues at AAS, universities, NSF, etc.

Annual meetings are a chance to listen to Member Reps on these subjects. IINSPIRE (IA, IL, NE LSAMP) will be a good example of this alignment.

7



Progress toward AURA's short-term goals (p 11 in Action Plan)

1. Align AURA, Centers, governing bodies and member reps in the pursuit of these objectives, continued

Centers seen as viable research mentor partners, e.g. with Fisk-Vanderbilt and with PAARE awardees to mentor and train PAARE* students.

DAs cooperate on projects such as climate surveys, staff information & training sessions, AURA presence at regional/national meetings of STEM societies** serving underrepresented communities

*Partnerships in Astronomy and Astrophysics Research and Education

** e. g., NSBP, NSHP, SACNAS (Soc Advanc Hisp/Chicano Native Amer in Sci)

and AISES (AI/Alaska Nat Sci Engr Soc)



Progress toward AURA's short-term goals (p 11 in Action Plan)

2. Articulate clear and updated policies on diversity & climate throughout organization

HRs/DAs updated and made accesssible most AURA personnel policies: Diversity, EEO, Employment, Compensation and Affirmative Action and reviewed hiring and promotion procedures.

Links to the AURA EEO Policy, new Recruitment Guide, and new Unconscious Bias Brochure are at the above website, incorporating best practices for improving diversity and managing bias.

Development and presentation of AURA wide anti-harassment training including for all new hires.

Addition of Parental Leave as a benefit – New Parental Leave Policy



Progress toward AURA's short-term goals (p 11 in Action Plan), continued

3. Gather best practices information from our member institutions.

WDC faculty members are from Cincinnati, MIT, Michigan, Vanderbilt, Virginia, Wisconsin, have been good sources of information on best practices in hiring, mentoring and training to improve inclusiveness and career development, supporting NSF programs on diversity, etc.

for example, recruitment guide and unconscious bias brochure and talks are modeled on university examples



Progress toward AURA's short-term goals (p 11 in Action Plan)

4. Establish recruitment best practices across AURA (the new software Ultipro

will help track the process uniformly among Centers).

Ultipro used for recruitment, applicant tracking, and HR/Payroll at Centers Recruitment guide incorporating diversity best practices has been distributed across AURA. Also providing orientations and unconscious bias trainings to hiring committees and managers. (E.g., NOAO/NSO talks)

5. Identify and evaluate initiatives and programs for broadening participation that may require outside resources.

In 2009 we envisioned some form of fundraising or finding access to NSF Broadening Participation programs.

It would help to be able to fund such things as AURA presence at more annual meetings of minority professionals' associations.



Progress toward AURA's long-term goals (p 11 in Action Plan)

1. In coordination with Diversity Advocates and Human Resources, develop AURA wide training programs and identify future resource needs.

DAs: recruitment training and anti-harassment training, looking at sharing management training, are watchful for other trainings useful to the DAs or AURA staff in general, have secured a system-wide training and HR resource through Human Resource Leadership Council.

David Cox was appointed HR for AURA in 2011, another good resource.



AURA's long-term goals (p 11 in Action Plan) and progress

2. Serve as a centralized clearinghouse for information and resources and facilitate cross-AURA communication.

We started this immediately. WDC members have collected guides, articles, training resources etc., which are available on the AURA website. AURA Centers have cooperatively identified resources, and shared information for dissemination at societal meetings. Through that work we are being sought as a resource by universities and AAS. Much from the previous slides is posted on the web.

Talks and trainings are adaptable, so university materials are easy for AURA to use, and vice versa.



