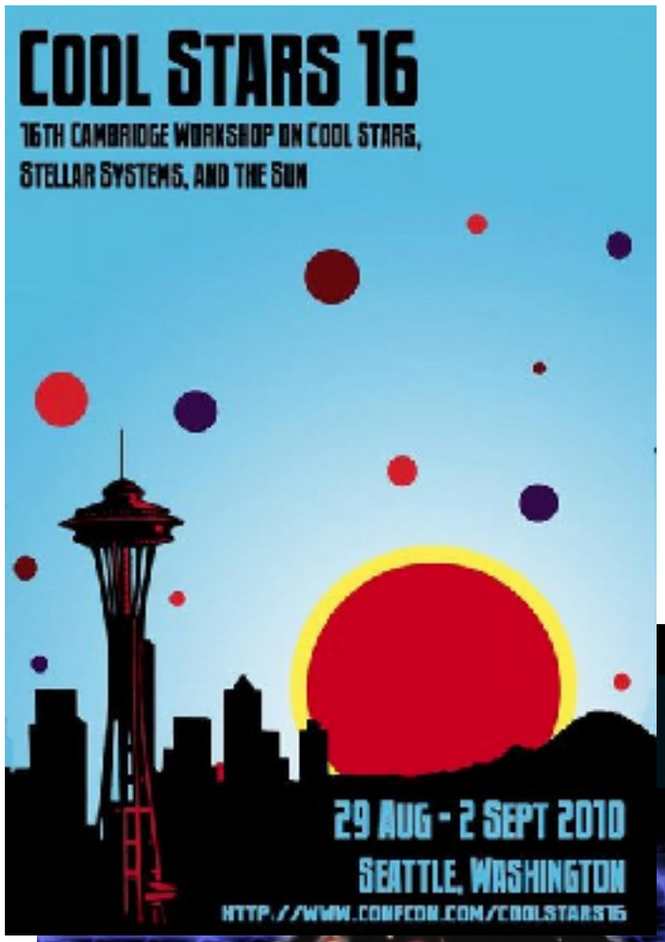
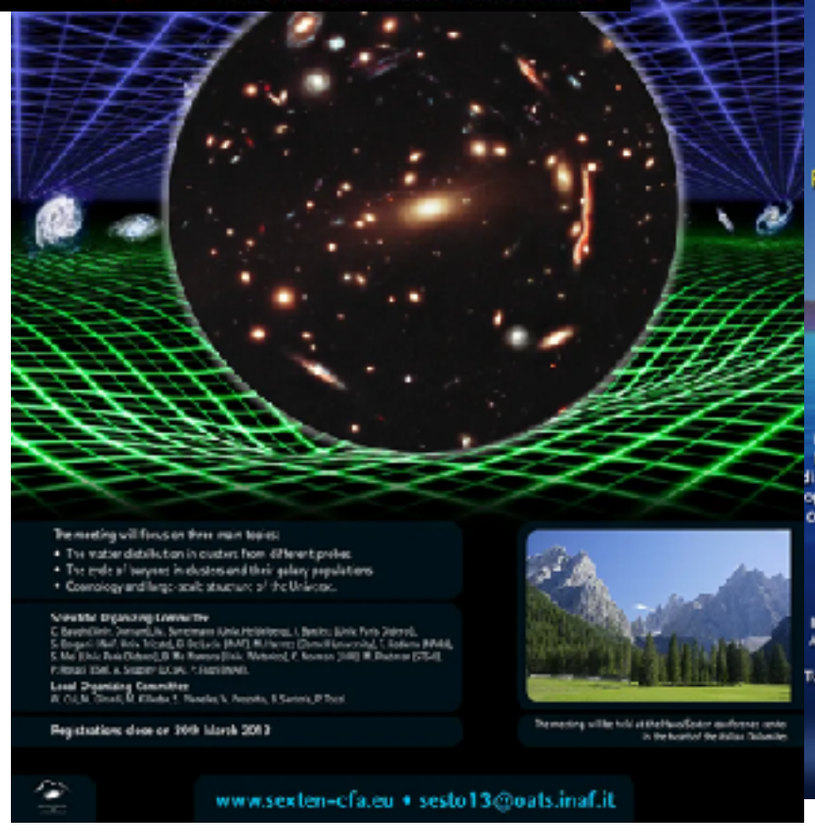
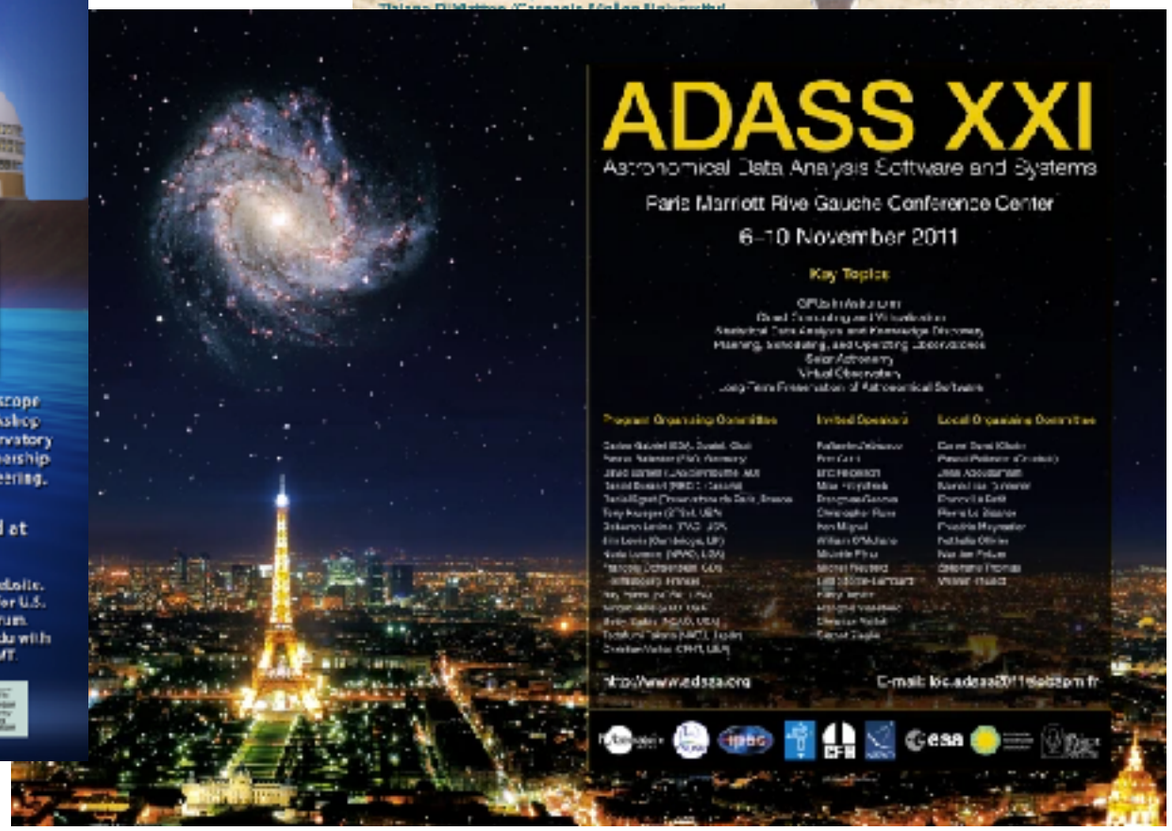
PHY 517 / AST 443:
Observational Techniques in Astronomy

