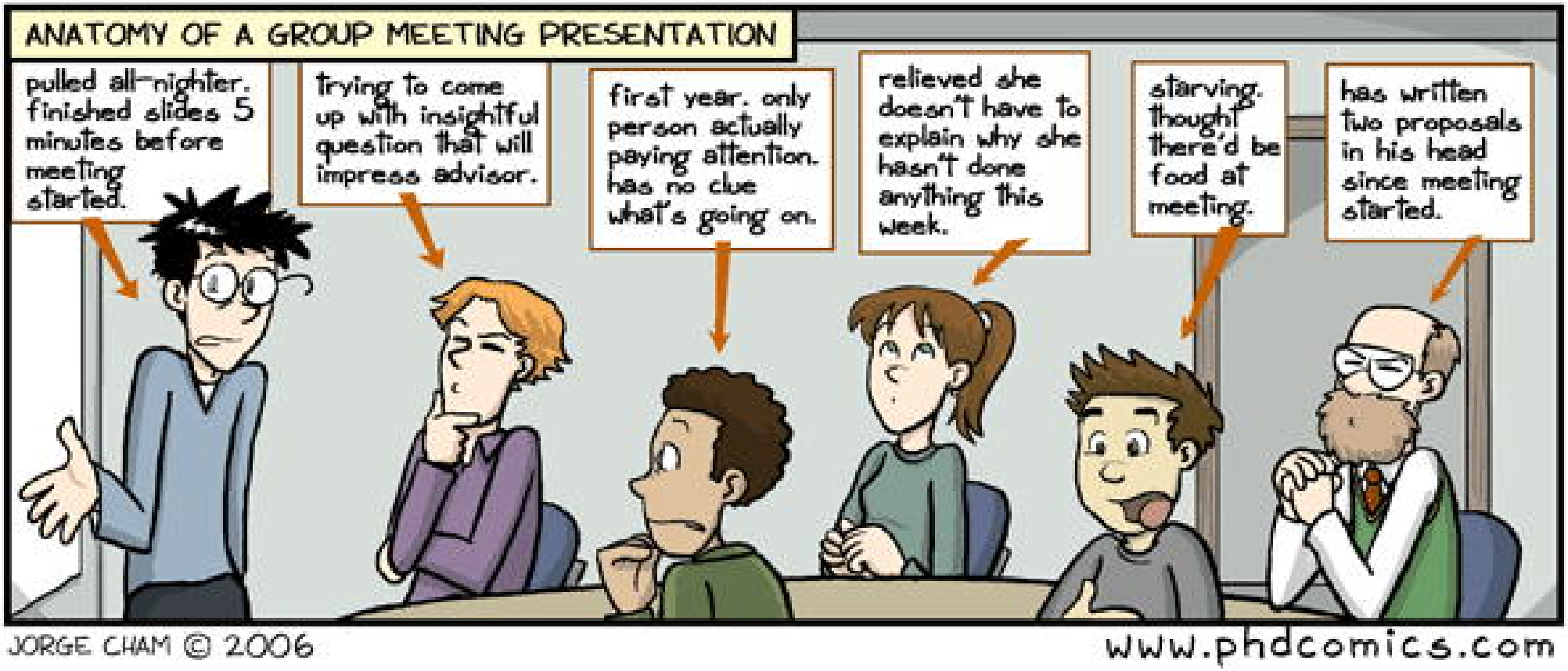
The Oral Presentation for the Prelim or Thesis



How Do You Start Drafting Your Presentation?

First, draft an outline for your presentation!!

