

ASTR368  
Final Presentation  
April 3, 2024

You are hereby invited to give a talk on May 1, in class. You will have 15 minutes total for your talk, so maybe 13 minutes talking followed by 2 minutes for questions. Because of time limitations, the time limit will be strictly enforced! The classroom desktop computer (running Windows) will be available for use for Google slides, PowerPoint, or PDF talks. You may also bring your own laptop if you prefer - there are HDMI and VGA connections. You will have to turn in your talk to me.

This presentation makes up 20% of your final grade. You will be graded on the clarity of your talk and your slides (see below), the organization of your talk (including keeping to time, your mastery of the material. Your presentation should include at least the following:

- 1) A title slide including your name and the date
- 2) Background information needed for understanding the presentation (this should be significant!)
- 3) A description of current research on the subject
- 4) Conclusions and potential future work
- 5) References. It's fine to use Wikipedia, but you must follow all the references you wish to use and cite those.

Rubric:

- Quality of slides (clarity, inclusion of required and relevant material, references, etc.) - 30%
- Quality of research content - 50%
- Quality of delivery incl. keeping to time - 20%

Some general tips:

- **PREPARE!** You should know more about these topics than anyone else in the room (possibly excluding me!). It takes time to build up this knowledge, so don't leave this to the last minute.
- **PRACTICE!** This will give you a sense of how long your talk will take and make sure you know what you want to say for each slide.
- Do not crowd too much information on a single slide. Neither you nor your audience should be reading the talk from the slide. Think of the slides as visual aides.
- Keep your time limit in mind. A good rule-of-thumb is 1-2 minutes per slide, but that depends on the slide; some will take more time others less. The best talks use few slides, but explain them in detail.
- Remember your audience. Make sure that your talk is understandable to your classmates.
- Provide basic citations of information on the slides: author+year is sufficient. You should include a full list of references on the final slide for my information only.

‘ Here are some topic choices:

- BESSEL trigonometric parallax project (<https://iopscience.iop.org/article/10.3847/1538-4357/ab4a11>)
- 3D dust maps (<https://ui.adsabs.harvard.edu/abs/2019ApJ...887...93G/abstract>)
- Smith’s Cloud (<https://ui.adsabs.harvard.edu/abs/2008ApJ...679L..21L/abstract>)
- The Kennicutt-Smith Law (<https://ui.adsabs.harvard.edu/abs/1998ApJ...498..541K/abstract>)
- The Fermi Bubbles (<https://ui.adsabs.harvard.edu/abs/2012ApJ...756..181G/abstract>)
- The “tension” between the standard-candle-derived value of  $H_0$  and those from the CMB (<https://ui.adsabs.harvard.edu/abs/2023ApJ...956L..18R/abstract>)
- Baryon Acoustic Oscillations (maybe Planck results)
- Anomalous Microwave Emission (AME; <https://www.aanda.org/articles/aa/abs/2014/05/aa22612-13/aa22612-13.html>)
- Various Universe models (Einstein-de Sitter, de Sitter, Steady State...)
- Luminous infrared galaxies (or other galaxy types not covered so far)
- SN Refsdal (<https://ui.adsabs.harvard.edu/abs/2023ApJ...948...93K/abstract>)
- Detecting the Era of Reionization
- The Great Attractor
- Laniakea Supercluster (<https://www.nature.com/articles/nature13674>)
- CMB anisotropies
- Any other topic! (check with me first)