

## Resources for Astronomy Graduate Students September 26, 2007

- 1) Offices: you need a place to sit. See the Grad Space Czar Bulent Kiziltan (ISB 291) if you have not already found your spot. Key forms are in your mailboxes in ISB 260. Fill them out and hand them in where instructed (note: not in this building).
- 2) A computer keyboard and monitor are installed on your desk. You are connected by a "Thin Client" to the central Astronomy computer, called "Astro" where an account has been set up for you. As soon as possible, log in and make sure that your account is up and running. If not, contact Ramon Berger (see below).

First- and (some second-) year students use the "astro network." Older grads with research supervisors to pay their research expenses are on the separate UCO/Lick network. Somewhat more flexible and more powerful computing is available on the Lick network, so it is advantageous to get switched over as soon as possible. Most students achieve this (by finding a faculty research supervisor who will pay their Lick computer bills), early in their second year if not before.

- 3) The astro network has a basic set of computer tools and astronomical software. The person in charge of Astro and its software is Ramon Berger ([berger@scipp.ucsc.edu](mailto:berger@scipp.ucsc.edu); 9-3866). Ramon is incredibly helpful, but he has 600 computers to look after in several departments, not just Astronomy. If you have trouble, send him an email message, but only after you've asked some locals first about how to solve your problem. The grads also have a Compute Czar (listed on the grad student committee list) to help you.
- 4) Have your mail forwarded from your UCSC mailbox to your email address on astro ([accountname@astro.ucsc.edu](mailto:accountname@astro.ucsc.edu)). The University sends official notices to your UCSC mailbox and you won't get them automatically unless you have your mail forwarded. Ask a resident grad how to do this.
- 5) You have an assigned faculty advisor. In addition, you have access to the Graduate Advising Committee, a faculty committee in charge of advising all first-year students and any second-year students who have not yet found research supervisors. Members of the Grad Advising Committee are Raja Guha Thakurta (chair), Graeme Smith, Steven Vogt, and Connie Rockosi. We urge you to go say hello right away to your faculty advisor and strike up a regular relationship in which you call on this person frequently throughout your first year. This person will be your advisor until you find your first real research project, at which point your funding,

advising, and computer support will switch to your research supervisor.

Each student (in every year) is required to meet at least once a quarter with his or her advisor and fill out a progress form, which is submitted to the Department office. The form is visible on the Astronomy "Grads" webpage.

- 6) You need access to journals and to Astro-ph (the astronomy preprint server): when you log into these via the Web on campus, you automatically use the UCSC site licenses for ApJ, MN, etc. If you log in from home, you can see only back issues unless you implement a special procedure called a UCSC Proxy server, which uses your web browser. You need to have your student ID activated at the Library for this. Astro-ph does not require a license and is visible from any site. You can get a library card to use the volumes in the library. The Science Library is right next door to ISB. Be sure to bring your student ID (needs to be activated first).
- 7) When you have caught your breath, please get started on writing your own web page. Get in the habit of posting interesting information about your research there as time goes on. Start keeping a CV (curriculum vitae) and post it on this page (you will need a CV to apply for jobs soon anyway and possibly for other fellowship and support applications while in grad school). A professional-looking webpage is getting to be de rigueur for serious astronomers. Look at web pages by other astronomers to get ideas. The grads are working to create a beginning webpage template to help you, if needed.
- 8) You need intellectual stimulation beyond your coursework:
  - For this we have on average at least two weekly talks, the Colloquium on Wed afternoons and the Friday Lunchtime Astrophysics Seminars (FLASHs) at 12:30 on Fridays. You are strongly urged to attend BOTH.
  - Funds are available to help you go to dinner with the Colloquium speaker. The time and location for dinner are announced at the Colloquium. Announce yourself to the Colloquium host or send an email to that person beforehand (hosts are listed on the Colloquium web page).
  - Grad students also take the Colloquium speaker to lunch on Wednesdays at the University Center. The Department treats you to lunch. The food is good!
  - People meet for coffee daily in CfAO at 11 AM during the quarter. Go there to hobnob and get answers to questions that have been bugging you. Tuesdays are run by the graduate students and are devoted to discussing the work of the Colloquium speaker of the following day. Get questions and material here for a lively discussion with the speaker at lunch the next day. Thursdays are a Journal Club run by the post-docs.
  - Other research groups meet weekly, as shown on the Astronomy

Department Google calendar (see button on our homepage). Examples include the Cosmo cosmology seminar, the GLAST seminar, and the planet/solar system seminar. These meetings are important if in your future field.

