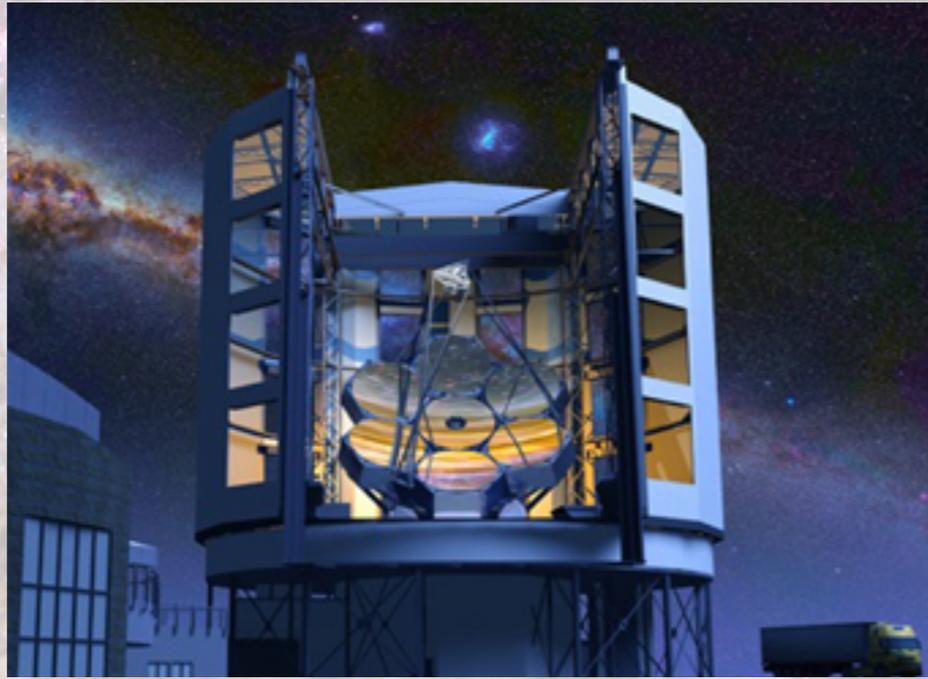
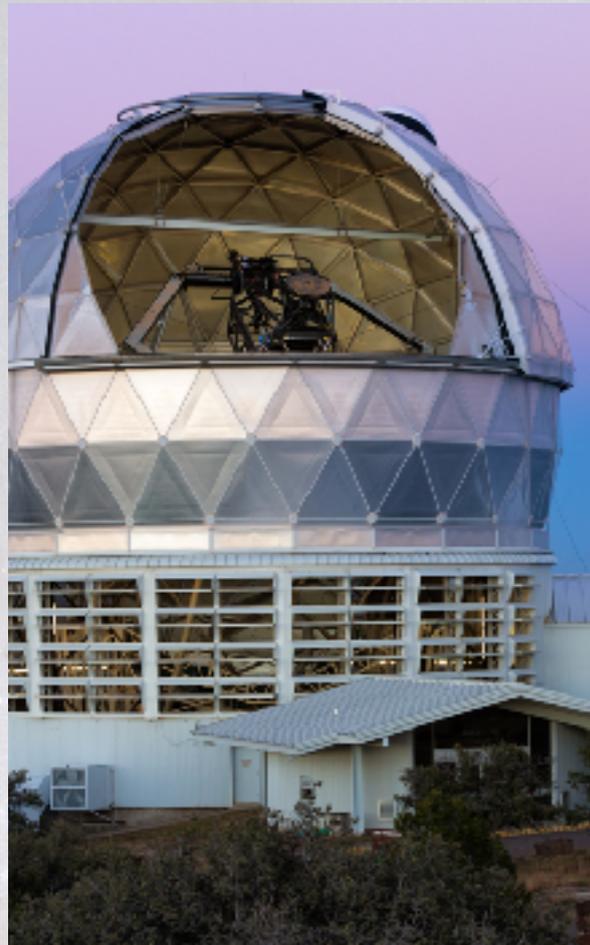
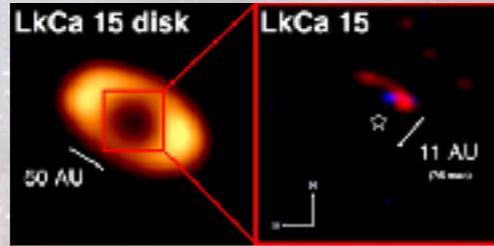
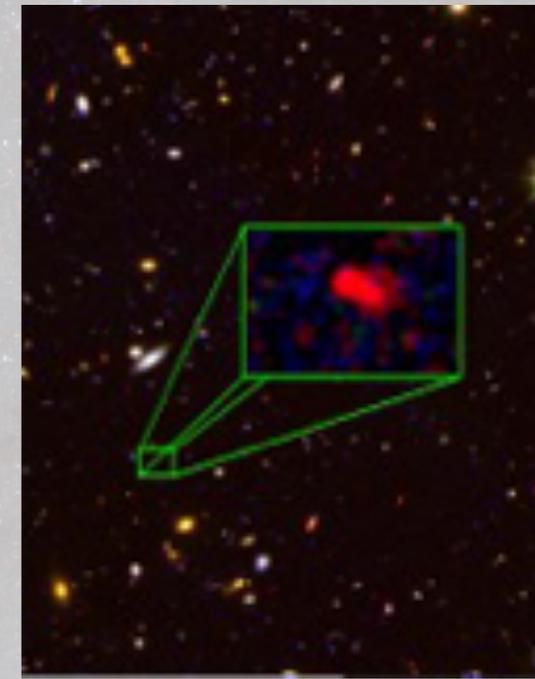




