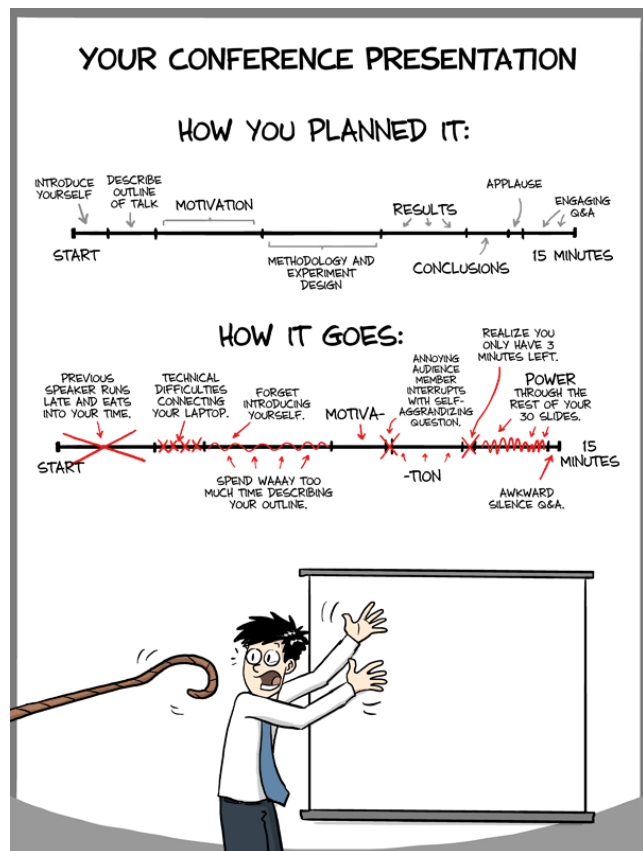




An Introduction to Presentations

Eddie Schwieterman – Pre-MAP Seminar – 11/24/2014



Seminar BINGO!

To play, simply print out this bingo sheet and attend a departmental seminar.

Mark over each square that occurs throughout the course of the lecture.

The first one to form a straight line (or all four corners) must yell out to win!



SEMINAR BINGO				
Speaker bashes previous work	Repeated use of "um..."	Speaker sucks up to host professor	Host Professor falls asleep	Speaker wastes 5 minutes explaining outline
Laptop malfunction	Work ties in to Cancer/HIV or War on Terror	"...et al."	You're the only one in your lab that bothered to show up	Blatant typo
Entire slide filled with equations	"The data clearly shows..."	FREE Speaker runs out of time	Use of Powerpoint template with blue background	References Advisor (past or present)
There's a Grad Student wearing same clothes as yesterday	Bitter Post-doc asks question	"That's an interesting question"	"Beyond the scope of this work"	Master's student bobs head fighting sleep
Speaker forgets to thank collaborators	Cell phone goes off	You've no idea what's going on	"Future work will..."	Results conveniently show improvement

JORGE CHAM © 2007

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Why give talks?

- Succinctly communicate scientific results to a large audience
- Opportunity for critical evaluation
- Opportunity for discussion
- Advertise yourself and your science

Key Components

- Title Slide
- Introduction & Background
- Motivation → What question(s) are you trying to answer?
- Methods
- Results/Analysis
- Conclusions and/or Future Work
- Questions & Answer

Introducing a Topic

- What object or process are you studying?
- Why is it interesting?
- What was known before?
- What specifically do we want to know now? How is that related to larger scientific questions?
- E.g, “Detecting N₂ directly through spectroscopy would help us constrain surface pressure, which would allow us to better understand the habitability of Earth-like exoplanets.”

Methodology



Yeah, you spent most of your time coding. No one really wants to hear about this.

- How did you pursue your question? What models or techniques did you use?
- E.g., “In order to measure X, we used model Y and analyzed the synthetic data with technique Z”
- Use equations sparingly
- Spend only as much time as necessary to establish the credibility of your results

Presenting Results

- Should be bulk of your talk
- Use descriptive titles
- Use plots, figures, diagrams, etc. to illustrate your results
- Bring back to motivating questions

Conclusions & Future Work

- Summarize succinctly what you found and its relevance based on your motivating questions
- What does this mean for other fields?
- What is still left to know?
- What limitations does your current work have, and how will it be addressed in the future?

