APC Graduate Student Survey – 2023

Dear Grads,

Thank you for taking the time to fill out this survey. The goal of the annual APC survey is to check in with all students to help ensure you are successfully progressing towards your degree and identify any hurdles that we can help you overcome. The information you provide is confidential within the APC committee and will not be shared directly with your advisor. Note that while not every student will be contacted by the APC directly about their responses, we read them all. We use your responses to help improve your individual experiences and our program as a whole. Please answer all of the starred questions. Use as much space as you need for the open ended ones. Non-starred questions are optional, but answers are encouraged to help us evaluate our program.

1. \*Name

Brock Parker

1. \*What year did you arrive at Steward?

Fall 2023

1. \*Who is/are your research advisor(s)?

Erika Hamden

1. \*Who are the members of your mentoring/thesis committee?

Erika Hamden, Jared Males, Eiichi Egami

1. \*What month/year did you last have a committee meeting? If you have a meeting scheduled, when will it be? **If you have not had a meeting yet this semester, please schedule one ASAP**

10/2023

1. \*Please indicate which of these milestones you have completed:

Written Prelim

All required coursework completed

Oral Prelim

Thesis plan submitted

1. \*How many semesters have you TA'd in your time here (please list the courses, semesters, and professors)? Did you have the opportunity to lecture or otherwise teach (in class, labs, or break-out sessions)? Are there any training/learning opportunities that you want but have not yet gotten while teaching?

I have not TA'd any classes yet, and have not had the opportunity to so far. However, I am very intersted in TA'ing (once classes are over) and excited to learn how to teach. Specifically, I'm interesting in making connections to people outside of STEM in attention-grabbing ways that are approachable while still being informative, with the hope of recruiting more people, specifically underrepresented minorities, into STEM. Additionally, I am interesting in learning effective teaching techniques for STEM topcis, especially methods that are effective for all types of learners.

1. \*List here all publications, including conference proceedings, during the past year only (noting those submitted/accepted/published in refereed journals with an "\*").

No publications or conference proceedings while at Steward. While at Wyoming:

[1]Parker, B., Zhu, C., Qiu, J., and Longcope, D., “Energy Release Process in the 2021 October 28 X1.0 Flare”, vol. 2022, 2022.

[2]Parker, B., Gardner, C., and Kobulnicky, H., “Simultaneous Transmission Spectroscopy of HD 189733b and KELT-9b from Wyoming Infrared Observatory and Red Buttes Observatory”, vol. 55, no. 2, 2023.

1. \*List any fellowships, scholarships, or awards you have received this year.

None.

1. List any duties you have within the Department or any other contributions you have made to the Department or the Observatory.

None so far.

1. \*How are you being supported this year? How were you supported last summer?

So far I have been supported through the guaranteed first semester funding through Steward. I will be transitioning to Erika Hamden's skipper CCD grant (funding source unknown currently) sometime this semester, and suspect to be supported with that same grant next summer.

1. \*Briefly describe the status of your research work.   
   If you have not completed your oral prelim, please briefly describe the expected timeline.  
   If you have completed your prelims, please describe your status relative to your thesis plan.  
   If this is your 5th year or more, please give your estimated Ph.D. completion date.

Currenly I am focused on familiarizing myself with the protocols and proceedures for CCD classification and fabrication in anticipation of the arrival of a skipper CCD. As this is my first semester of research, no research milestones have been reached. Currenly, I will plan to complete my oral prelim after the first paper, which is suspected to be done the end of my second year, placing the oral prelim likely the first semester of my third year. All other dates and timelines are unknown.

1. \*Write a brief (~1 paragraph) evaluation of your progress in the past year and your expectations for the next year

In the last year little progress has been made towards my research, as I have only been pursuing it for the last few months. Within that time, however, progress has been slow, as this is a completely new field to me and there is much to learn. Within the next year, I expect to have successfully constructed a new vacuum dewar for the arriving skipper CCD. With this dewar, I expect to have completed interfacing with the CCD and optimization of CCD readout parameters to minimize sources of noise, such as clock induced charge, readout noise, and dark noise. Successful calibration of this CCD will likely result in a paper in years following, however it is unlikely any on-sky data will be taken within the next year.

