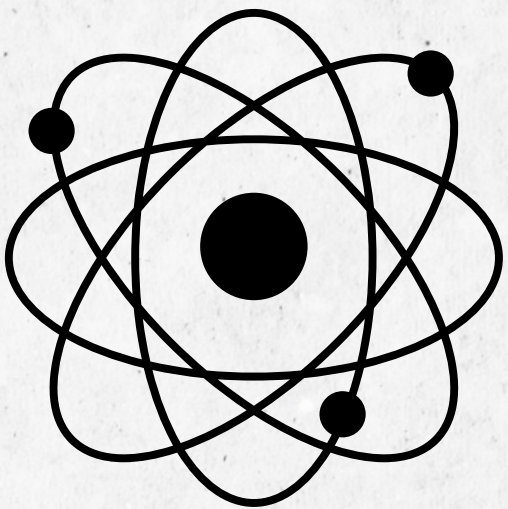
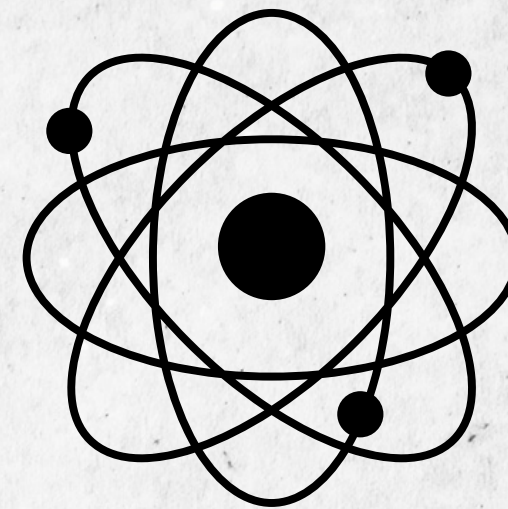