Avoid These Things

- Paragraphs of text
- Cluttered slides
- Unlabeled axes
- Figures that are too small, too faint, or at too low a resolution
- Painful color/text schemes
- Bullet point lists that are too long ;)

Good Slide Example

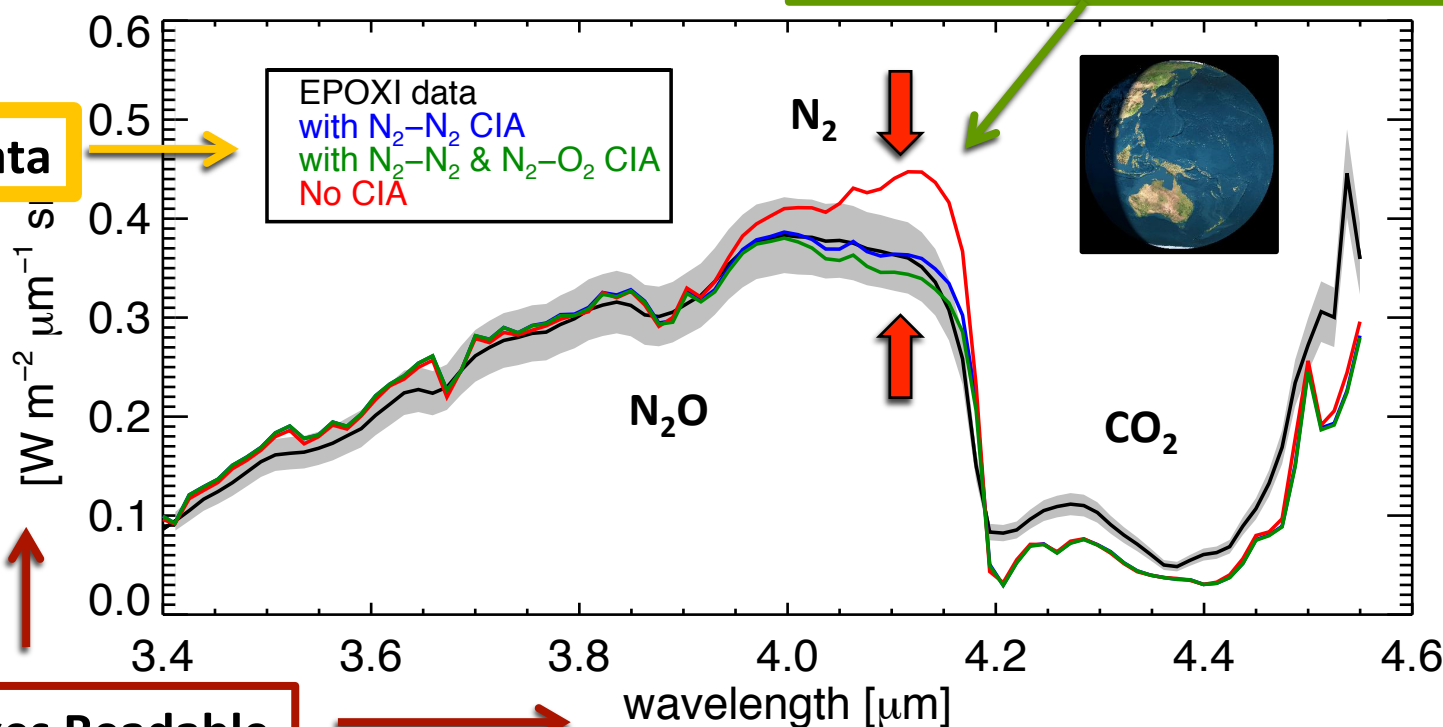


Descriptive Title

N₂ direct detection

Attention Drawn to Important Feature

Key for data



Axes Readable

Schwieterman et al., in prep

Validation: N₂ directly detected in Earth's disk-integrated spectrum

Bad Slides Example



Comet Project Steps

Vague Title

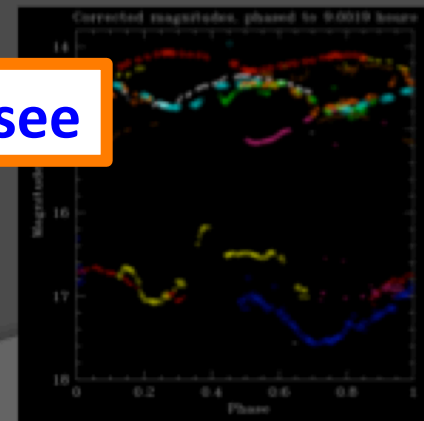
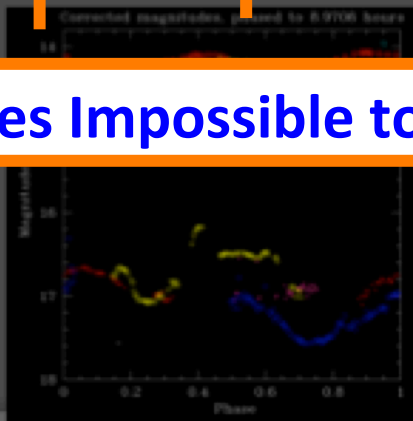
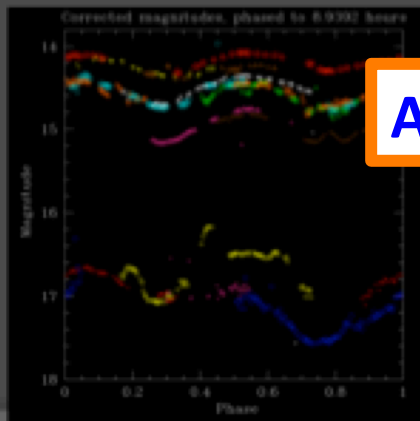
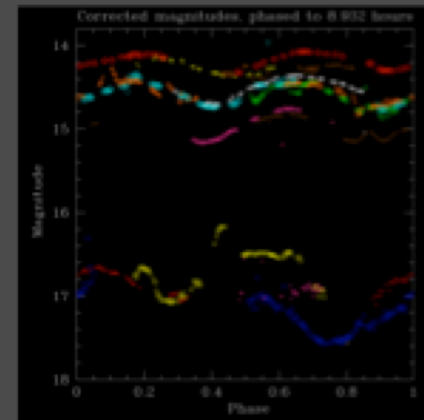
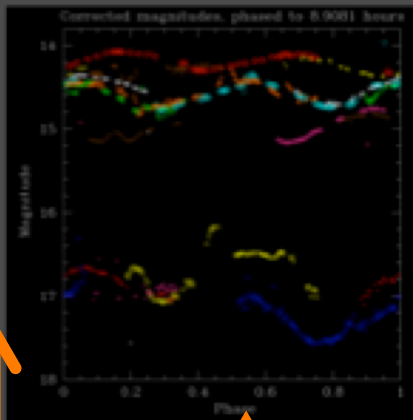
