

# Research Funding for Graduate Students

Research Funding for graduate students in the Yale Astronomy Department DRAFT 1-22-09

Most research expenses for graduate students (travel, publications, etc) are normally covered by grant funding from the faculty advisor. However in a student's first 2 years, before students start on their PhD, such funding is generally less available. Also, faculty may not always have an appropriate grant for a particular expense. Happily, the Astronomy Department has a number of other funding sources for graduate student research expenses.

Additional research funding sources available to graduate students:

1. Graduate Research Accounts (Garfinkel Fund) (\$1.5-2K plus supplements for department service)
2. Graduate Computer Accounts (Newton Fund/GA)(\$3K every 3 years for purchase of computer)
3. Butler Fund for publication charges (Butler Fund)
4. Tinsley Fund (up to \$2K in research expenses for best student proposals) (Tinsley/Newton fund)
5. Special requests to dept chair (Newton Fund/GA)

Funding sources (1-4) should be mentioned in acceptance letters to prospective graduate students.

Announcing the Garfinkel research funds for graduate students! (#1 above)

The intention of these funds is to give students their own flexible research accounts which they control. We imagine the main use will be for travel to scientific meetings. Attending such meetings can be valuable at all stages of one's graduate career, including within the first 2 years while students are exploring possible PhD research projects.

Here are the key details of the Garfinkel research funds:

- 1a. All new incoming students will receive \$2K for their first 2 years.
- 1b. All current students will get \$1.5K each.

(This will cost \$29K for the 19 current students, which will leave an additional \$6K in the Garfinkel account for service.)

2. The Garfinkel research funds are for research-related expenses, including: -- travel to scientific meetings -- travel for observing -- computer equipment (additional expenses beyond that covered by

normal grad student computer program) -- other uses, if approved by the chair

3. Students can earn additional research funds, up to \$1K per year, in years 3-6(?), for "department & community service", including: -- public outreach, including events at the Leitner Observatory & Planetarium -- instrument commissioning or testing for WIYN -- website maintenance or development -- computer support

4. The maximum to be awarded to any one student each year for service is \$1000. Above some maximum there will be no additional award, since we don't want incentives to spend TOO much time on non-research activities. Awards will be made in increments of \$250. The total amount awarded will depend on the availability of the Garfinkel funds.

5. Awards will be based on approximate number of hours spent on service activity. The program coordinator will determine the actual credit for all activities.

6. Prof. Marla Geha (in consultation with the Chair and the Student Observatory Director) will initially be the program coordinator in charge of the service part of the program.

7. We will set up separate accounts for each student. (If the funds are deducted from the Garfinkel account, the Yale administrators will see that the funds are being used and will give us the full payout.)

8. Any funds not used by the student before they leave Yale reverts to the Astronomy Department.

-----  
List of possible outreach & service opportunities, with credit units attached.

These serve as examples, there are other possibilities. The credit for the activities listed here is only a rough guide. The program coordinator will determine the actual credit for all activities.

1 unit = 5 hours work = \$250 in research funding. Maximum of 4 units = 20 hours work = \$1000 per year.

**\*\*Department service activities:**

5 hours of website maintenance = 1 unit  
1 night of instrument commissioning @ WIYN = 2 units

**\*\*Outreach activities:**

Giving a "First Tuesday" public lecture at the observatory = 1 unit

Presenting 3 of the Tuesday public planetarium shows (live show + full-dome show + Q&A) = 1 unit

Helping out with 3 of the public observing sessions on clear nights (i.e., staffing one of the telescopes during a public night, pointing at objects and taking questions for about 1.5 hours on a Tuesday night).

Coordinating the public observing nights for a semester and setting up the scopes for public night (what Rachel and Tomer are doing now) = 2 units per semester

Helping out with 3 of our public school visits (either a "pre-visit" to a school or a bus visit to the planetarium during the day) = 1 unit

Working on video, images, scripting, etc. for a new planetarium show = 2-4 units

Helping out with 3 of our IYA "sidewalk astronomy" events over the course of a year (when we set up telescopes on central campus or on the green on a clear night) = 1 unit

Developing content for the stereoscopic projector in the lobby of the planetarium: 1-2 units

last updated: 5/11/09 nw