THE UNIVERSITY OF
TEXAS
— AT AUSTIN —



Welcome TAURUS!

To the University of Texas at Austin
Department of Astronomy



- Introductions
- Mission Statement
- Logistics & Expectations
- Overview of Department
- McDonald Observatory
- Seminar Schedule & Professional Development
- Austin, Other Misc.



Reflections...

1. What are you most proud of?
2. What are you most hoping to get out of this program?
3. What are your biggest apprehensions right now (either in life, school, or pertaining to this program)?
4. What is something you'd like to share with others that not many other people know about you?*

...then Introductions.

**let's share these when you're done, but no need to share the other answers...*

A BIT MORE ABOUT ME.

- ❖ I'm an Asst. Professor in the Dept. of Astronomy at UT.
 - ❖ Research is my primary responsibility (I study galaxies in the distant universe) and I also teach classes at UT during the school year, and run TAURUS during the summer.
- ❖ I received my B.S. in Astronomy, Physics and Math from Univ. of Arizona in 2007, and my Ph.D. in Astronomy from University of Cambridge (England) in 2010.
- ❖ I did 5 years of research as a postdoctoral fellow in Hawai'i and California before moving to UT.
- ❖ Taught a range of classes: astronomical research techniques, high-energy astrophysics, graduate cosmology, high-redshift galaxies, freshman writing course, and introductory astronomy.
- ❖ I've been in Austin for ~3 years with my favorite dog, cat and human (and now chickens!) and LOVE IT!



A BIT MORE ABOUT ME.

**BLACK
LIVES
MATTER**



Mission Statement

The TAURUS program is a full-time, 9-week summer research experience for highly-motivated undergraduate students from underserved and traditionally marginalized groups. We prepare these excellent students to enter graduate school in top-rated astronomy programs or the STEM workforce by providing authentic research experiences, ongoing professional development, and community support beyond the conclusion of the summer program.

Mission Statement

We are committed to addressing structural and cultural marginalization (people of color, LGBTQIA, those with disabilities, intersectional groups) within academic research through discussion and building a strong sense of community via mutual respect as scientists, learners, and individuals.

Mission Statement

We are building this program together. Please feel empowered to take ownership of your own learning and personal growth!

Priority #1 is you!

We are not here to get you to do our research for us — we want to train you and equip you with critical skills that will help later on in your career.