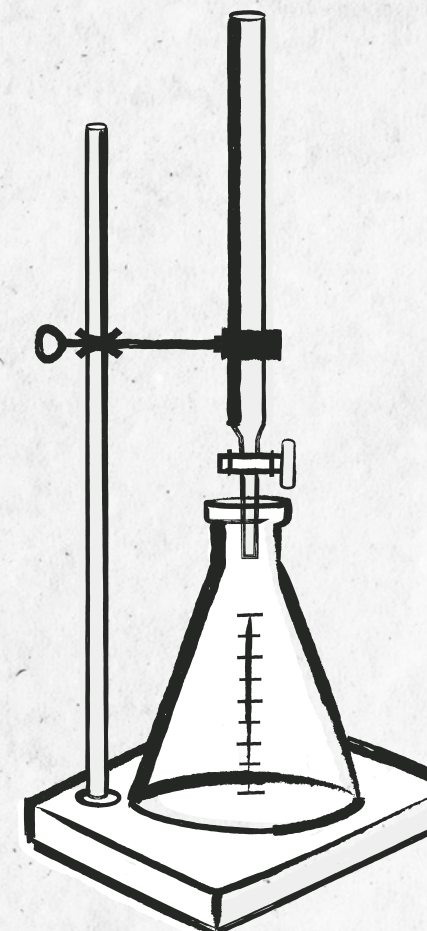
$$E_k = \frac{1}{2}mv^2$$

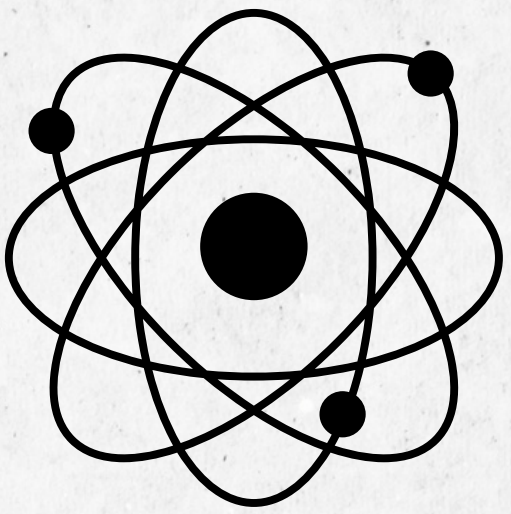


How to Get Into Research

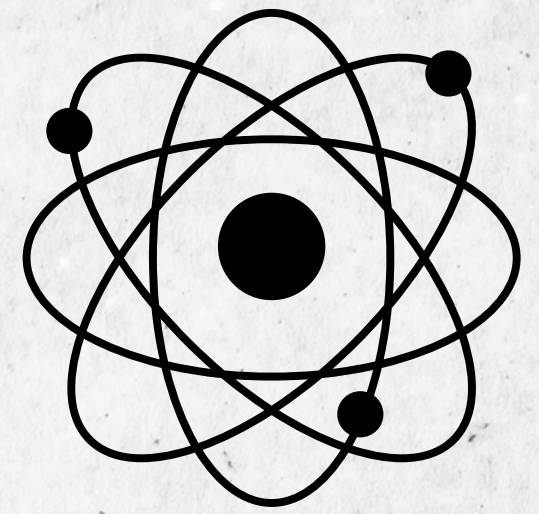


$$F = \frac{Gm_1m_2}{r^2}$$



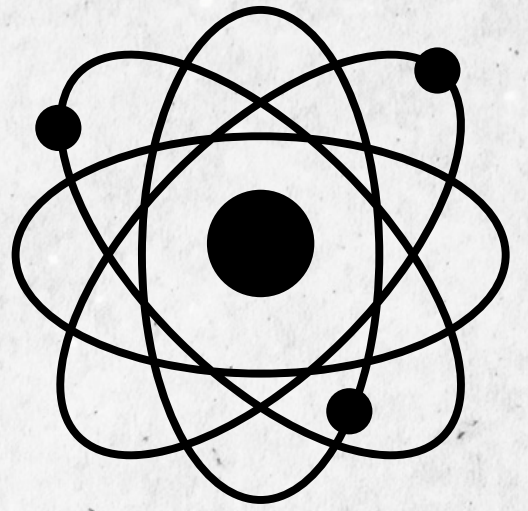


How do I pick a professor?



- Find someone who researches a topic you're interested in working on
 - Not sure what you actually like? No problem! This is how you can find out!
 - Undergrad is the time to branch out into different disciplines and find out what you actually like to do and learn about
- Under the faculty tab on the UT Physics website, you can browse our faculty and look at their research
- Ask your professors what they research
- Talk to your graduate TA's to find out who their advisors are and what they do

$$F = \frac{Gm_1m_2}{r^2}$$

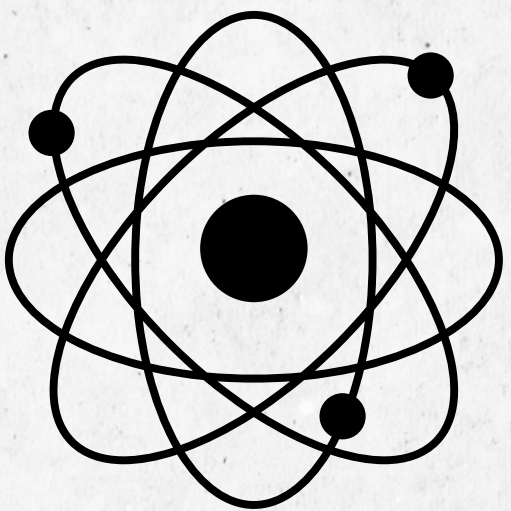


Common Methods

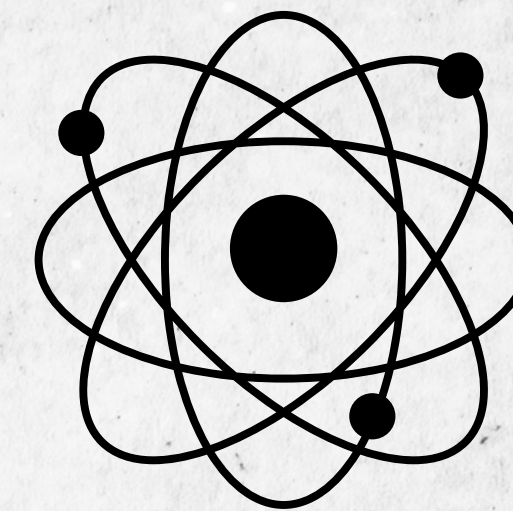


- Cold emailing
- Talking to professors you have for class
- Applying to structured programs like REU's
- Talk to your grad TA's

$$E_k = \frac{1}{2}mv^2$$



Anatomy of a Cold Email



Bartley, Ava Grace

To: Fomin, Nadia



Tue 8/26/2025 10:51 AM

Dear Dr. Fomin,

My name is Ava Bartley, and I am a freshman undergraduate student currently majoring in Physics with plans to pursue a PhD in the field. I am interested in nuclear physics, and your work with neutron decay and Nab is very exciting to me. The possibility of finding new physics beyond the standard model is incredibly fascinating to me.

