

Meeting Minutes 9/13/19

- **ATOMM (Astronomy Tutoring or Majors and Minors):** Need help with math, physics, or astronomy? Want a place to study with friends?

Stop by *EVERYDAY* b/w 2-4pm @ Parker Library, outside N305. Get to know people in your major and work together, while also having upperclassmen available to help!

- **TIMESTEP:** TIMESTEP is a discussion group about topics of professional development for undergraduates in STEM fields at U. Arizona with a specific focus on supporting students who are under represented minorities (URMs). Next Meeting; What it's like to be a Graduate Student -> on October 9th in PAS 218. Hear from a panel of UA graduate students in physics and astronomy about the realities of graduate school and why they chose to pursue a PhD.

- **Astronomy Question of the Week:**

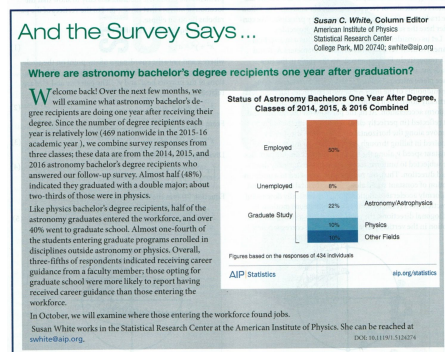
- APOD (Sep 11, 2019) IC 1805: The Heart Nebula



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- Tell me everything you see. Can you explain everything you see?
 - The little streak in the heart, since it's a long time exposure, it has to be something closer and moving fast! (a meteor!)
 - Upper right, Fishead nebula
 - Blue gas due to ionized oxygen atoms
 - Red gas due to excited hydrogen atoms
 - Dust from previous generations of stars
 - This nebula is in the direction of Casseopoeia, and it is within our galaxy
- Check out the astronomy picture of the day online!
- Why aren't these bulbs equally bright?



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- Filament is probably thinner at these points, it's harder for current to go through thicker ones because there's more resistance
- An app with a cool algorithm: "what3words"
 - Section the Earth's surface into squares 3x3 meters on a side. How many is that?
 - Find the surface area of the earth, $(4 \cdot \pi \cdot \text{radius} \cdot \text{radius})$
 - The square Don was on "Personal Behavior Glare"
 - Can be used instead of latitude and longitude! You can send your location to 911!
 - Encode each square with 3 words, how many would you need?
 - Assigned each 3m square in the world a unique 3 word address that will never change.
 - For example: ///filled.count.soap marks the exact entrance to what3words' London headquarters.
 - What are some advantages and disadvantages of this?



- **Astro News of the Week:** Presented by Ryan Webster! Here are the links-> <https://www.nasa.gov/feature/goddard/2019/nasa-s-hubble-finds-water-vapor-on-habitable-zone-exoplanet-for-1st-time>
 - NASA found water vapor on a habitable zone exoplanet! They're not sure if it's a rocky or gas planet.
- <https://www.nytimes.com/2019/09/12/science/comet-interstellar-oumuamua.html>
 - Interstellar comet with a hyperbolic orbit!
- **Constellation of the Week:** Presented by Sammie Mackie! This week is

Sagittarius the Archer! Check out the mythology behind it at <https://www.constellation-guide.com/constellation-list/sagittarius-constellation/>



- **Undergraduate Research Opportunity:** Lots Steward faculty are still looking for undergraduates to help in their research! Opportunities span many areas of astronomy, and it can count towards research credits
- **VLBA Dish Walk with Space Grant:** Astro club will be joining the UA Space Grant Interns on a tour/walk of the VLBA Dish on Kitt Peak. It will be on September 21st. It starts at 3pm, so we will leave by 1pm. Only can bring 30 members though. The sign up sheet will be out tomorrow!
- **Club Picnic:** Will be on September 28th at Windy Point, on Mt. Lemmon. We'll have a picnic and then star gaze! Leave Steward Observatory south parking lot at 4:00 pm. Please bring food item to share (not messy/needs to be frozen), or \$5 food donation. The sign up sheets will be sent out!
- **235th Meeting of AAS:** It will be in Honolulu, Hawaii from January 4-8th. You will have to register by September 25th, and abstracts are due October 8th. We will be taking Seniors (Presenting and grad school info) and juniors that are presenting

Apply for Fall Preview



- **Apply for Fall Preview!** Explore a Michigan PhD - October 31-November 2, 2019
Deadline extended! Application is now due September 20th. They do pay for you to go! The Department of Astronomy invites juniors, seniors, recently graduated students, and Master's students to visit us for a preview event.
<https://lsa.umich.edu/astro/graduates/apply-for-fall-preview0.html>



- **Apollo Remembered:**
- **Physics club:** Meets every other Wednesday at 5pm in PAS. Next meeting will be on October 2th.
- **If you didn't get your T-Shirt from last semester please do so by 9/20**
- **Astronomy Majors Lounge:** Now in the dome! In the room right by the stairs on the ground floor!
- **Astronomers:** If you have a snack attack, look no farther than Astronomers! The unofficial Astro Club snack store on 3rd floor outside Parker on the bookshelf. It's restocked every week, and open to everyone, including faculty. Honor system payment
- **Please pay your dues!** They are \$10 a semester. They help provide funds for trips, snacks, cool activities, shirts, etc. Also if you want to attend one of our internal events such as the club picnic and the dishwalk, you need to have paid your dues!