

## 2003 Report from the Committee on the Status of Women in Astronomy

by Meg Urry

The CSWA continues to publish STATUS (the twice-yearly paper newsletter, co-edited by myself and CSWA member Lisa Frattare, with help from Joannah Hinz and Beth Holmes) and AASWOMEN (the weekly email newsletter, edited by CSWA members Pat Knezek and Michael Rupen, with some help from me), which include up-to-date information on the situation of women in astronomy. We focus on status reports (statistics), evidence of gender bias or influence (e.g., in evaluations, hiring, test performance), and successful efforts to change the status quo (e.g., pro-active hiring strategies, intervention programs for young women, committee studies at various institutions).

Examples of each of these three areas:

- (1) The CSWA is carrying out a new survey of the 36 major astronomical institutions, to get a 2003 update on the 1992 and 1999 data (courtesy of CSWA member Karen Kwitter, assisted by volunteer Jennifer Hoffman).
- (2) A recent STATUS article (2003 January issue, article by Diane Quinn) describes how performance on difficult math tests is strongly affected by local psychological factors rather than math ability; thus the measured differences between girls and boys may well reflect society's expectations and influences rather than their relative abilities to do math.
- (3) At the CSWA session for the 2003 January AAS meeting in Seattle, Dr. Denice Denton, Dean of Engineering at the University of Washington, described UW's very successful efforts to diversify faculty while improving the quality.

These activities demonstrate that change is needed and that it is possible. For many of us, however, the pace of change is too slow. Accordingly, in 2002-2003 the CSWA focused most of its efforts on organizing the second meeting on Women in Astronomy, to be held at the California Institute of Technology, in Pasadena, California, on June 27-28, 2003. This conference, "Women in Astronomy II: Ten Years After," convenes approximately 10 years after the historic first conference on women in astronomy, held in Baltimore in 1992, which gave rise to the Baltimore Charter (<http://oposite.stsci.edu/pubinfo/BaltoCharter.html>).

The purpose of the second conference is to examine how far the profession has progressed, and to identify the next steps. The motivation is not only equity and fairness for women astronomers but also the practical issue of providing the best workforce possible to achieve national goals. Dr. Fran Bagenal from the University of Colorado chairs the Program Committee. Drs. Judy Cohen, Wal Sargent (Caltech), and Barry Madore (Caltech/Carnegie) head the Local Organizing Committee.

Speakers include such nationally known experts on gender and science as Elaine Seymour, Sheila Tobias, Virginia Valian, Denice Denton, and Debra Rolison. The after-dinner speaker is USC law professor Susan Estrich, author of "Sex & Power" (and former campaign manager for presidential candidate Michael Dukakis). Additional details of the program can be found at the meeting web site, <http://www.aas.org/~cswa/WIA2003.html> .

We have obtained financial support from Caltech, the Carnegie Institutions of Washington, the AAS, AURA, AUI, the Research Corporation, and JPL. Proposals are outstanding to NASA, NSF, and the Sloan Foundation. (Proposals were written by CSWA members Meg Urry, David Helfand, and Karen Kwitter.) CSWA member Liliya Williams, with help from members Lisa Frattare and Pat Knezek, will review student and postdoc applications for subsidies to enable their participation in the meeting. We are anticipating an attendance of 300-400 people, mostly astronomers, of whom 1/3 will be students, 1/3 will be postdocs and junior faculty, and 1/3 will be senior faculty and administrators.

Leaders in the field of astronomy and other interested parties are encouraged to attend. **The CSWA strongly believes that it is particularly important for AAS Councillors and Officers to attend this meeting, and to encourage their colleagues to attend.** A meeting poster is also available from the web site; we encourage people to print it out and post it at their institutions.

Registration and information on accommodations are available at the web site. Note that the registration deadline is June 16, 2003, but deadlines for the hotel accommodations vary, and can be as soon as May 26. Please see the web site for information on upcoming deadlines.