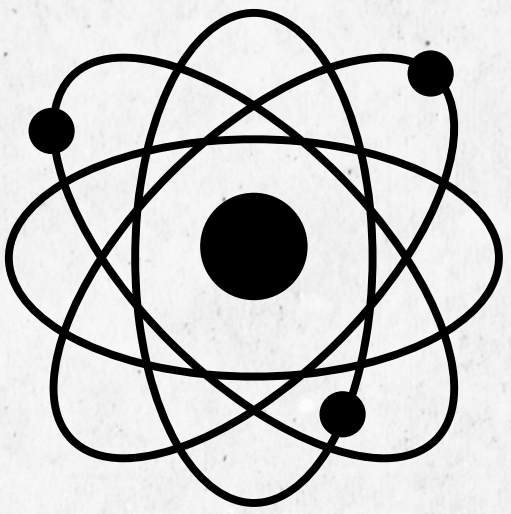
Lucas McBee, my GTA, advised that I email you to ask about any potential openings as an undergraduate research assistant. I am currently in Physics 137 and Math 142, and I'm eager to gain research experience, especially in the sector of physics I'm most interested in, as soon as possible.

If you have any availabilities or could point me in the direction of anyone in high-energy nuclear physics who would be looking for undergraduate help, I would be very grateful.

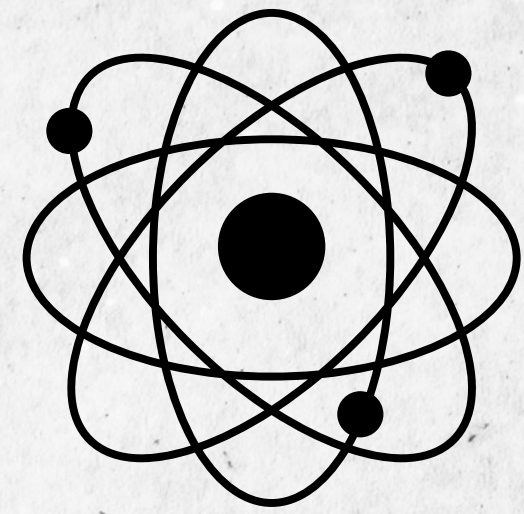
I'd love the opportunity to meet with you and discuss further if you're available at any point.

Thank you so much for your time and consideration!

Best regards,
Ava Bartley



Anatomy of a Cold Email



Laney, Elijah

To: Hix, Raph



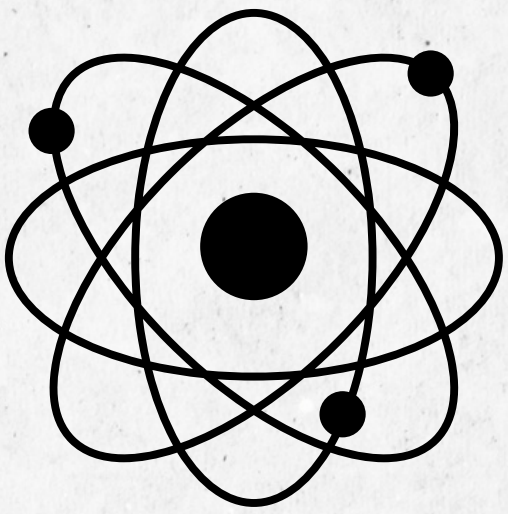
Sat 8/29/2026 8:16 PM

Dr. Hix,

I read about your research in stellar evolution and nucleosynthesis and would be very interested in discussing potential involvement in your work. The intense conditions experienced, resulting changes undergone, materials produced by objects as extreme as stars have been a topic I have been very interested in for a long time, and I would greatly enjoy working in this field. I believe that this field of study is incredibly important as it aims to detail where most of the heavy matter in the universe was built and exactly how this very matter came to be. I am currently a sophomore undergraduate in the physics department, completing both the academic and astronomy concentrations with additional minors in computer science and the chancellor's honors program. At the moment I am enrolled in PHYS 311 and COSC 230 and have experience with Java and C++ programming and familiarity with python. I am currently available all day Tuesday and Thursday and on Friday afternoons and would love to meet with you sometime soon!