Final Presentations

Going to a conference







Goals for a conference attendance

- tell people about your awesome work !
- learn about the current hot topics in your field
- network

Conference format

- talks:
  - review / plenary talks
  - contributed talks (have to apply for these)
- posters:
  - displayed for the full duration; often dedicated poster session
  - often with “lightning talk” session
- social events (usually conference dinner)

PHY517/AST443 Final presentations

- graduate students: make a poster + 1 minute "lightning talk"
- undergraduates: give a presentation; 10 minute talk + 3 minutes questions
- undergraduates who have already fulfilled the SPK requirement: can do presentation or poster

  (send me your transcript to show SPK has been fulfilled)

Final presentations

- **Mon., Dec. 8** (last day of class)
- For each presentation, 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

- coordinate with your lab partners: ≥ 1 of you will present your Lab 2, ≥ 1 of you will present your Lab 3

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

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
  - Posters: good to include picture of yourself so that people can come find you

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 the 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.

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) *Note: ChatGPT puts way too much stuff on slides…*
  - 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. *on the slide it is shown*
  - Visibly acknowledge your co-authors when presenting your own research, e.g. on title slide

How to make a good poster

- *Many of the same guidelines as for talks*
- Avoid too much text!!!
- Clearly structure your poster
- Make sure figures and text are well legible
- Include your picture + e-mail address

Practicalities

- You'll have to tell me your title ahead of time (for scheduling)

- **Talks**: Send me your talk in google slides or pdf format, well before the start of class
- **Posters**: The Geoscience Director of Laboratories has kindly agreed to print your posters! Send her *the link to the poster PDF file* by 8am on Friday, Dec. 5th. The maximum poster width is 42".