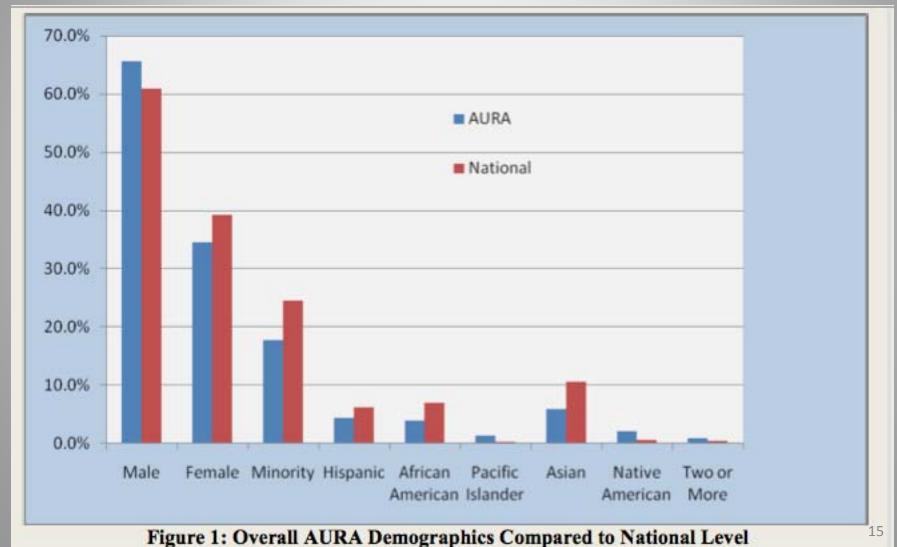
Workforce and Diversity Committee http://www.aura-astronomy.org/diversity
Bill's annual letter-reports (on website)

Bill has written excellent annual WDC progress summary letters/reports covering CYs 2009, 2010 & 2011, posted on the above website.

He uses data reported by AURA and the DAs, national workforce statistics, studies such as the CSWA catalog of percent senior women in astronomy institutions ...



Workforce and Diversity Committee http://www.aura-astronomy.org/diversity 2009 Workforce AURA/National Data





Workforce and Diversity Committee http://www.aura-astronomy.org/diversity 2010 Workforce AURA/National Data

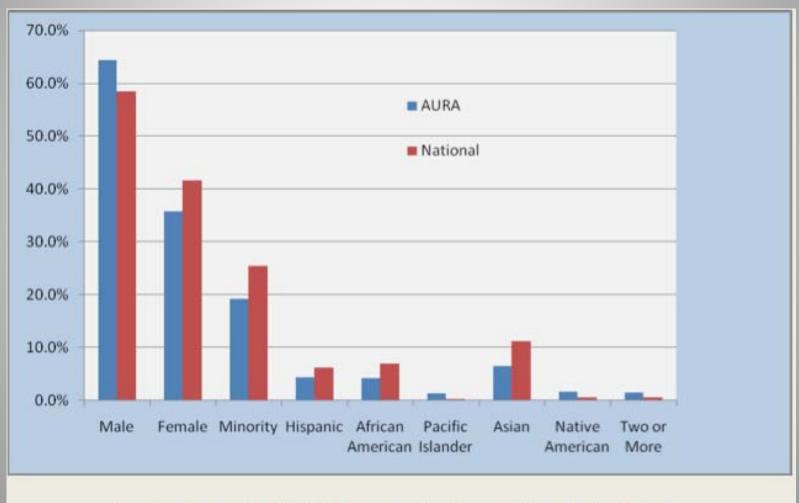


Figure 1: Overall AURA Demographics Compared to National Level



Workforce and Diversity Committee http://www.aura-astronomy.org/diversity 2011 Workforce AURA/National Data

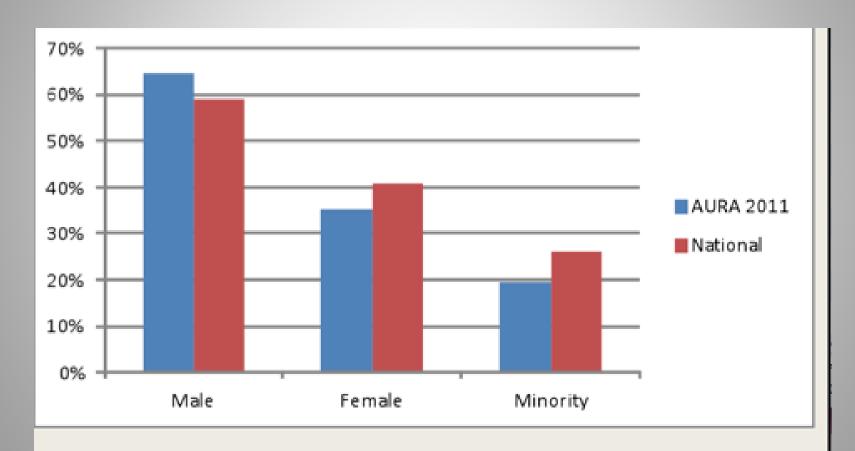


Figure 1: Overall AURA Demographics Compared to National Level



Workforce and Diversity Committee http://www.aura-astronomy.org/diversity from figures in Bill's annual letter-reports