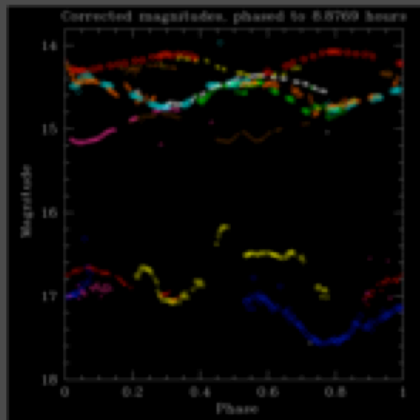
- ◉ Image Reduction - Bias, Flats, Processing
- ◉ Standard Star Photometry
- ◉ Extinction Calculations
- ◉ Instrumental Mag. Calculations
- ◉ Comet Photometry
- ◉ Comparison Star Photometry
- ◉ Phase Analysis
- ◉ Fourier and PDM Analyses
- ◉ Plotting
- ◉ Cometplications!

Tedious List of Steps

Bad Pun

Phasing 1988 and 1999 solutions to our data

Too many subplots



Axes Impossible to see

Poor color contrast

Common Speaking Mistakes

- Spending too much time on intro/methods
- Rushing through results/conclusion
- Speaking too fast
- Exaggerated hand motions
- “Um”, “like”, mumbling

Some Other General Tips

- Tell a story (have a narrative)
- Practice (several times with a timer)
- Plan 1 minute/slide