

PHY 517 / AST 443:
Observational Techniques in Astronomy

Final Presentations

Final presentations

- **Wednesday, May 4** (last day of class)
- Everybody gives a 15-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

Topics

- select one of your lab experiments
- within your group, one of you has to present your Lab 4
- you cannot both present on the same lab
- if you do research in **observational astronomy**, you can present your research instead of a Lab

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)
- Send me your talk in [google slides](#) or [pdf](#) format, well before the start of class