

Report of the Astronomy Chair Search Committee

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1. Process

The entire committee met with Divisional Dean Ron Irving on November 4, 2005 to discuss the charge and some of the issues facing the Astronomy Department. On January 10, 2006 the external committee members Paula Heron and Werner Stuetzle met with current Astronomy Chair Bruce Balick to hear his views on the state of the Department. He also provided written materials, such as the most recent 10-year self-study.

On January 17 - 20 Paula Heron and Werner Stuetzle interviewed many of the members of the Astronomy Department as well as selected Physics faculty, asking two main questions: “What are the major challenges facing the Department?” and “Who is best qualified to lead the Department in the next five years?” (See the Appendix for a list of interviews.) These interviews were preceded by a meeting of the entire committee, during which Julianne Dalcanton presented her view of the Department in general and of the personnel situation in particular.

The report was written by Paula Heron and Werner Stuetzle; Julianne Dalcanton provided comments on Sections 1-3.

2. Challenges facing the Department

Since 2000 the Department has lost four of its most visible and productive senior faculty members (Paul Hodge, George Lake, Bruce Margon, Chris Stubbs) to departure or retirement. In addition, Craig Hogan moved on to administrative positions, and the effect of his return to teaching and research will take some time to be felt. *Overcoming this “brain drain” and successfully navigating the resulting generational transition clearly is the main challenge.* The hire and subsequent promotion of Zeljko Ivezic and the switch of Suzanne Hawley and Scott Anderson to 50% state support were steps in the right direction. The strategic plan of the Department enjoys uniform and strong support. Nevertheless, the situation remains precarious:

- The future fortunes of the Department rest to a large extent on a nucleus of five faculty members: Scott Anderson, Julianne Dalcanton, Suzanne Hawley, Zeljko Ivezic, and Tom Quinn.
- Of these five, Anderson and Hawley are only on 50% state support, which does not adequately reflect their contributions to the teaching, advising, and administrative functions of the Department.
- The role of Zeljko Ivesic as Project Scientist for LSST holds great future promise for the Department, but it also means that he will have to travel frequently and will have less time for local responsibilities.

- A significant part of Suzanne Hawley's effort is dedicated to her work as Director of the Apache Point Observatory.

The highly active faculty mentioned above are stretched very thin. It is essential that no further shrinkage of this nucleus occurs. However maintaining the current strength is not adequate; new faculty who can share the load and contribute to the long-range goals of the department must be hired.

Two steps are critical in the very near term:

- *Recruit a Chair with vision, political savvy, and administrative skills.* Appointment of a caretaker will not do: it would be demoralizing to faculty and graduate students and would almost certainly lead to further faculty departures.
- *Wrap up the Andy Connolly hire.* Given the stage of his career he could immediately join the nucleus and take over part of the load in advising, grant writing, and administration. He would add a new dimension to the Department, and his potential role in the University extends beyond the Astronomy Department.

These steps may be expensive. However, at the current time the Department still basks in the glow of a great past, which is invaluable when it comes to student and faculty recruiting. Once the glow is gone, then the costs of rebuilding may well be prohibitive.

There were a number of other issues that were raised in more than one interview but did not carry the same sense of urgency as those outlined above:

- There will be a gap between the end of the SDSS2 and the projected point at which data will be available from the LSST. The Department needs to consider carefully how to bridge this gap especially in regard to graduate student training.
- The relationship with Physics is not as strong as it could/should be. Recent hires (Rosenberg in physics, Agol in Astronomy) are steps in the right direction, as is the expected return to an active research program by Craig Hogan.
- Support for computing is dangerously inadequate. Data have been lost and graduate students have experienced significant downtime. Serious delays in the installation of specialized software have also harmed research efforts. There was concern that the current structure shared with Physics is not sensitive to Astronomy's needs. A great deal of local support has been supplied by a staff member in Tom Quinn's group. The possible departure of this resource will further weaken computing in the Department.
- Some of the postdocs feel that while their individual research efforts are well supported, they could be better integrated into the Department. They cited a significant difference between how they are welcomed and involved and how graduate students are welcomed and involved.
- The availability of RA funds for graduate students, coupled with over-enrollment of undergraduate courses (both obviously good for the Department) has caused an ongoing shortage of well-qualified teaching assistants.
- The cost / benefit ratio of the Qualifying Exam was questioned by some students.

3. Qualities needed in the next Chair

- The ability to work effectively with College and University administration to recruit new faculty and retain current faculty.
- The ability to work effectively with the Physics Department both to advance mutual research interests and to ensure that the computing needs of the Astronomy Department are met.
- The ability to work with staff to ensure that they are given challenging assignments and supported in doing those assignments effectively, and to ensure that any issues regarding relations among staff members and between staff and faculty are dealt with in a timely manner.
- Willingness to advocate for and support initiatives brought by students, staff, and faculty.

Appendix: Interview schedule

Astronomy Department

- *Regular Faculty*: Eric Agol, Scott Anderson, Bruce Balick, Julianne Dalcanton, Suzanne Hawley, Craig Hogan, Zeljko Ivezic, Tom Quinn, Paula Szkody.
- *Research Faculty*: Julie Lutz .
- *Emeritus Faculty*: Paul Hodge, George Wallerstein, Ivan King.
- *Graduate Students*: Marcel Aqueros, John Bochanski, Jill Meyer, presenting the consensus views of all the students (group meeting).
- *Postdocs*: Andrew Becker, Nicole Silvestri, Christopher Laws (group meeting).
- *Technical Staff*: Larry Carey, Mike Evans, Russ Owen (group meeting).
- *Office staff*: Pat Taylor, Sarah Sterr(group meeting).
- *Department Administrator*: Stan Vlcek

Physics Department:

- David Boulware, Wick Haxton, Ann Nelson