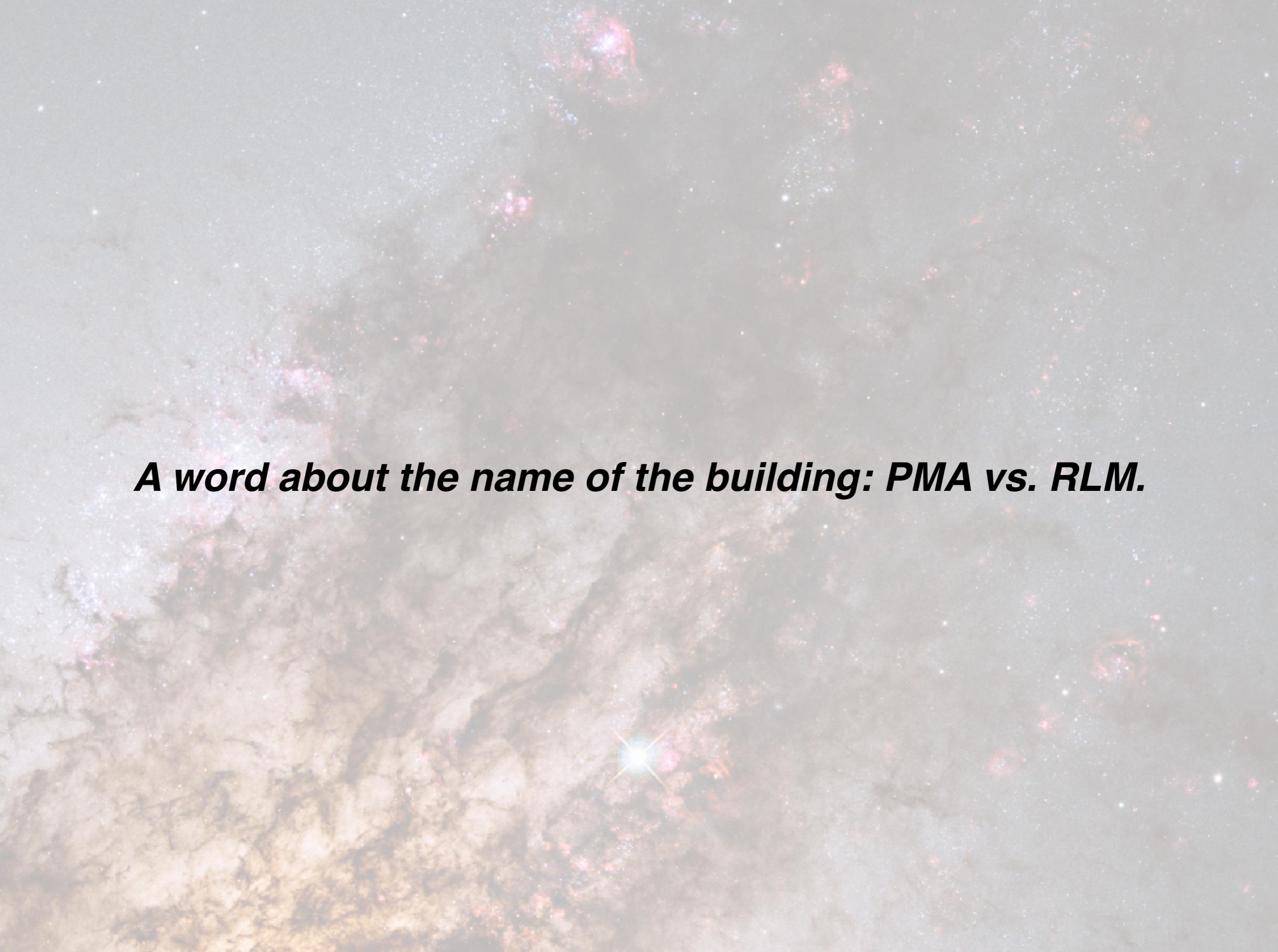
Our #1 priority: helping you get where you want to go, giving you an extra home here at UT.

We also want you to have fun!



Seriously, come talk to
me about anything!