Eyeball comparison of AURA's workforce to national:

2009/2010/2011 AURA National

Male 66/64/64 61/58+/59

Female 34/36/35 39/41/40+

Minority 18/19/19 24/25+/26

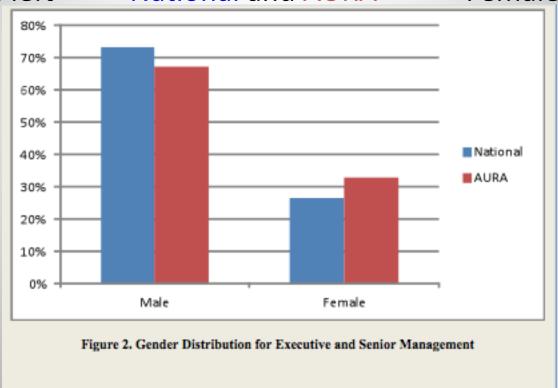
AURA's workforce getting better balanced at about the same rate as national, but remains at lower levels of females and minorities.



Workforce and Diversity Committee http://www.aura-astronomy.org/diversity 2011 AURA Data from Bill's letter

2011 Gender Distribution for Executive and Senior Management

Male left National and AURA Female right

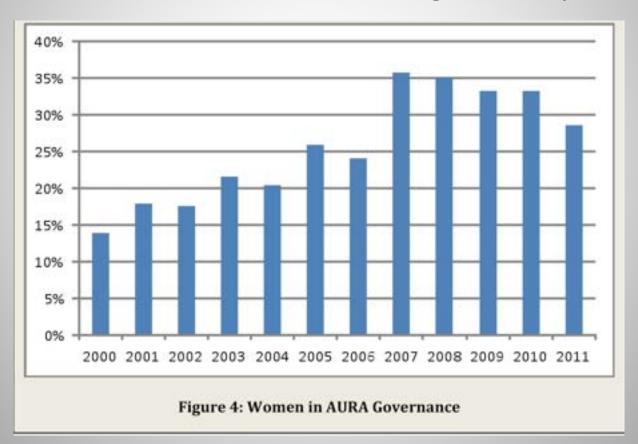




Workforce and Diversity Committee http://www.aura-astronomy.org/diversity 2011 AURA Data from Bill's letter

Women in AURA Governance 2000-2011 goal 30%, peaked 2007

Why?





Workforce and Diversity Committee http://www.aura-astronomy.org/diversity Useful National Data

Example of National data, CSWA, Joan Schmeltz Chair, report "Senior Women: A Comparison of Astronomy Organizations" Bill's 2011 letter/report includes a bar graph.

http://www.aas.org/cswa/percent_tenured.html

Average percentage of senior women 14.7%, standard deviation 10.6%

As of December 2011, Gemini and Indiana led with 50%

NOAO and STScI were tied at 10.5%

NSO had no senior women, does have 2 tenure-track and 1 scientist-track women



Workforce and Diversity Committee http://www.aura-astronomy.org/diversity What about Chile?

There is no DA in residence in La Serena.

Gemini DA Neil Barker visits La Serena regularly.

North – South differences in understanding of diversity:

Diversity in US refers to including people under-represented in such areas as ethnicity, gender, institution, geography.

We asked in La Serena how the word applies to them, and got an answer that in Chile, the ranking of who is least represented is poverty, gender, disability.

Also, married "ex-pats" have to make special arrangements getting visas if both wish to be employed in Chile.



Workforce and Diversity Committee http://www.aura-astronomy.org/diversity Looking to the Future

AURA Current Needs and Action Items

Thorough report of progress, review and update of all goals Uniform reporting categories and formats across Centers

Broadening Participation activities on our website

Track outcomes from presence at minority society meetings

Continue discussions and liaisons with member universities about diversity, etc.