## **Women in Astronomy II: Ten Years After**

**June 27-28, 2003**

**Caltech - Pasadena, CA**

**Purpose:** To review the current status of women in astronomy, understand their work environment, assess developments since the 1992 Baltimore conference, and recommend future actions that will improve the environment for all astronomers.

**Online Registration available: deadline June 16**

**Student Support available: deadline May 20**

### **PROGRAM**

#### **SESSION 1: Demographics**

Data and trends: Updates from AAS, NSF, AIP

*Kevin Marvel, AAS Deputy Executive Officer*

*Rachel Ivie, AIP Statistics group*

#### **SESSION 2: Stemming the Leaks in the Pipeline**

- At what stages do women leave science / astronomy and why?
- What works?
- Where can we be effective?
- Lessons from sociological studies (gender bias experiments)
- Lessons from experience in other fields

*Elaine Seymour, U of Colorado*

*Sheila Tobias, author of "They're Not Dumb, They're*

*Different: Stalking the Second Tier"*

#### **SESSION 3: Making Institutional Change**

*Denice Denton, U. Washington*

#### **SESSION 4: Panel Discussion - Institutional Studies/Solutions**

- Similarities/differences, Lessons learned, Implementing changes, Top down vs. grass roots?, Changing the culture

*AURA (TBD\*)*

*NCAR (Michael Knoelker)*

*Caltech (Anneila Sargent)*

*Carnegie (Wendy Freeman)*

*STScI panel (Andrea Dupree)*

*UCLA (Margaret Kivelson)*

*JPL (Charles Elachi)*

*Wisconsin (Bernice Durand)*

**Friday Night After Dinner Speaker**

*Susan Estrich, USC*

*Author of "Sex & Power"*

**SESSION 5: Working Groups - Changing the System**

Breakout Sessions, leading to recommendations for institutions (AAS, NSF, NASA), as well as the broader astronomy community:

- What will change institutions?
- What will change people?
- How can we learn from those outside astronomy?
- What are the programs to apply to / align with that address WIA issues?

**SESSION 6: Diversity**

- Why diversity?
- Similarities/differences WIA vs. other minorities
- Order-of-magnitude (minorities 25% of population, 2-3% of astronomers)
- Lessons learned from CSWA/other organizations
- Outreach to earlier career

*Speakers: TBD*

**SESSION 7: Changing the System, Changing People**

*Virginia Valian, Hunter College*

*Alice Huang, Caltech*

*TBD, industry viewpoint*

**SESSION 8: Plenary - reports from groups / recommendations**

**SESSION 9: Equity and Climate**

- Applying Title IX

*Debra Rolison, NRL*

*Charlotte Fishman, Equal Rights Advocates*

Final program with times and session locations to be added soon.

## Personal Thoughts on the Status of Women in Astronomy

As this is my last report as Chair, and because of the upcoming WiA II meeting, I thought it would be useful to give a personal perspective on the evolving status of women over the preceding decade, and the prospects for the next decade.

There has been considerable progress. Ten years ago, the Women in Astronomy meeting was convened and the Baltimore Charter issued. This generated a growing awareness of the degree to which women still lagged behind men, which led to dramatic improvements in, for example, the number of women Councillors and Officers of the AAS and the number of invited women speakers at AAS meetings. (Table 1 shows some statistics before and after the Baltimore meeting, courtesy of CSWA member David Helfand.)

More generally, the number (and percentage) of women astronomy faculty at US institutions has increased, as shown by my own survey statistics (2000 June STATUS, [www.aas.org/~cswa/pubs.html](http://www.aas.org/~cswa/pubs.html)), which incidentally are the only data that follow the astronomy profession beyond the graduate school level (as opposed to grouping it with physics).

Yet the same data show that the advancement of women continues to lag that of men.