***My cell # is 573-544-7930. Call/text whenever! Even when
I'm gone (Weeks #2, 3 and part of 5)***



A word about the name of the building: PMA vs. RLM.

Who's who!

Raquel Martinez,
Grad Mentoring Chair



Caitlin Casey

Director of TAURUS, any question or concerns or just want to talk, contact me!
Office is PMA 16.218

Sam Factor
website designer



Sinclair Manning & Jackie Champagne
seminar organizers



Abby Black
Academic Program
Coordinator



The MENTORS

Cyndi Froning, Andrew
Vanderburg, Aaron
Rizzuto, Justin Spilker,
Jorge Zavala, Brendan
Bowler

Logistics & Expectations

- This program runs June 11 — August 10, during which you are full-time, 40 hour/week stipended employees of the TAURUS program and your supervisors
- You have two shared offices: RLM 17.312 & 17.314
(Kelly Quinney will issue you key slips)
- You are free to use your own laptops, but you have all been issued a college laptop as well, which comes with software pre-loaded
- Your supervisors and I will expect you to be **in your office** (or the 15th floor computer lab) **from ~9-5pm daily**, unless previously agreed upon. We expect this of both our graduate students and undergraduate researchers.
- There can be some flexibility to work hours, as long as you're putting in the time (40 hours a week!), attend TAURUS events and have sufficient interactions with your supervisor and other members of the department.
- If you need to miss a day due to illness or special circumstances, please contact your supervisor and let me know.

Logistics & Expectations

- You are staying in San Jacinto Residence Hall
- Please let us know if anything regarding your housing is unsatisfactory
- \$300 credit has been applied to your UT account (Dine-In Dollars), which you can spend at cafeterias and dining establishments on campus
- We have purchased memberships for you to the UT RecSports System (including Gregory Gym, Gregory Gym Aquatic Complex, the Recreational Sports Center, Belmont Hall, Whitaker Fields/Tennis Courts)



Logistics & Expectations

9 weeks isn't a lot of time!

Part of this experience will be learning time management skills, assessing priorities. Seminar schedule will help build skills and scaffold your project development. These are tools used by every scientist when approaching new lines of research and we value a combination of self-discovery and community support.

We view both of the following equally in terms of program success:

- your progress in your research project
- your development as a scientist, both personally and professionally

Overview of Department

- One of the largest astronomy departments in the country: 24 faculty, 12 research scientists, ~20 postdocs and research associates, ~45 graduate students, and ~90 undergraduate majors.
- We grant Bachelors, Masters and PhDs in Astronomy
- Mix of observers and theorists: make use of wide range of facilities, from Keck, *Hubble*, ALMA, VLA, to the Hobby Eberly Telescope and the Texas Advanced Computing Center (TACC)

Overview of Department



Extragalactic

*Armandroff, Casey,
Finkelstein, Finkelstein,
Gebhardt, Hill, Jogee,
Kormendy, McQuinn*



Stars

*Benedict, Dinerstein, Froning,
Lambert, Montgomery, Ramirez,
Robinson, Sneden, Winget*