1. Have you been able to overcome any direct COVID-related impacts to your research program? Examples include telescope closures that prevented your observations, laboratory closures that delayed your work, cancelation of important proposal calls, cancelation of conferences. Is there anything the department could do now to help get you back on track if you feel that you are not?

No COVID-related effects have been apparent or present in my current research.

1. \*Please comment on your experience with meetings pertaining to your research. How often are you participating in individual and/or group research meetings? Are you meeting with collaborators other than your advisor? Are you satisfied with the number and quality of these meetings?

Currently, I am meeting once every other week with my advisor, Erika Hamden, for approximately half an hour. These have been mostly informal, as I have yet to progress beyond literature review and basic tasks. Outside of this, I am meeting once a week for an hour with a 4th year grad student, Aafaque Khan, to go over specifics regarding CCD operations. These meetings are where I have learned most of what I need to know, and are incredibly useful as Erika is often occupied. Additionally, a larger group has been meeting every other week to discuss recent events and papers surrounding research of the circumgalactic medium. Additionally in these meetings is individual research checkups, offering a place for advice and support. Overall, while I feel that research has been slow going, I believe the meetings frequencies and content are satisfactory.

1. \*Please comment on your relationship with your research advisor **(comments will not be shared with your advisor**, although feedback may be conveyed by the APC). If you are having difficulties, please be specific in your comments so that we may seek remedies.

 So far, my relationship with my research advisor has been mostly adequate, if not short at times. While she is always reachable over email, the in person time is very limited, and it still feels like an undergradute relationship, rather than a more advanced graduate student relationship, although I suspect this to change as research progresses.

1. If you are still taking courses, or finished last spring, please provided a few sentences that describe your thoughts on the department’s graduate course offerings.  Comment on those courses that you found most helpful and also aspects of the curriculum that you feel could be improved.  
   Of the classes I am currently taking, I feel like the workload/content is quite unevenly divided. ASTR-589, physics of astrophysics, has definitely contained the most information and relevant material, however at such a pace as is nearly unsustainable. As well, the homework workload has been beyond what should be expected from an introductory graduate course. Despite this, the content has been incredibly interesting and useful. In terms of usefulness, the computation skills covered in ASTR-513 so far appear to be the most applicable and usable. However, this class covers content quite slowly, and is weirdly organized concerning the order of concepts. ASTR-501 has been, up and to this point, almost entirely useless. While some of what has been learned is quite valuable, such as UA HPC access, none of it is beyond the scope of what can be learned through a quick online tutorial. The class has been fully self-driven, and the overall lack of structure means much of what has been taught has been tangential and unrelated.
2. \*On average, how many days per week are you working on campus during the academic year  
   I attempt to come to campus every working day, averaging likely 4.75 days a week in the office. Most working days are spent in the office from approximately 9am-5pm, and often later.
3. \*Which department events are you attending?

Steward/NOIR Lab Joint Colloquium, Science Coffee, FLASH Talks, GRAMPS, CGM Group Meetings, Galaxy Group, Space Drafts

1. Do you have any suggestions to improve existing events, or ideas for new types of events?

The only improvement I might suggest is an online calendar of all the events happening, not only in the department but also through other departments. Alternatively, an email similar to the weekly 'This week in physics' for the rest of the astronomy/Steward events would be much appreciated. I find myself missing events due to not knowing they are occuring.

1. Please comment on the intellectual and social climate of the department. Are there aspects that you feel work well, or that you wish were improved?

I really quite enjoy the department wide work-life balance that is so stressed. If you come into the department before 9 or after 5, there are very few people still around, and most graduate students do not work on weekends. Additionally, all of the older grad students make a very appreciated effort to organize regular social outings, outside of what is organized on a smaller level.

1. Please comment on any notable successes/failures of the graduate program (advising, support from the Department, computer facilities, your experience joining the department, etc)

I have greatly appreciated the support from Michelle and other staff, especially concerning her individual interest and commitment to our continued success. They are always checking in and making sure we are making a home here at Tucson.

1. In order to help us better address your needs, we’d like to hear anything about your lived experience that you are willing to share. For example, are you experiencing any external stressors of which you would like to make the APC aware?

None so far, life in Tucson has been quite enjoyable.

1. Please provide any other feedback here.