Be as aggressive advertising job openings to veterans as to women and minorities. Like the disabled, veterans may not be as visible as women and minorities. No numerical reporting is required for disabled or vets, but the compliance arm of the Dept of Labor wants to know how we support veterans.



Workforce and Diversity Committee http://www.aura-astronomy.org/diversity Looking to the Future

AURA Current Needs and Action Items Suggestions

Focus on (and fund) more direct organization wide initiatives to develop the future pipeline, such as AURA wide

- Scholarships
- Internship programs in progress
- Leadership and technical excellence programs
- Formal Partnerships with academic institutions and professional groups
- Challenge AURA to consistently achieve 30% or higher women in governance – Also challenge on minority participation

This whole effort is a culture change, requiring leadership and support across all areas of AURA – and has been getting it.



Workforce and Diversity Committee http://www.aura-astronomy.org/diversity
4-page site includes 2009 Action Plan

Centers' Goals are in Action Plan pp 11-14

The DAs all sent me different formats of three-year progress.

A summary statement for Centers' goal (paraphrase of Dara Norman)

"The Centers should work toward being ready to support and lead progress on diversity initiatives in the astronomical community."

I have highlighted samples from their reports.



Centers' progress toward short- and long-term goals

NOAO accomplishments by DAs and director on staff matters

- monthly meetings with NOAO director about diversity work: policies, staff issues, ideas, implementations
- Presentations of NOAO climate survey results
- Norman: creation of presentation "Excellence & Diversity at NOAO" given to various staff & hiring committees (NOAO N & S, NSO).



NOAO accomplishments on staff matters, cont'd

DAs have

- been members of recent hiring committees
- submitted suggestions of candidates for various NOAO/AURA committees
- given names of possible hiring candidates for recruitment
- been active in addressing Staff issues: periodic meetings with an informal staff group for "enhancing communication"
- implemented lab & observatory tours for non-science staff
- implemented minutes at monthly science staff meetings that are available to all NOAO staff



NOAO accomplishments on pipeline matters

- Recruited African American students for REU; recruited first Tohono O'odham student to NOAO Tucson REU program
- Increased interaction with schools, other groups on Tohono
 O'odham nation
- Promoted an exploratory booth and session at Society of Hispanic Professional Engineers (SHPE) 2010 meeting to increase awareness of engineering opportunities in the astronomy enterprise among students, and to check out job advertising opportunities for NOAO. Found there are many talented minority job-seekers attending SHPE sessions.



NOAO accomplishments on professional matters

DAs have sponsored special sessions at professional meetings to promote diversity

2 Astronomical Society of the Pacific, special panels in 2010, 2012

4 American Astronomical Society special sessions

Mentoring New Generations of Minority Astronomers, Jan
2009

Mentoring Astronomers: Students to Faculty, Jan, Jun 2010 Strategies for Addressing Harassment and Prejudice, Jan 2011

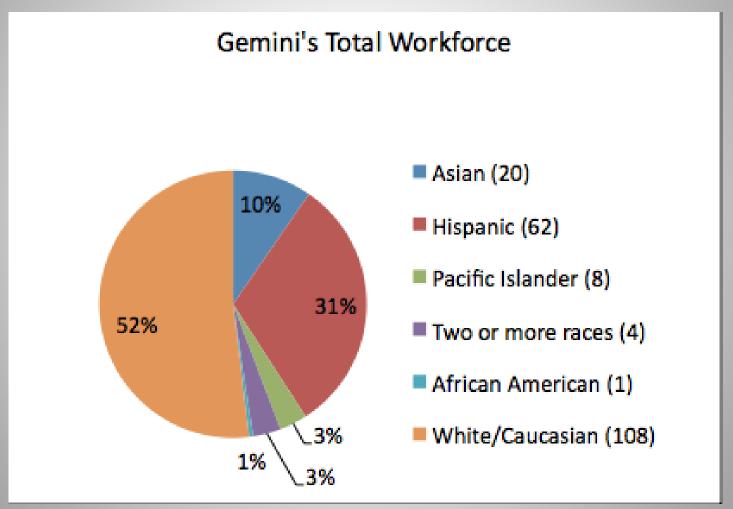


NOAO accomplishments on professional matters, cont'd

 DAs active in professional societal newsletters (editing, articles) that address issues of women and minorities in the field; active on professional societal committees that address diversity issues e.g., AAS demographics committee, NSBP ASTRO committee & meeting executive committee



Gemini's Accomplishments 2009-2012





Gemini Demographics

Demographics stable and outstandingly broad (48.2% self-identify as non-white this year, though just 1 African-American); 22 countries of origin.

