

# PHY 517 / AST 443: Observational Techniques in Astronomy

Final Presentations

# Going to a conference

The logo for the conference 'Cosmology on the Beach 2016' is displayed against a background of a tropical beach with palm trees and a clear blue sky. The title 'Cosmology on the beach 2016' is written in a large, stylized, colorful font where 'Cosmology' is in pink, 'on the' is in yellow, 'beach' is in green, and '2016' is in white. Below the main title, the subtitle 'Essential Cosmology for the Next Generation' is written in a smaller, dark blue font. To the right of the subtitle, the text 'January 10th to 16th, 2016' is followed by the location 'Iberoautor Tulum/Quintana Roo, Playa del Carmen, Mexico'. Below this, the word 'Information' is followed by a URL: <https://sites.google.com/inin/cosmologyonthebeach2016/home>. On the left side of the logo, there is a list of invited speakers under the heading 'INVITED LECTURES' and 'INVITED PLENARY SPEAKERS'. On the right side, there is a stylized illustration of a martini glass filled with a colorful, swirling mixture, with a small Earth model and a blue planet-like object floating in it.

The image is a promotional flyer for the ADASS XXI conference. The left side features a photograph of the Eiffel Tower and the Paris skyline at night, with a large, colorful spiral galaxy superimposed on the upper left. The right side contains text and logos. At the top, 'ADASS XXI' is written in large, bold, black letters, with 'Astronomical Data Analysis Software and Systems' in a smaller font below it. The conference details are listed: 'Paris Marriott Rive Gauche Conference Center' and '6-10 November 2011'. Below this, 'Key Topics' are listed: 'CPU and GPU', 'Cloud Computing and Web Services', 'Assisted Data Analysis and Knowledge Discovery', 'Planning, Scheduling, and Optimizing Observations', 'Solar Astronomy', 'Virtual Observatories', and 'Large Data Federation of Astronomical Databases'. The 'Program Organizing Committee' and 'Local Organizing Committee' sections list names and their institutions. Logos for various organizations are at the bottom.

# 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; 12 minute talk + 3 minutes questions

# PHY517/AST443 Final presentations

- ~~graduate students: make a poster + 1 minute “lightning talk”~~
- undergraduates: give a presentation; 12 minute talk + 3 minutes questions

# Final presentations

- **Wed., May 7** (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 partner: one of you will present your Lab 2, the other one 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 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)
  - 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

# 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