Our profession still has prominent leaders who offer the tired canard that the lack of women reflects a lack of women in the pipeline, or that it stems from the desire of women to leave the profession, or who believe that standards must be lowered if we are to increase the percentage of women. These are demonstrably untrue or misleading, and there are abundant, if diverse, explanations of the differential advancement of women. (Many explanations come from social science research, which is summarized very nicely in Virginia Valian's book, "Why So Slow: The Advancement of Women." Prof. Valian will be speaking at the WiA II meeting.)

Further, the engagement of the senior leadership, who are mostly men, has been spotty. There is sympathy yes, but no concerted action, no commitment of resources and energy. The AAS has made education a clear priority, for compelling reasons, devoting substantial resources and Society attention to this important issue. I believe that the issue of diversity is every bit as compelling, and deserves a similar level of attention. Foundations (e.g., Sloan) and national organizations (e.g., NSF) have aggressively funded programs to increase the presence of women in science, and to investigate the causes of their exclusion. Our colleagues in the European community are addressing this problem at the highest levels, both in the EC and in individual countries.

I would like to see the AAS make diversity a true priority, with staff to collect statistics, to edit and produce STATUS (with help from an editorial board), and to write proposals for further support. Congress is increasingly engaged in this issue

(witness the recent Title IX hearings convened by Sen. Ron Wyden, D-Oregon), and, driven by national security concerns post-9/11, is likely to push hard for greater numbers of US scientists. The largest untapped pool of talent is women.

If we don't change things more drastically than has yet happened, smart women will vote with their feet and go elsewhere. This has already happened in Chemistry, where the percentage of Ph.D. degrees going to women is over 30% yet the percentage of applicants for faculty positions is about 10%. Astronomy has been doing beautifully at attracting young women to the field, graduating an increasing number each year. If we do not intervene more forcefully, however, we will go the way of our Chemistry colleagues, and see these women vanish.

It is important to remember that what goes forward, can go back even more quickly. We have all seen institutional change erased by changes in leadership or even by simple neglect.

Some have suggested that I am too negative. Indeed, there may well be an equal number of positive stories, of success. Yet the fact that in 2003, a female colleague (at a large state-funded institution) can be paid 20% less than a far less qualified, newly hired male colleague, or that she can be told she does not need as much salary because she has a working husband, is shocking.

The CSWA has played an important role in assessing and improving the status of women in astronomy. The twice-yearly newsletter STATUS presents influential articles from the national literature on women in male-dominated fields. The weekly AASWOMEN email provides a forum for information exchange and for stimulating ideas. The CSWA web site highlights relevant information and links, including a searchable database of women in astronomy. These services are possible only because of the enormous contributions of my remarkable colleagues on the CSWA, Neal Evans, Lisa Frattare, David Helfand, Pat Knezek, Karen Kwitter, Michael Rupen, Amy Simon-Miller and Liliya Williams. They have, to a man (I couldn't resist), and despite incredibly demanding schedules, volunteered freely of their time and energy to better the situation for women in astronomy. It has been an enormous pleasure and a privilege to work with them, and with the members who have served in previous years --- they are the ones who have made the CSWA a productive and effective committee.

Meg Urry  
New Haven, May 2003

Table 1. Progress for Women Since the Baltimore Charter

Dates	AAS Pres.	AAS VPs	AAS Council	Russell	Pierce	Notes
1950-1970	1/15	2/33	10/91	1/30	0/6	
1980-1991	0/7	2/13	10/38	1/12	2/13	12 yrs pre-Baltimore
Totals	1/22	4/46	20/129	2/42	2/19	
<b>Percent</b>	<b>4.5%</b>	<b>8.7%</b>	<b>15.5%</b>	<b>4.8%</b>	<b>10.5%</b>	
1992-2003	4/6	3/11	13/34	1/12	3/10	12 yrs post-Baltimore
<b>Percent</b>	<b>67%</b>	<b>27%</b>	<b>38%</b>	<b>8%</b>	<b>30%</b>	