26.8% of staff, 8% of engineers; 34% of science PhD staff are female.

Gemini focused on hiring more female engineers: in 2011 2 hired, 2 left.

Last year was challenging for Gemini, yet staff turnover was 10% in 2010 and dropped to 8% in 2011. 56% of those leaving were minorities.

Gemini N & S Workforce Pipeline Development Initiatives

Public Outreach in both Hilo and La Serena: teacher training, Family ASTRO for students & families, StarLab planetaria N&S, Journey Through the Universe (Hilo in 8th year, Viaje al Universo Chile started in 2011 & merged with AstroDay Program) impact thousands of students, parents, teachers. AstroDay started small in 2005, now hosts >20 institutions from Chile and beyond.



Gemini N & S Workforce Pipeline Internships 2006-11, built on relationships with partner country programs

Area of Experience

Number of Interns

Number of Gemini Interns		
Year	Gemini North	Gemini South
2006	5	11
2007	7	11
2008	1	19
2009	8	20
2010	12	17
2011	10	10
Total	34	78

Country of Origin

Interns, 2006 - 2011		
Area of Experience	Number	
Science	59	
Administration	9	
Engineering	45	
PIO/Safety	19	
Total	132	

Interns, 2006 - 2011		
Country of Origin	Number	
Australia	14	
Canada	21	
Chile	59	
France	2	
USA	36	
Venezuela	1	
Italia	1	
Brazil	1	



Gemini N&S Workforce Pipeline Internships, cont'd

Among 2011 interns were 3 from Akamai program and 1 from Fisk-Vanderbilt. Last year Gemini S started an internship program with partner country Brazil.

2 former interns were hired by Gemini last year, and a Gemini Connections Facebook network was started, for networking and keeping up on career opportunities at Gemini.

Gemini N&S Mentoring Program for staff

Foundations laid in 2010, in 2011 100 staff received training, >25 active mentoring relationships (about 20% of employees). This program is very well conceived, executed and monitored.



Gemini N Hawaii Astronomy Workforce Initiative

Established by Hawaii Island Workforce Investment Board to assure island is positioned to meet future workforce needs.

Project focusing on leadership stakeholders, K-12, Community College and University education, math development and work experience/internship development programs. Gemini has been a key contributor to this program, working with educators, leading the design of Mauna Kea Jobs web site and continuing to provide important leadership.

Gemini Employee Retention Program

To assure that staff turnover remains at 'normal' levels and that key contributors are retained and assured about future and personal development. Focuses on compensation, benefits, communications, morale, recognition, training, development, mentoring.



NSO accomplishments in the three years of WDC

- 1 Two women hired on to the astronomer tenure track
- 2 One woman hired on to the scientist track
- 3 One woman added to the Scientific Personnel Committee
- 4 Two women offered post-docs (one declined, two-body problem)
- 5 Participation in the Akamai, Fisk/Vanderbilt, and NMSU programs
- 6 Developing program for middle school with UH Maui College and NOAO (Pompei)



Workforce and Diversity Committee http://www.aura-astronomy.org/diversity NSO Accomplishments 2009-2012

NSO goals, progress toward goals, organized by short- and longterm Goals from Action Plan: Centers pp 11-14

Short term, p 14 of Action Plan

- 1 Expand recruitment efforts of underrepresented groups through broader advertising venues for NSO job opportunities.
 - Have hired 2 women on tenure track, 1 woman on scientist track
- 2 Participate in STEM-related society meetings, either national or regional, serving underrepresented communities such as NSBP, NSHP, SACNAS and AISES. NSBP, NSHP, SACNAS (multiple), AISES (multiple), NIEA
- 3 Add a non-tenured scientific staff member from an underrepresented group to the NSO Scientific Personnel Committee. Irene González Hernández (GONG Project Scientist)



Workforce and Diversity Committee http://www.aura-astronomy.org/diversity NSO Accomplishments 2009-2012