Thank you for your time,

Elijah Laney

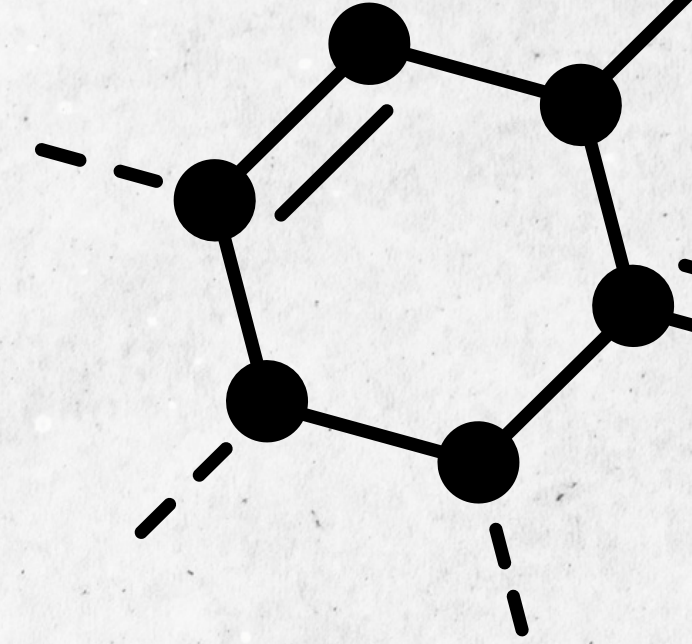


Meeting with a Professor

- Dress somewhat professionally, smart casual preferably, for an introductory meeting
- Bring lots of questions!
 - If given material to read before the meeting, read thoroughly and notate any questions you have
 - If not, see what you can find out from UT's website (recently published papers are sometimes listed underneath the professor's name)
- Understand what your ability to commit time looks like, and be upfront about it

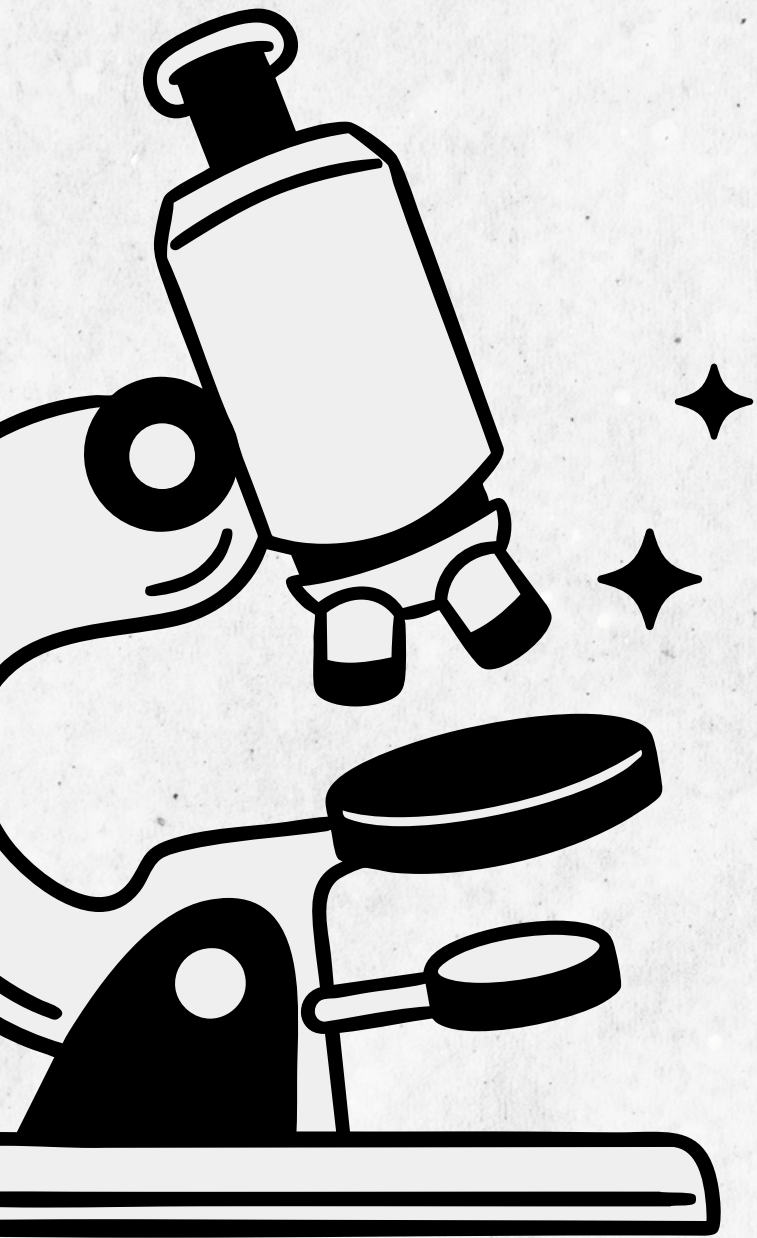


What does research look like?