Example organization of ~30-minute prelim talk

Background and Introduction (7–9 minutes)

$\Rightarrow$ 5–6 slides

~1 Title slide - Your name, advisor's name, research title
~1 Outline slide – Organization of talk
~1 Overview slide – Why is this research important?
~2-3 Background slides – Provides essential background for non-experts

Methods and Preliminary Results (7–9 minutes)

$\Rightarrow$ 5–6 slides

~2-3 Methods slides – Theoretical/experimental methods used
~0-3 Preliminary results slides – Proof-of-principle results

Example organization of ~30-minute prelim talk

Proposed Research (10–12 minutes)

⇒ 5–6 slides

~1-2 slides per proposed project

Summary and Acknowledgments (1-2 minutes)

⇒ 2 slides

1 Summary slide - Review the main points

1 Acknowledgment slide – Acknowledge collaborators, funding agencies, helpful colleagues/staff, etc.

Questions

⇒ 3–N back-up slides – Anticipate questions that might arise

Tips for preparing your talk

Adjust the presentation to your audience! Your committee are not all experts…make sure you have sufficient background to orient all members

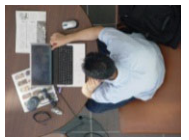
You don't have to tell the committee everything about your research: Identify the 2-3 main points you can reasonably convey in a 30-minute talk

Create an outline of your talk, i.e., have a logical organization: You can use the same outline as used for your prelim paper

Make sure each slide has one key idea and that idea is important to your message

Write the key point to make for each slide (often the heading)

If the slide doesn't have a point, eliminate it!!!



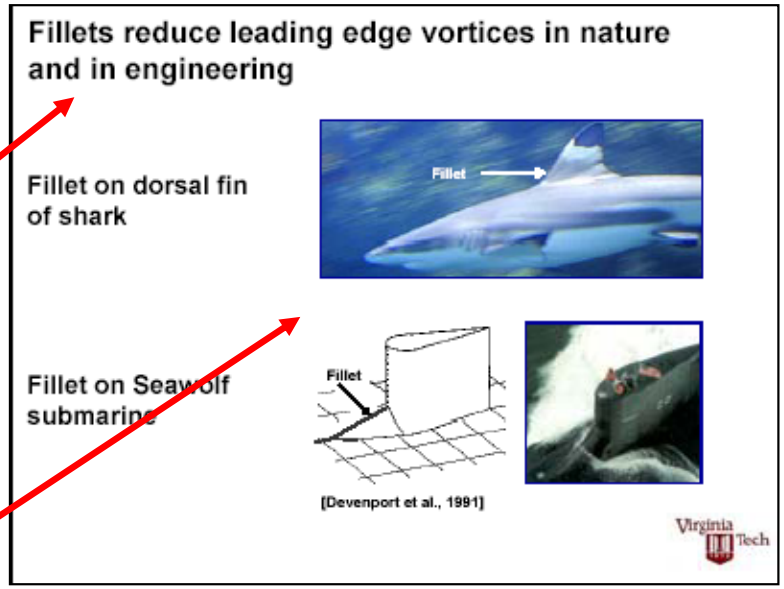
Tips for preparing your talk (cont.)

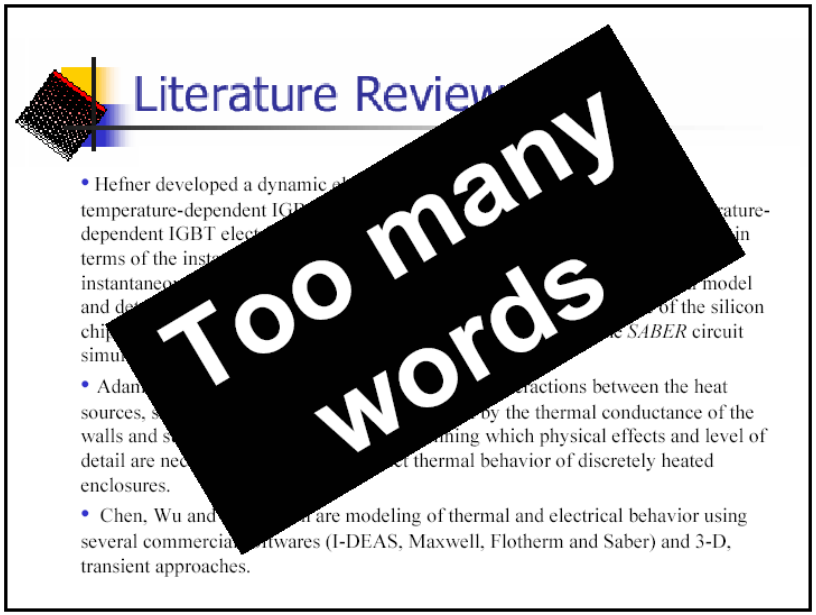
Have only 1 idea per slide

Use the header to state the main idea of the slide, and use the body of the slide to support that idea

Use well-labeled graphs and figures to illustrate your key points…this makes the slide more real and interesting to the audience

Avoid too much text….