NSO goals, progress toward goals Short term, continued

- 4 Continue PAARE student participation in the NSO as funded by the Fisk/Vanderbilt PAARE proposal. Expand this beyond the scientific staff to include our engineering and technical staff as mentors. Matthew Richardson (engineering and science, now at Vanderbilt), Teresa Monsue selected for 2012. Others (not sure they're PAARE) from NMSU (an MSI)
- 5 Identify more mentors among the engineering and technical staff in addition to the scientific staff. George Luis, Mark Warner, Kim Streander, Friedrich Wöger,* Sam Barden, Kit Richards. Also NSO tenure-track Anna Pietarila has "soft" mentoring from senior tenured astronomer Joan Najita of NOAO, and science mentoring from NSO collaborators
- * (Scientist track, but mentoring engineering student in deformable mirror technology)



Workforce and Diversity Committee

http://www.aura-astronomy.org/diversity NSO Accomplishments 2009-2012

NSO goals, progress toward goals Long term, p 14 of Action Plan

- Increase the number of underrepresented students in the NSO REU program, ideally, with a supplement in our REU funding.
 - 2:1 F:M, but still room for others (see stats below) Pipeline: 2011: REU 1M 5F; RET 1M 2F, Akamai 4M 2F
- Expand the RET program effort by targeting teachers at minority-serving institutions, including getting funding for more RETs.
 Still working on this
- Increase the number of underrepresented minorities on the scientific and/or engineering/technical staff during the next 3 to 5 years.
 - Anna Pietarila (has been in Tucson > 1 yr) and Serena Criscuoli (has been at Sac Peak for a few months) are both tenure track; Alexandra Tritschler (has been at Sac Peak a couple of years) is scientist track working on ATST. Also Sabrina Savage (offered post-doc, declined), Nina Karachik (post-doc)
- 4 Obtain student internships for engineering and computing at the NSO. Akamai; (IINSPIRE in future)



Workforce and Diversity Committee http://www.aura-astronomy.org/diversity NSO Accomplishments 2009-2012

NSO EOP participant statistics 2003-12

Number of Participants in NSO Educational Outreach Programs 2003-2012							
Year	Graduate (SRA)	Undergrad (SRA)	Undergrad (REU)	Teachers (RET)	Pestdectoral Fellows		
2012	10*		6	2	6		
2011	8*	2*	6	3	5		
2010	6*		7	D	5		
2009	6*		6	2	6		
2008	7*	1	6	0	6		
2007	9*		6	4	7		
2006	4		7	4	5		
2005	9		9	4	- 5		
2004	6	1	6	4	3		
2003	7		8	3	4		



Workforce and Diversity Committee http://www.aura-astronomy.org/diversity NSO Accomplishments 2009-2012

NSO REU participant statistics 2005-12

Minority category includes only students from underrepresented minorities (Hispanic and African-American)

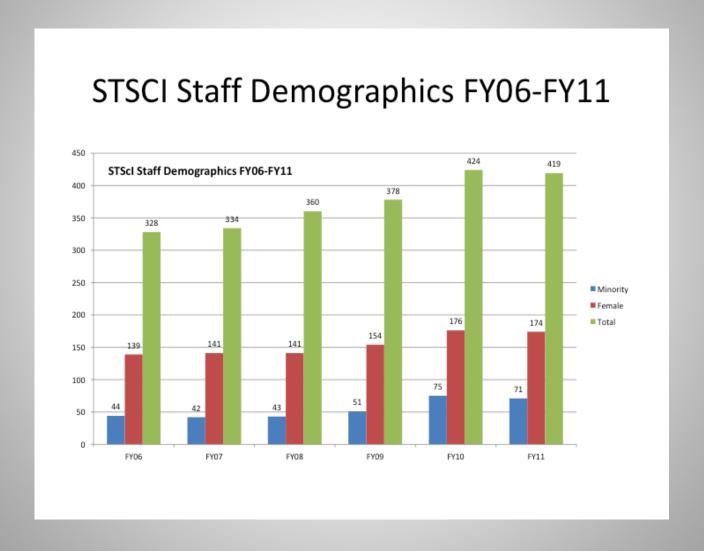
NSO REU Participant Statistics (2005-2012)									
Year	Year 2012 2011 2010 2009 2008 2007 2006 2005 % Participants								
Male	2	2	2	3	4	2	1	5	40
Female	4	4	5	3	2	4	6	3	60

Minority*	0	0	0	2	0	1	0	0	5.8

^{*}Includes only students from underrepresented minorities (Hispanic and African-American).