- 9) To get involved in research as soon as possible, we require that all students complete a First Year Project within the first two years. A talk on your project is due by the end of the second year, which you will give at one of the FLASH seminars. You may well manage to complete more than one project, which is terrific, but one is the minimum. In addition to the talk, you should also plan to write the project up as a published paper--not publishing a good project is a terrible wasted opportunity to add to your publication record.

To help you find a topic, the faculty have prepared a list of sample research projects, which is available in the Department office. They will also be describing these projects in more detail in their lecture in Ay 205. Please speak ASAP to faculty with projects that might interest you. Relevant questions to ask are: how much work is involved (you want to be sure to finish and write a paper in the first two years), whether this research might lead to a thesis, what funding is available to support your salary (including summer salary and salary for the second year), and whether thesis funding might also be available. Faculty use research projects as a gauge for choosing thesis advisees, so a strong performance is very important. This is your chance to impress potential thesis advisors.

In addition to the list of First Year Projects, there are other resources for research:

\* A general overview of research being done in the Department and affiliated units is given on the Department webpage (<http://www.astro.ucsc.edu>) and in the Department Self-Study (<http://www.astro.ucsc.edu/externalreview>).

\* Certain courses include a research project as part of the work. We are making an effort to coordinate these better this year so that you will be able to continue work on a project that you have started in a previous course. If you have any problem coordinating research projects with class work, please contact Sandy or Raja.

\* Ay205 is given in Fall Quarter. Faculty will be coming to tell you about their research and will describe in more detail the research projects that they have listed on the Department web page.

\* The fall Astronomy Research Social is scheduled for October 10 at 3:30 in ISB Room 102. The ostensible purpose is to connect undergraduates seeking Senior Thesis topics with faculty advisors, but this is also a good opportunity for you to quickly scan what research is being done in the department and what the opportunities are.

10) In addition to research opportunities in the Astronomy Department, you also have access to research in the Physics, Earth and Planetary Sciences, and Applied Math and Statistics departments. Read the faculty profiles of these departments in the UCSC Catalog to find out more and visit the departmental websites. Our affiliated faculty are listed on the People Directory of the Department webpage.

The Center for Adaptive Optics and the UCO/Lick Observing shops are additional venues for research, especially for instrumentation projects.

11) Ergonomics: The Astronomy and Astrophysics Department takes the health and welfare of its graduate students seriously. The campus and department have a preventative program for potential ergonomic injuries. Included in your information packet is a computer workstation ergonomic self-evaluation document. Please take this self evaluation, complete the checklist and return it to Sissy Madden by Friday, October 5. The department willwork with Physical and Biological Sciences Facilities Office to ensure that you have the proper computer set-up to prevent ergonomic injuries.

12) Basic info:  
The Astronomy Department has a new web page where you will find lots of information. If you cannot find your answer there, please let us know so we can add it. The most relevant section is called "Graduate":

<http://www.astro.ucsc.edu/graduate/index.html>

which has the subpage " Information for New & Prospective Graduate Students":

<http://www.astro.ucsc.edu/graduate/newgrad.html>

Among other things, the grad students have written an informal survival guide for the Department, UCSC, and Santa Cruz. We try to keep this information up to date but in case of any discrepancies with the official Department information, the latter is binding.

There is also information here about applying for fellowship and other forms of financial support. Your advisors will be pushing you to take advantage of as much outside support as you can muster.

- 13) Useful websites: the following by no means exhausts all the information that you can find on the web. However, these are sites you should be aware of that provide useful resources:

AAS Job Register;

<http://members.aas.org/JobReg/JobRegister.cfm>

CADC International Conference List;

<http://www2.cadc-ccda.hia-ihp.nrc-cnrc.gc.ca/meetings/>

Rumor Mill;

<http://cdm.berkeley.edu/doku.php?id=astrophysicsjobs>

Cornell Fellowship Database (comprehensive for grad fellowships; also includes postdocs);

<http://www.gradschool.cornell.edu/?p=132>

UCSC Astronomy Fellowships List (very old; could be useful if updated)

<http://www.ucolick.org/~board/grad/fwatch.html>

AAS travel grants:

<http://www.aas.org/grants/itg.php>

All best wishes for a delightful and productive stay at UCSC!