

*Bernadette Rodgers, Inger Jørgensen, Neil Barker, Michelle Edwards, Gelys Trancho*

Gemini Observatory has been very successful at attracting, hiring and retaining female Scientists. We present data on the growth of the scientific staff since the start of the Observatory, and science fellow recruiting from 2006-2008. At Gemini 31% of the science staff holding PhDs are female compared with 13.9% [2000 US Census] within the United States. The Science Management is 75% female, as is 50% of the Gemini Directorate. This critical mass of female representation within the science staff and management appears to have had a positive effect on female recruitment and hiring; in 2006-8, 21-38% of science fellow applicants were female and 57% of new hires during this period were women scientists. Perhaps even more significant, the retention rate of female science staff at Gemini is 88%, compared to 64% for male science staff. There are likely many factors contributing to this success, but we conclude that **Gemini is a place where female scientists are valued and can be successful.**



## Gemini Science Staff

Gemini has had female PhD scientists since the beginning of science operations, and has consistently maintained a fraction of female PhDs between 25 and 35% (fig. 1). This is well above the percentage of female astronomy PhDs in the US (19.1% [US Census 2000]). It is likely that the relative youth of the organization is the primary reason for this—nearly all of the staff have been hired in the last 10 years, during which the percentage of females among new PhDs has grown from ~20 to 29% [NSF]. Starting from scratch, Gemini has been able to tap into a diverse and more gender-balanced labor pool. Our international partnership also contributes to the diversity of our workforce. As an example, Gemini has just 4 tenured staff with 2 women, compared to 18 tenured faculty with 2 women at NOAO. It's also likely that the presence of women science staff, and managers, contributes to continued growth and retention, simply by providing a visible female presence and a clear signal that women scientists can and do advance at Gemini.

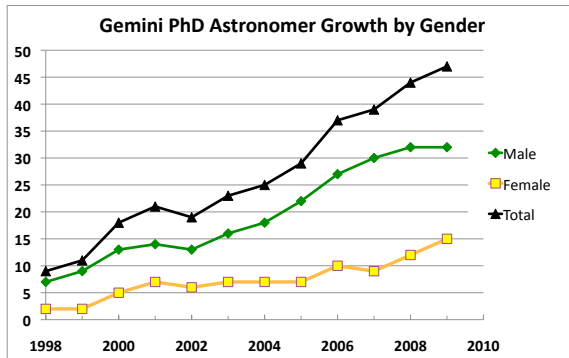


Fig. 1: Number of PhD Astronomers on staff by year and gender

## Female Management

Women are present at all levels of the Gemini science staff. There are women science fellows, scientists, tenure-track and tenured astronomers, supervisors, and managers. Most of the senior positions, including the Heads of Science at both telescopes, were internal promotions based on performance and ability. In August 2009, Nancy Levenson joined Gemini as Deputy Director, further increasing the female representation in the Gemini leadership.

## Recruiting and Hiring

The Gemini hiring process selects the best person for a job, independent of gender, race, age, etc. The percentage of female Science Fellow applicants in 2006-2007 was slightly lower, but consistent with, the gender ratio of new US PhDs (28% female in 2006 [NSF]), as would be expected for this entry level position. But in 2008, we saw a significant increase in female applicants (fig. 2). Without polling the applicants, it is impossible to know if the female staff presence was a factor in this increase. In an informal survey of current women astronomers on staff, none cited gender as a primary factor in applying or selecting Gemini. However, when asked, 3 out of 9 hired since 2005 agreed that it was a positive factor in their decision, whereas none of the 6 staff that started before 2005 felt this way. The bottom circle in Fig. 2 shows that more than half of the hired science fellows over the same period were female (4 of 7 total). All of these selection committees included male and female members.

## Retention

The 31% female science staff is not only due to hiring, but also to retention. **There is no "leaky pipeline" at Gemini.** The retention rate of female science staff is 88%, compared to 64% for male science staff. Every female PhD scientist hired in 2005 or before has been promoted (some more than once). Among the women PhD scientists interviewed, the majority (73%) cited the presence of many women science staff as a positive factor in working at Gemini, and 87% either have already been at Gemini for several years, or stated that they could see themselves staying for a long time. When asked, several listed common gender-related concerns that remain—in Astronomy as a whole, such as family issues due to shift and travel schedules, or at Gemini in particular, most notably the lack of female engineers (see left). Still, the majority of the comments were positive, e.g.,

"I like that...it's not unusual to have more than one woman in a meeting"  
*"It takes all kinds to do a good job...Different genders and personalities working together get the best results."*

*"The balance is good, and makes me feel more comfortable."*  
**"The large number of women here creates a supportive environment."**

*"I like to see women in manager positions....[some] male staff complain that women are treated so well at Gemini."*

### References and Acknowledgements:

The authors thank the staff that agreed to be interviewed for this poster. Statistics were taken from the US census, and NSF and AIP web pages; number of tenured NOAO staff from NOAO staff web pages. "Diversifying the next generation of astronomers..." by A. Nota et al (a 2010 Decadal Survey position paper) provided additional background and insight. Pictured around the border are all female science staff at Gemini, both PhD astronomers (15) and non-PhD staff (5).

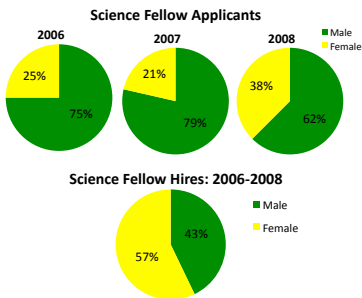
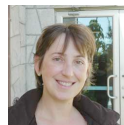


Fig. 2: Science fellow applicants and hires by gender, 2006-2008

### More to do...

While the percentage of women among science staff is well above the national average, female engineers are under-represented at Gemini. They make up just 4.3% of the engineers on staff compared to 7.5% in the US overall, and none of the engineering managers are female. Fig. 3 shows a breakdown of all Gemini staff by gender.

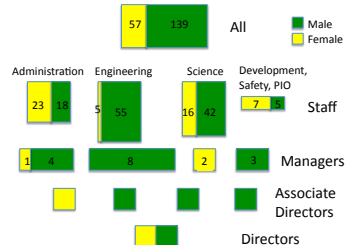


Fig. 3 Gemini Staff by gender & division. Boxes in each row are sized by total staff represented in that row.