Evolution of STScI Workforce FY06-Present

Blue: Minority Red Women Green Total





Workforce and Diversity Committee

http://www.aura-astronomy.org/diversity STScI Accomplishments 2009-2012

STScI most significant accomplishments

All short term goals met, all long term goals met or in progress.

- Integration of broadening participation best practices in <u>all</u>
 recruitment/hiring activities including expanded outreach to career fairs,
 recruitment sources, partnerships, etc. that help improve diversity in
 candidate pools. This is now standard operating procedure.
- Established and ongoing partnerships with local HBCUs and MSIs (Morgan, UMBC and Capitol College) as well as Fisk-Vanderbilt Bridge Program, producing feeder pool of diverse entry level hires and interns.
- Better integration of diversity outreach activities and initiatives between
 Human Resources, the Youth for Astronomy & Engineering program, our
 Office of Public Outreach, the Diversity, Climate and Respect Working
 Group as well as a graduate student diversity initiative at JHU, which has
 allowed for greater science and engineering staff participation,
 internships, joint programs and events, local middle and high school
 partnerships.



Workforce and Diversity Committee http://www.aura-astronomy.org/diversity STScl Accomplishments 2009-2012

STScI most significant accomplishments, continued

- Ongoing monitoring of all activities by internal groups as well as the STScI Future of the Workplace Committee. Activities include colloquia and symposium speakers, bonuses, promotions, publications, training, culture and climate to ensure equity, broader participation and inclusiveness.
- Targeting use of internships and summer student programs to create ongoing opportunities to engage young people, particularly young women and minorities, in STEM fields. This has resulted in the establishment of some sort of "touchpoint" program or opportunity at every stage of education from middle school to graduate school. We are beginning to see students continue from one stage to another with STScl. We see very diverse participation in these programs.



Workforce and Diversity Committee http://www.aura-astronomy.org/diversity STScI Accomplishments 2009-2012

STScI most significant accomplishments, continued

- Ongoing use of training programs, such as Hard Science/Soft
 Skills to address key culture and climate issues, as well as
 integration of the importance of diversity and inclusion into our
 orientation and the development of a basic management training
 program to improve managerial skills around diversity and
 inclusion in hiring, career development and personnel
 management.
- Improved marketing of family friendly policies and practices.
- expanded presence at conferences and career fairs such as SACNAS, NSBP, NSHP, SWE, SHPE, AAS, etc.



Workforce and Diversity Committee http://www.aura-astronomy.org/diversity STScI Accomplishments 2009-2012

STScI (from Sheryl Bruff)

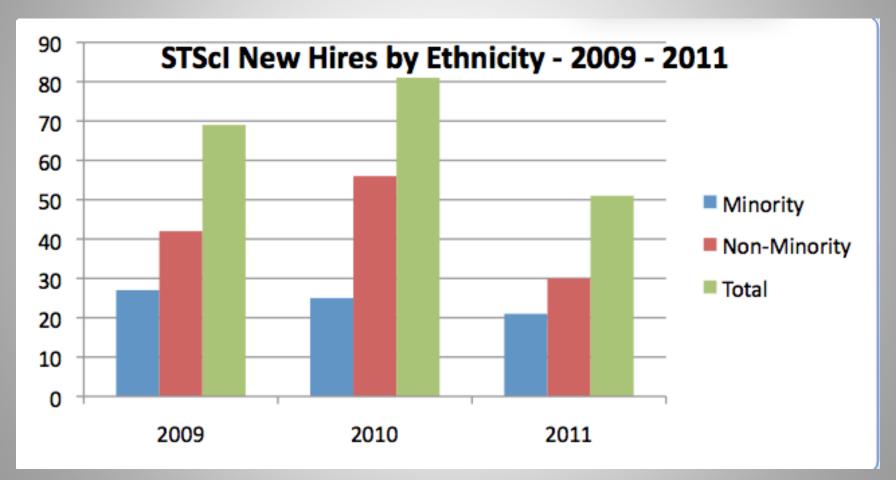
Evolution of STScI Workforce FY06-Present on next slides

It may look as if STScI goes on a hiring binge every year. THIS IS NOT THE CASE. A lot of people come and go in the course of the year because they are here for internships, summer programs, temporary assignments, etc. We have postdocs and grad students coming and going all the time. And a number of new hires are backfilling positions where people may have left. We add some positions net every year, but not like the numbers you see for new hires.