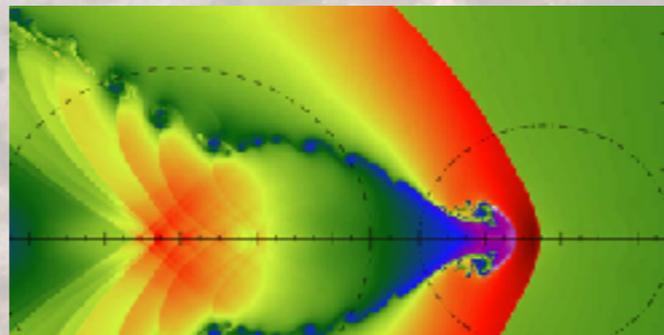
Interstellar

*Dinerstein, Evans,
Jaffe, Kraus, Lacy*



Planetary Systems

*Cochran, Endl,
Kraus, Scalo, Trafton*



Theory

*Boylan-Kolchin, Bromm,
Kumar, Milosavljevic, Shapiro,
Weinberg, Wheeler*

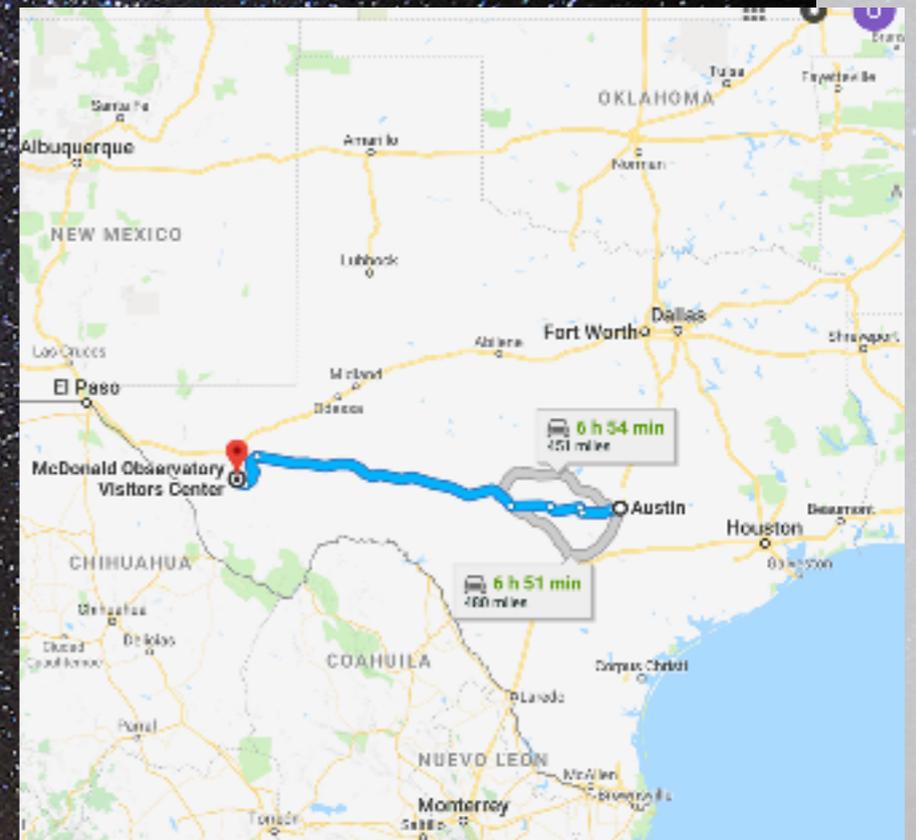


Instrumentation

*Gebhardt, Hill,
Jaffe, Lacy*

McDonald Observatory

Scheduled observing trip happening
July 27 — 30!



Your research project

You will meet with your mentor this afternoon: learn about the project, what's involved, some background science information, and also you will get to know each other!

You and your mentor should decide on a regular schedule for meetings that works for both of you.

You should regularly discuss your goals with your mentor — their #1 priority is to help you learn and grow as a scientist!

Asking questions means you are learning; don't hesitate!