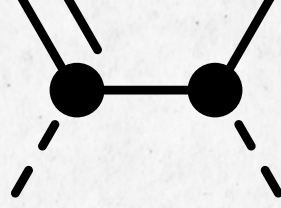
Tasks:

- Different for everyone!
- Depends on your background (especially in programming)
- Typically start out with "low-hanging fruit", like repetitive analysis tasks to get you used to the workflow
- Onboarding, depending on the experiment, can take a long time



Workload:

- Again, depends!
- A healthy balance would typically be 10-15 hours a week
- Different tasks have different workloads and take different amounts of time



Funding

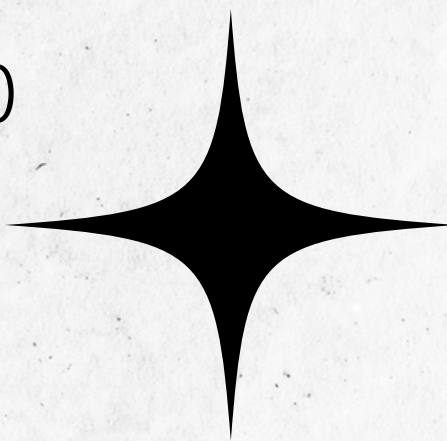
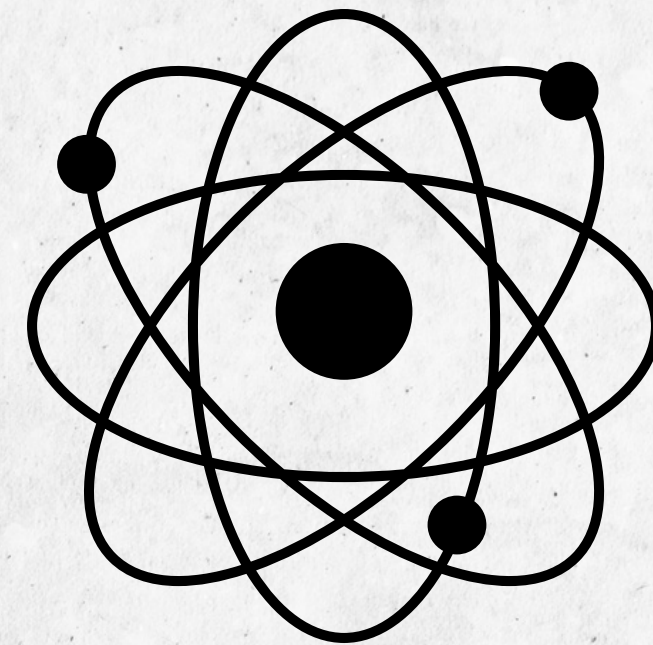
You can get funding from your research group:

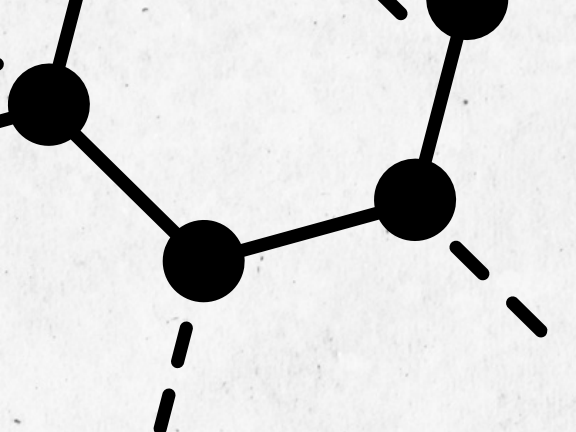
- work study (based on FAFSA SAI, profs like when you have this because you're free)
- direct funding from group
 - need to get on some kind of payroll, usually through the school (DASH, similar if you have some student employment)
 - could be for both travel and research work

Or externally:

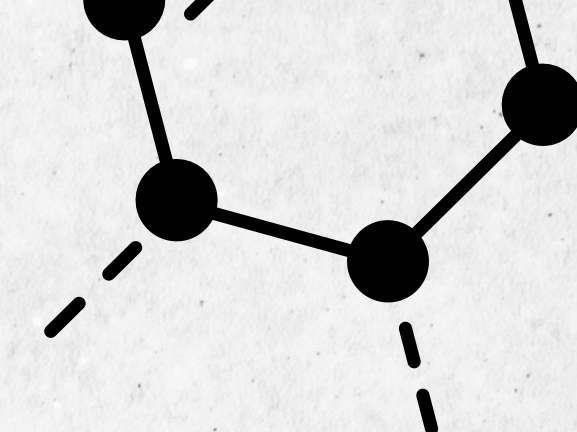
- Usually set amount, not paid by hour
- Funding through Undergraduate Research and Fellowships:
 - Student Development Grant (previously AURA)
 - Fall, Spring, and Summer grants w/ different due dates
 - First come, first serve so apply early
 - Good if you have a group in mind and they just can't fund you
 - Also do travel grants
 - School specific programs hosted by URF (usually for engineering, bio, chem, not as much phys directly but can still be very relevant)
 - posted on Handshake sometimes
 - these can be per hour rate
 - You can always reach out and schedule a meeting with someone from URF and they will match you with opportunities!!!
- Scholarships:
 - SPS (undergraduate researcher scholarship, travel grant w/ funding up to \$300, both "reimbursements")
 - Fulbright, Gilman, etc. (URF can also advise you on these and will host workshops sometimes, can be very competitive)
- Departmental Programs:
 - Summer research fellowships (\$6500, apply to work with a mentor, do a presentation at the end)

Or by doing external paid programs like SUII, REUs, etc.





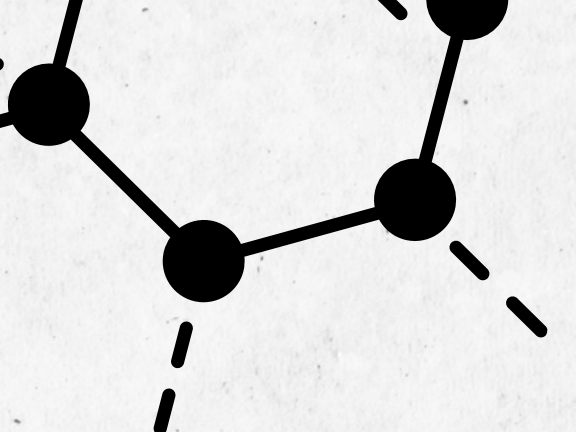
Student Testimonies



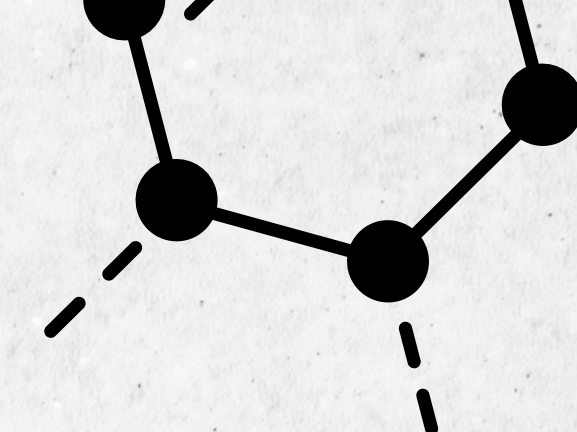
Ava Bartley

Fundamental Nuclear Physics

- Worked last year on the (admittedly) lengthy onboarding process for Nab and worked on small analysis tasks
 - Was under Work-Study
- Helped graduate student Aubrey Augustine write a new run mode for our simulation that corrected for breaking radiation
- Spent my summer working with the polarimetry campaign, designing magnetic shielding in COMSOL
 - Funded through the UTK Physics Summer Fellowship
- Continuing this work into this school year
 - On payroll



