PHY 517 / AST 443:
Observational Techniques in Astronomy

Lecture 7:

Final Presentations

Final presentations

- **Wednesday, May 5**

- Everybody gives a 10-minute talk, with 5 minutes for questions

- For each talk, you will fill out a grading rubric and assign a score (0-10). We will pass them to the presenter after anonymizing the feedback.

- The SBU astronomy group will be invited to listen in

Final presentations

- if you do research in **observational astronomy**, you can present your research instead

- within your group, one of you has to present your Lab 3

How to give a good talk

- Know your audience!
- Aim: *everyone* should get something out of your talk
  - Include enough background information
  - Avoid too much jargon
  - Avoid too many equations
  - Tell a coherent story

How to give a good talk

- Slides: *visual aids* to your *story*
  - Assume ~1-2 minutes / slide
  - Don't put too much "stuff" on one slide
  - Include relevant **pictures / figures**
  - Prefer concise keywords to full sentences (let alone paragraphs)
  - Make everything legible (e.g., axis labels)
  - Use color and font style / size to highlight points, but **Don't overDO** IT
  - Don't use yellow, light green, low-contrast colors

How to give a good talk

- Speaking:
  - Don’t speak too fast
  - Prepare not just your slides, but also what you will say
  - … but don’t memorize your talk, **speak freely**
  - *Your tone and articulation play an important part in conveying your story*
  - Engage with your audience - make eye contact
  - Avoid too many “umm”s - better to pause
  - **Practice** your talk, more than once, with different people!

How to give a good talk

- References, and avoiding plagiarism
  - Make sure to give proper credits
  - Every figure (that you did not make) needs to reference the author
  - Every research result needs to be properly cited with author / collaboration name + year; good to include journal, etc.
  - Visibly acknowledge your co-authors when presenting your own research, e.g. on title slide

Presentation structure

- Title slide:
  - Title: be descriptive! (I.e. NOT "AST443 Final Presentation")
  - Speaker name, with affiliation
  - Co-authors
  - Venue, date
  - Good to include: affiliation logo, funding source logo (if applicable), pretty picture relevant to your talk

Presentation structure

- Background / introduction
  - Present the big picture
  - Introduce the main concepts
  - Describe your target
  - Summarize previous work
  - Clearly state the question(s) your project addresses

Presentation structure

- Data / observations
  - Equipment
  - Important information depends on project, e.g.
    - Date of observations (time-variable observations)
    - Filter (imaging)
    - Grating (spectroscopy)
    - …

Presentation structure

- Data analysis and measurements
  - "Basic" data reduction does not have to explained (but can be mentioned) - by now, everybody should know what a dark frame is
  - Describe analysis choices, e.g. lightcurve binning + estimates of uncertainties
  - Describe measurements clearly, e.g. transit depth

Presentation structure

- Inferred physics and interpretation
  - E.g. ratio of planet/star size
  - Comparison to expectations / literature

Presentation structure

- Conclusion
  - Summarize the main points that you want your audience to take away
  - Can include next steps, future work, etc.

Practicalities

- You'll have to tell me your title ahead of time (for scheduling)
- Talks:
  - If you want me to present your slides: send me your talk in google slides or pdf format.
  - Otherwise: use zoom screen-share, and test your presentation well before class.