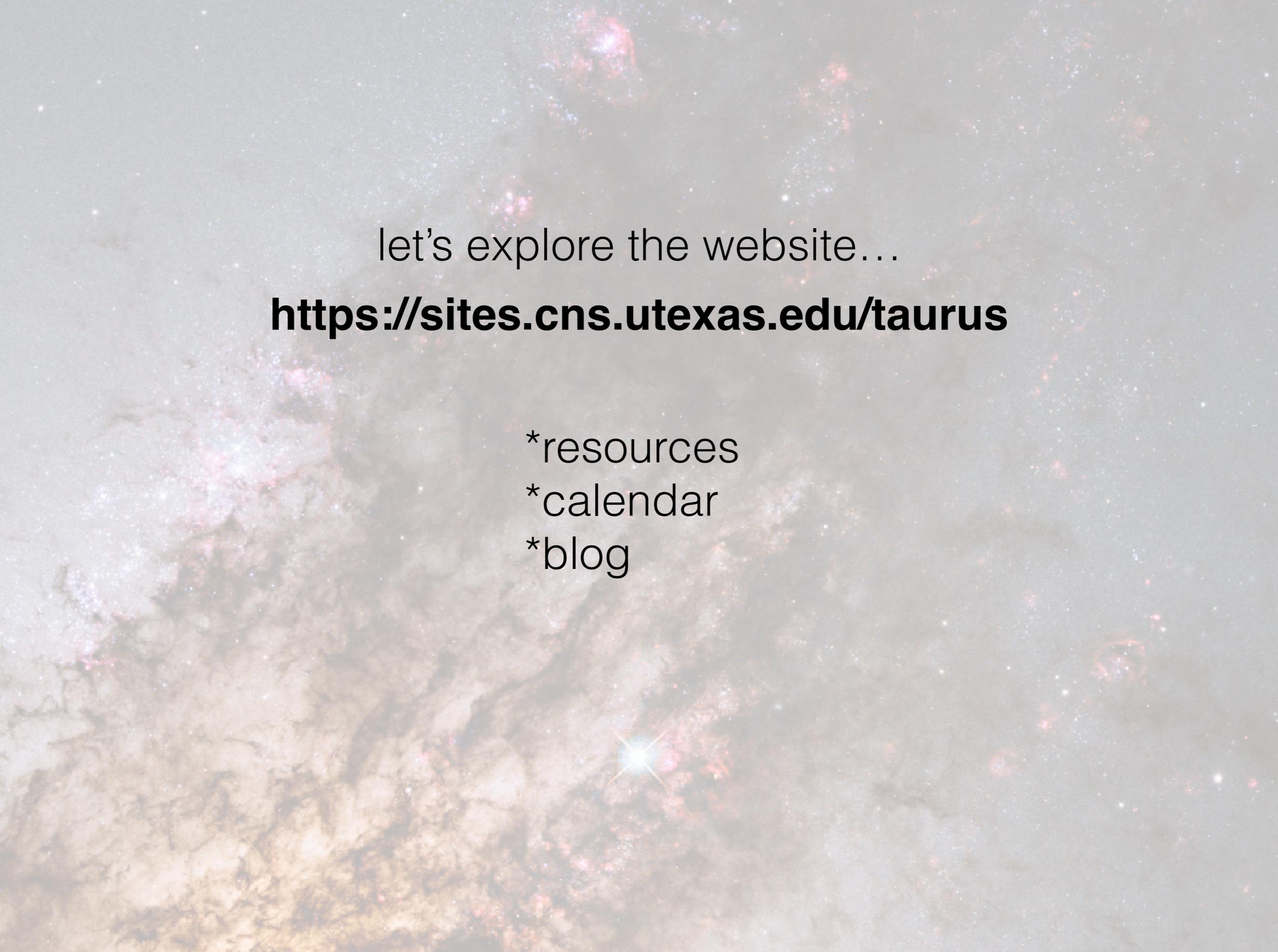
Your research project

Take notes on what you do each day, even if you think it wasn't productive. Keep a notebook! Or whatever system works for you.

Set goals for yourself each day: what do you want to accomplish today, and how will you get there?

It's OK not to know things; ask us questions! Googling can be remarkably helpful but won't be the solution for everything.

All of the mentors and TAURUS organizers are here for you: science questions, technical questions, career questions. Knock on our doors!

The background of the slide is a deep space photograph showing a complex structure of stars and interstellar dust. A bright, multi-colored nebula or galaxy core is visible in the lower-left quadrant, with hues of blue, purple, and white. The rest of the field is filled with numerous individual stars of varying colors, including red, orange, yellow, and blue, set against a dark, star-speckled background.

let's explore the website...

<https://sites.cns.utexas.edu/taurus>

*resources

*calendar

*blog

TAURUS Seminar Schedule

1-2pm on Tuesdays and Fridays!!