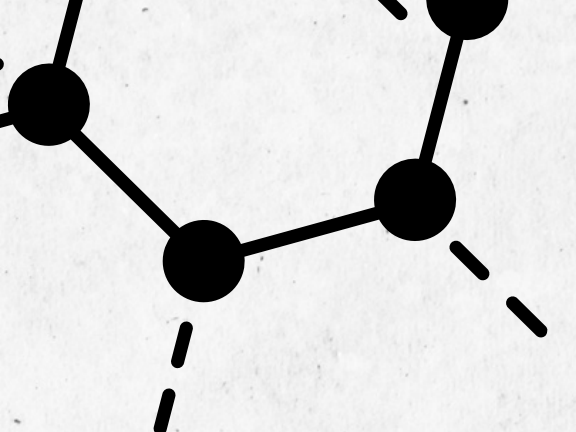
Student Testimonies



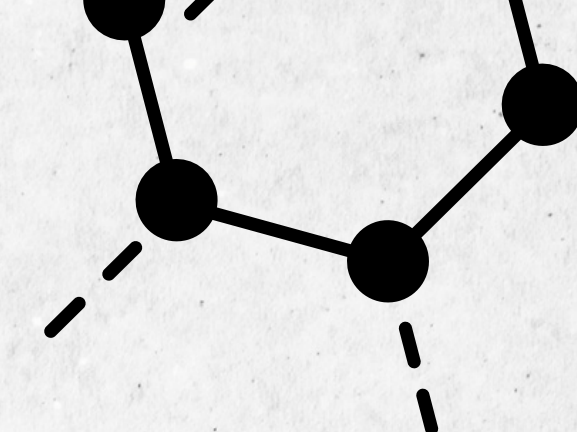
Samantha Wilder

Computational Astrophysics

- Cold emailed Dr. Mezzacappa
- Didn't get to actually meet with him until a while later
- Gave me materials to prepare with until he could find a position for me
- Met with him and a graduate student who I would work with to get started prepping for a specific research project
- They helped me with everything I needed and had me apply for the Summer Fellowship - did supernova neutrino detection analysis
- Continuing to work with them now!