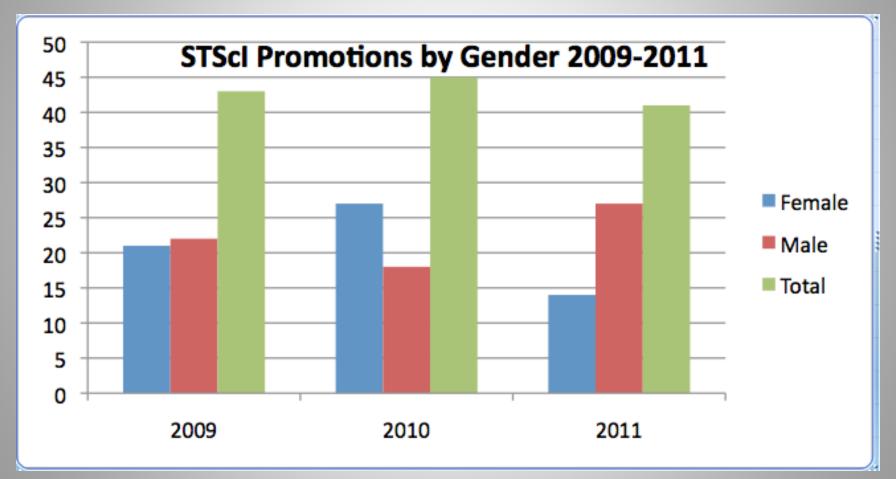
	2009	2010	2011
Women	43	26	18
Men	26	55	33
Total	69	81	51



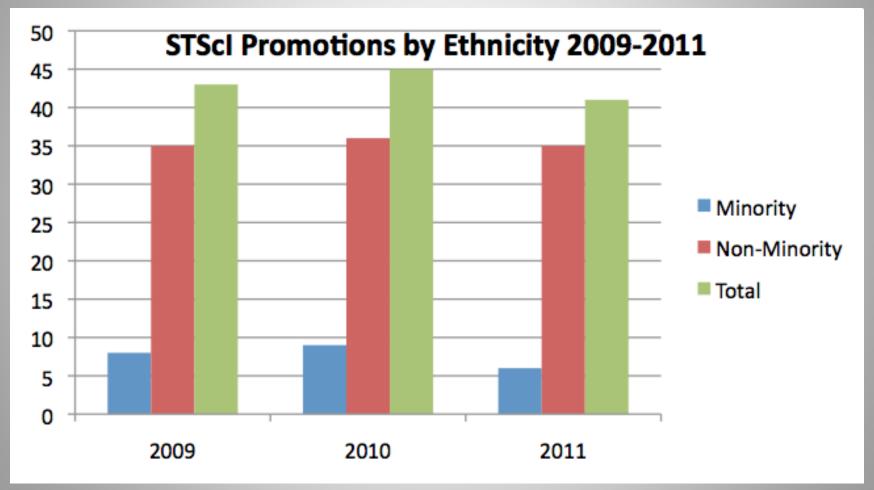
	2009	2010	2011
Minority	27	25	21
Non-Minority	42	56	30
Total	69	81	51



	2009	2010	2011
Women	21	27	14
Men	22	18	27
Total	43	45	41



	2009	2010	2011
Minority	8	9	6
Non-Minority	35	36	35
Total	43	45	41





Workforce and Diversity Committee http://www.aura-astronomy.org/diversity Thanks

Finally, a big thank you to the following:

The 5 Diversity Advocates and 6 Professors and Bill for making this one of my top five favorite committees ever.

Bill ranks equally high as a top administrator new to the diversity business who has pitched in and really led.

And so do the Center directors.

The WDC will miss Katy and Mark.