Week #1: Unix editors, python

Week #2: Galaxies in the distant Universe,
Observational Astronomy

Week #3: Inquiry in Observational Astronomy, How to
read papers/literature search

Week #4: Theoretical Cosmology, Gravitational Lensing
and Public Outreach

Week #5: Exoplanets, the ISM, and Stars

Week #6: Astronomical Instrumentation and Exoplanet
Characterization

Week #7: Careers in Astronomy, Grad Student Panel

Week #8: Trip to McDonald Observatory

Week #9: How to give talks, and the FINAL TAURUS SYMPOSIUM

*Last year's
schedule as an
example*

Weekly check-in with grad mentors

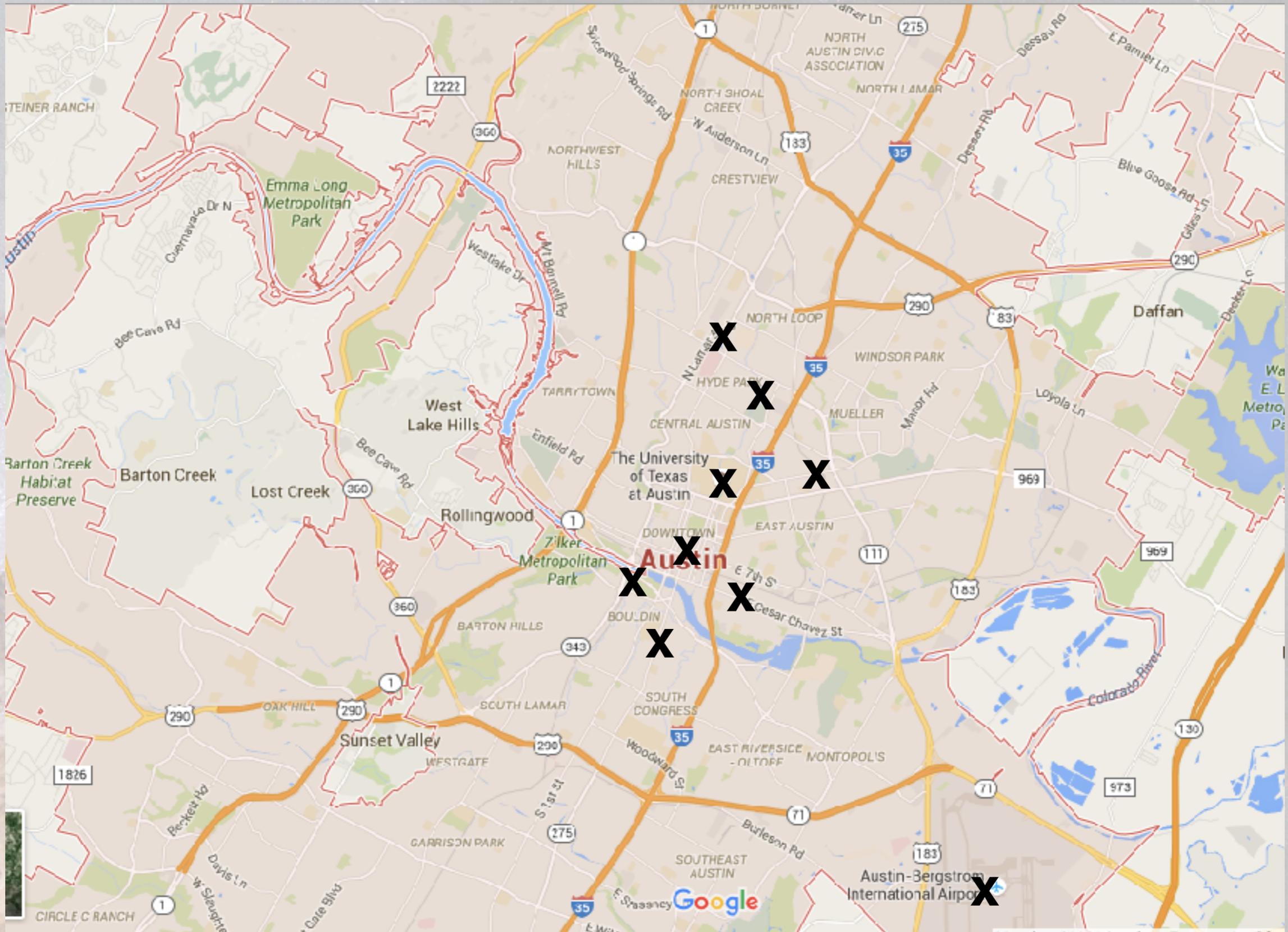
You'll be paired up with a grad student to have informal chats to see how things are going, impressions, thoughts, life advice, whatever, etc.