Student Testimonies



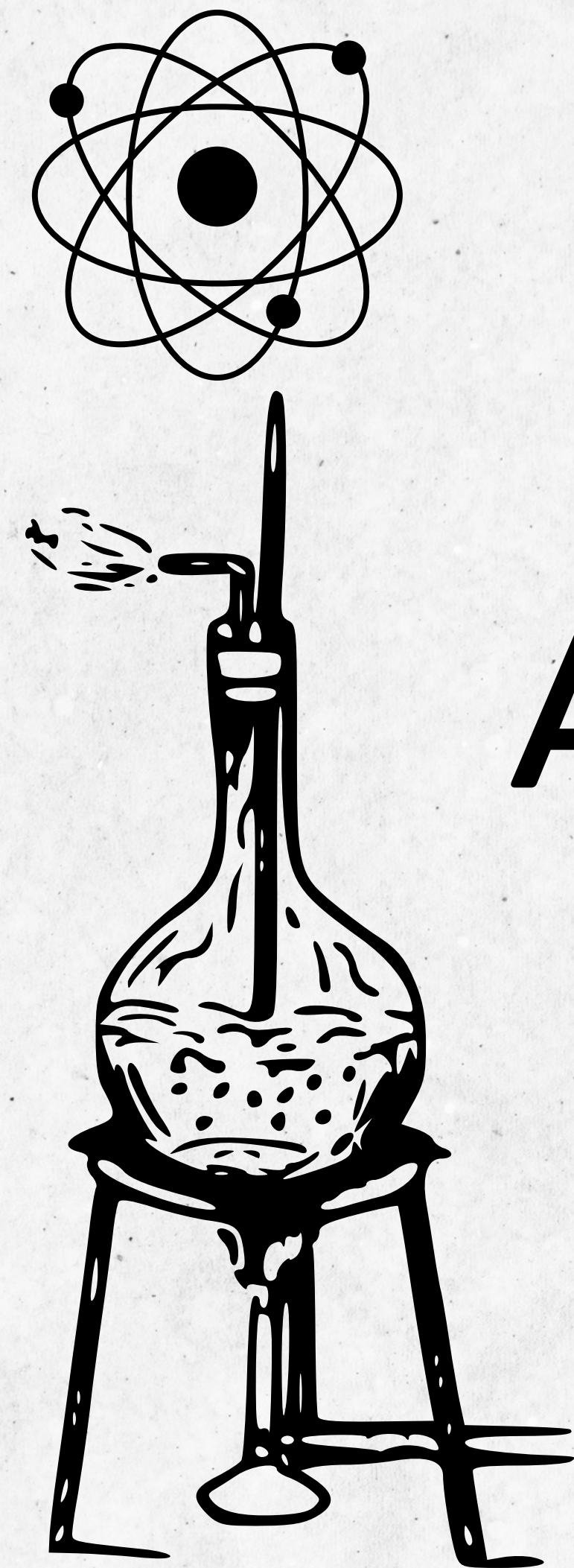
Mackenzie Henley

Applying my physics background to a different field

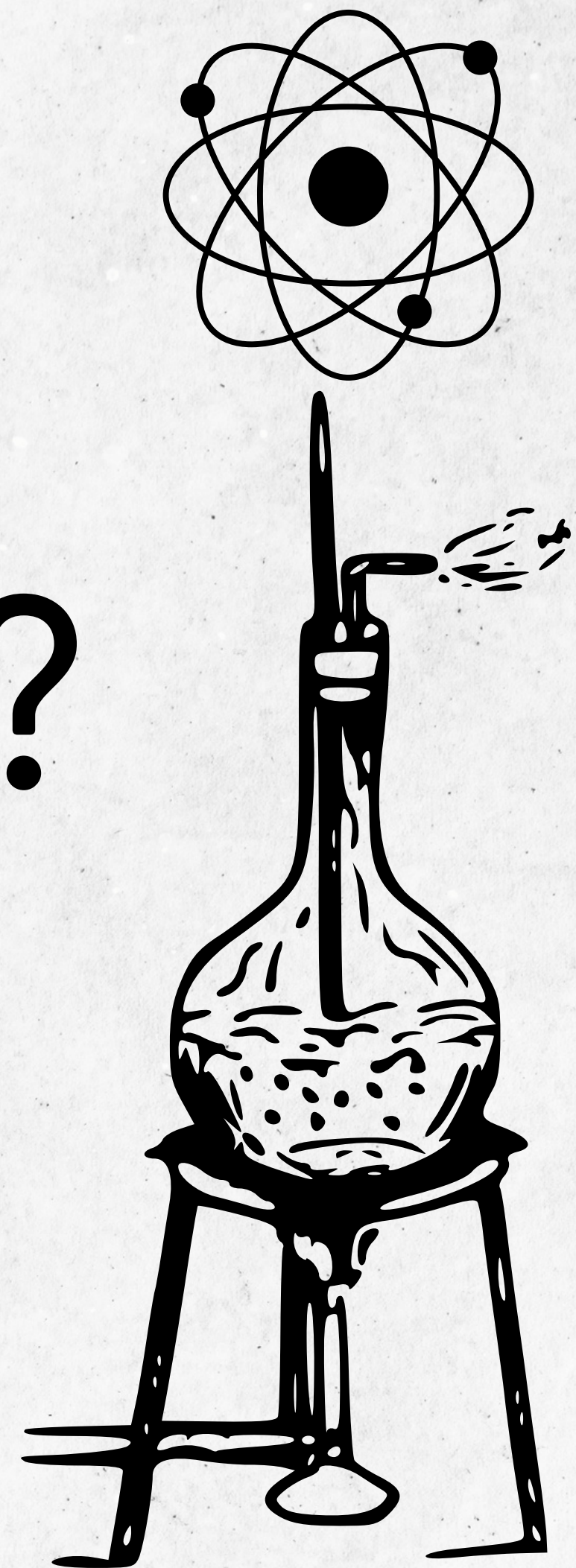
Research Projects:

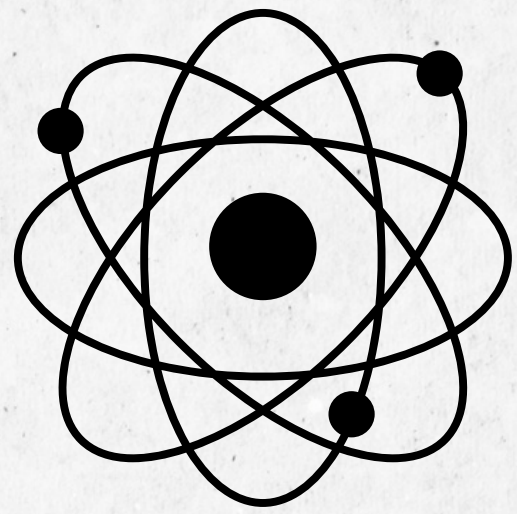
1. NASA Dragonfly Mission - DraGNS (conducted in the EEPS department)
2. Asteroid Project (conducted here in the Physics department to support my senior thesis)

Both require coding knowledge and problem solving, which was given to me by my physics classes.

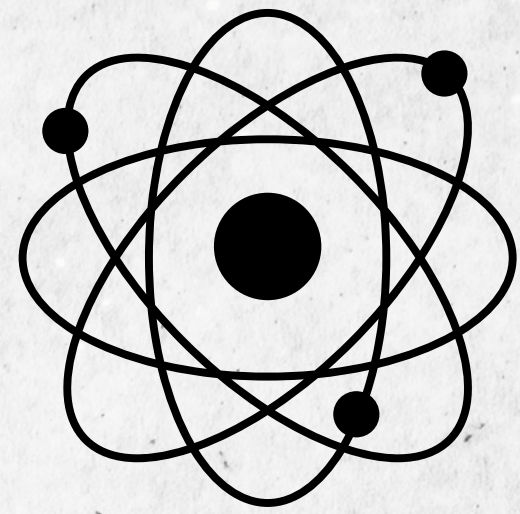


Any Questions ?





$$E_k = \frac{1}{2}mv^2$$



Thank You!



$$F = \frac{Gm_1m_2}{r^2}$$

