

Report of the CfA Gender Equity Committee (CGEC)

February 2007

EXECUTIVE SUMMARY

This report summarizes the final findings and recommendations of the Center for Astrophysics (CfA) Gender Equity Committee (CGEC). The CGEC was appointed by former CfA Director Irwin Shapiro in 2002, to assess gender equity in all of the categories of CfA employment. Since 2004, CGEC activities have been supported by Director Charles Alcock. The CfA, based in Cambridge Massachusetts, is a combined institution composed of the Smithsonian Astrophysical Observatory (SAO), the Harvard College Observatory (HCO), and the Harvard Department of Astronomy. With an overall employee and associate base of about 950 individuals, the CfA is one of the largest astrophysical institutions in the world.

The findings of the CGEC are based on the committee's assessment of CfA employee demographics, solicited and unsolicited input from employees, and three independent studies: a web survey of the entire CfA employee population; confidential interviews of a randomly selected, statistically representative, sample of employees; and a statistical analysis of the institutional records of the SAO, which is the largest component of the CfA.

The CGEC finds that even though the CfA has a larger fraction of women postdocs (including those in prestigious named post-doctoral fellowships) than in nationwide statistics, overall the CfA lags behind the national statistics--which themselves need to improve--in the percentages of staff and faculty women scientists, both tenured and non-tenured. At SAO, for example, of the 22 Federal (tenured) scientists hired since 1991, there were 21 men and only one woman (hired in 2003). Women engineers are also nearly absent from the SAO Central Engineering Department. Women are virtually absent from the senior ranks of administrative positions, and hold only a minority of the senior IT positions.

The CGEC study revealed a consistent woman-adverse bias at the CfA. In all areas where a gender gap was detected (e.g., wages/salaries, space allocation, upward mobility), women were generally in a worse position than men. The survey of allotted workspace showed that on average women have smaller office spaces than men, a result echoing that found in gender equity surveys in other institutions. Similarly, a woman-adverse gap is found in rank/salaries. This gap--albeit small--would still result in significant differences in earnings over a career in favor of men. All the discrepancies found in the study, although small, tend to disfavor women.

The analysis of publication rates and citation indices for scientists revealed gender-related differences suggesting that women scientists, especially junior women, tend to collaborate less than their male colleagues. Interestingly, senior women scientists, while having a slightly smaller publication rate compared to the senior men, surpass

senior male scientists in citations per paper. A larger percentage of women scientists than men obtain external funding at SAO, but the few large contracts are male-dominated. This result may point to a higher level of entrepreneurship among women, but can also be explained by a sense of isolation. Since most SAO scientists work in mid to large size projects, if male scientists feel part of the team (and women do not), they are less motivated than women to apply for funding.

The web survey and interviews confirmed symptoms of gender imbalance in the perceptions of CfA employees. In particular, concerns were expressed about the lack of upward mobility for women, unwritten rules favoring male employees, lack of adequate mentoring, unfriendly culture and male cliques, lack of management training for SAO supervisors, the SAO performance evaluation process, and the need for more family-friendly procedures at the institution.

A detailed set of recommendations to move the CfA towards gender equality is given in Sections 1.2 through 1.5.

The CGEC feels strongly that a leadership and institutional commitment to gender equity in the CfA workplace is paramount. Without an explicit commitment to these goals by the Director, gender equity will languish. If we are serious about gender equity, we will need to re-think how we hire, reward, and promote CfA employees; and how we attract and further the career development of high-quality individuals.

We recommend that the CfA Director establish an independent mechanism to monitor equity. This could be achieved by creating a small standing committee chaired by a senior staff member of the CfA, which includes both science and non-science representatives. We also recommend that the Director, in conjunction with this independent equity committee, establish a system of incentives towards achieving equity.

Noting the difficulty in obtaining institutional data for the Gender Equity study, the CGEC recommends that *the CfA Director institute the means for pursuing an ongoing longitudinal monitoring of the entire CfA population*, to compare the career trajectories of different groups at the CfA and to investigate the issue of the disproportionately small number of women in high level positions; and that these statistics should be provided annually to the equity monitoring committee. We further recommend that the longitudinal record study be used to monitor other aspects of equity such as race, ethnic biases, and disabilities; and that for each new position, statistics should be provided annually to the equity monitoring committee on the gender of the applicants, and the gender fraction at each step of the hiring process. We recommend that full longitudinal studies (similar to those conducted by the CGEC), be performed at 3 year intervals to provide reports for the CfA Visiting Committee.

The CGEC recommends that *the CfA take steps to redress the gender biases uncovered in the present study*, and that as steps to accomplish this the Director

ensure that women are members of all the CfA governing bodies and all committees, including promotion and hiring committees; the CfA address the issue of lack of upward mobility for women employees; and the CfA develop formal mentoring programs.

In the course of our investigations, a broader range of issues than gender equity surfaced. The CGEC recommends that *the CfA improve communications and existing processes*. In particular, we recommend that the CfA set up effective information sources and communication paths for job-related issues that may affect gender equity; that SAO enforce training for supervisors; that the CfA revise the performance evaluation process; and that the CfA review its Ombudsperson and EEOC counselor programs.

In addition, the CGEC recommends that the *CfA improve its social and working environment*, by addressing and changing the present unfriendly culture for *all* women, and taking steps to facilitate family care processes for employees.

Focusing on scientists, the CGEC recommends that SAO and Harvard both strive to achieve gender equity among scientists and faculty; that future CfA Gender Equity studies include graduate students and post-doctoral fellows; and that Gender Balance be a consideration in the choice of speakers and chair-persons at CfA colloquia.

Focusing on the technical staff, the CGEC recommends that SAO address the paucity of women in Central Engineering, and the scarcity of women in IT positions at the higher grades.

Focusing on the administrative and support staff, the CGEC recommends that SAO address the scarcity of women in senior administrative positions, and that all scientists, men and women, be made aware of the necessity to engage in respectful behavior in their interactions with administrative and support staff.