I'll also periodically want to check in with all of you and have a group meeting. Time to reflect as a group.

Breakfast tacos



Austin: best city this side of the Rio Grande?



Austin to-do's



Street art!

Live Music!

Round Rock Express!



Puzzle houses!

Movies!

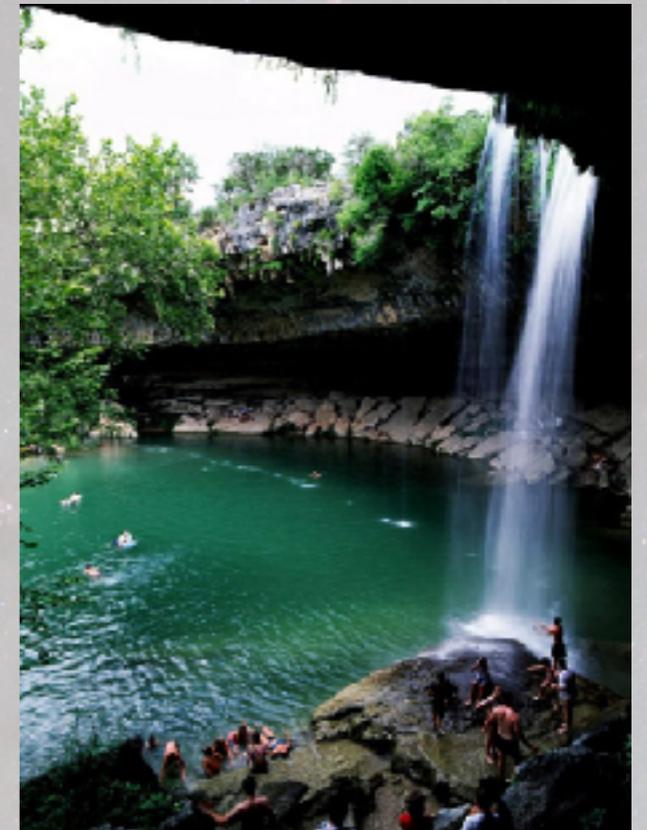
Blanton Museum!



Zilker Park!

Food trucks!

Austin Outdoors!



Barton Springs, Hamilton Springs, Barton Creek Greenbelt





233rd MEETING

AMERICAN ASTRONOMICAL SOCIETY
SEATTLE, WASHINGTON, 6-10 JANUARY 2019

Photo: Visit Seattle/Howard Frisk Photography

Support from our community, this summer & beyond

We are here to help you from today onward. Talk to us about what you want out of your career, where you want to go in the short-term and the long-term.

Words from past TAURUS Scholars...

Keep a consistent work ethic!

ask any questions you might have about astronomy careers / graduate school / etc. the graduate students and faculty there are a valuable resource.

Practical:

Cypress Bend in San Jacinto has the best 'Dine-In Dollars' food. Salads are big enough to last two meals, and the greens are a much higher quality than anywhere else.

At Raising Canes, always get The Caniac. It's two meals for only a few dollars more.

Aspirational:

Don't hold back.

Remember that the UT faculty is amazing and hearing about their career path can be just as important as talking with grad students or your mentor regarding your project. Don't forget to think about the long term advice you have access to.

Don't be afraid to ask for help occasionally, but also realize that googling things and experimenting on your own is critical for learning.



A wide-field astronomical image showing a galaxy cluster. The background is filled with numerous galaxies, many of which are reddish in color, indicating they are at a significant distance. The foreground shows a dense field of stars, likely from a nearby galaxy, with a prominent bright star in the lower center. The text "Questions?" is overlaid in the center of the image.

Questions?