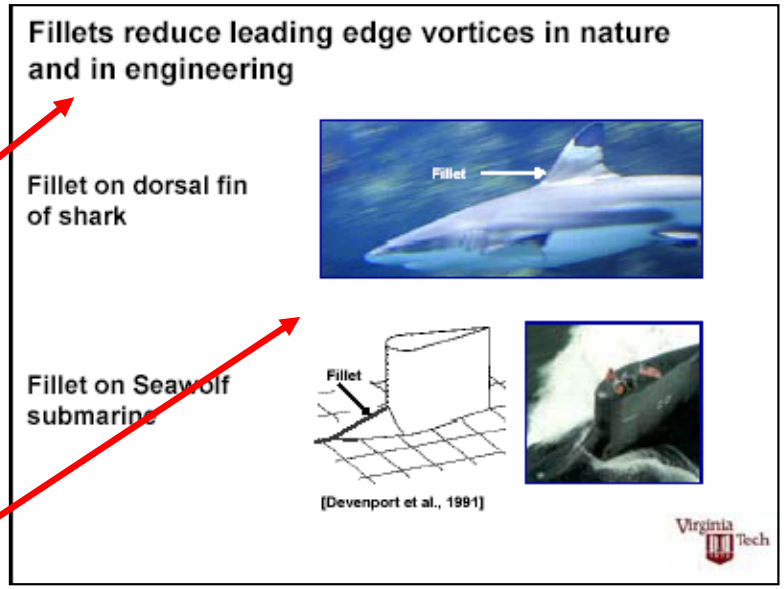
Tips for preparing your talk (cont.)

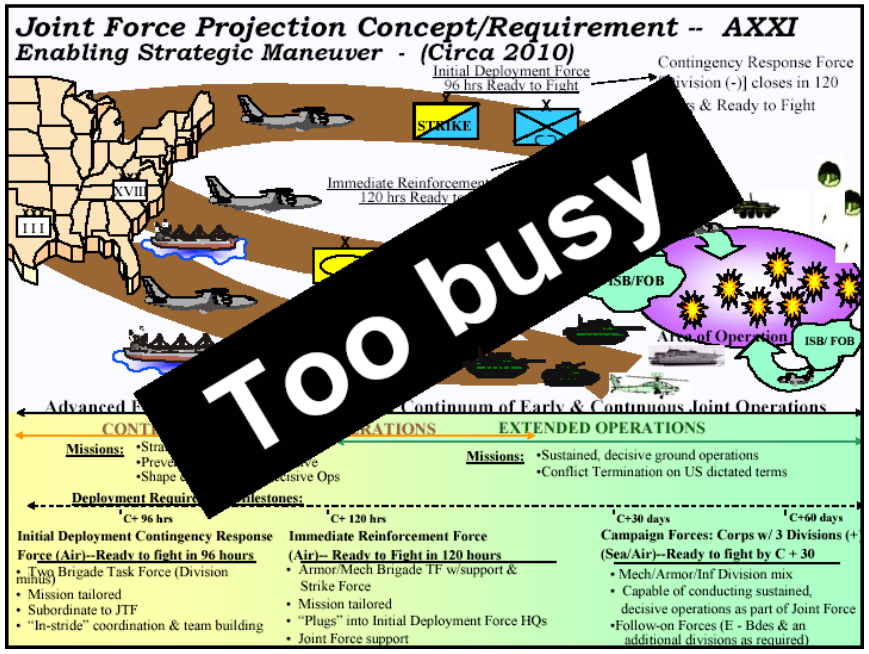
Have only 1 idea per slide

Use the header to state the main idea of the slide, and use the body of the slide to support that idea

Use well-labeled graphs and figures to illustrate your key points…this makes the slide more real and interesting to the audience

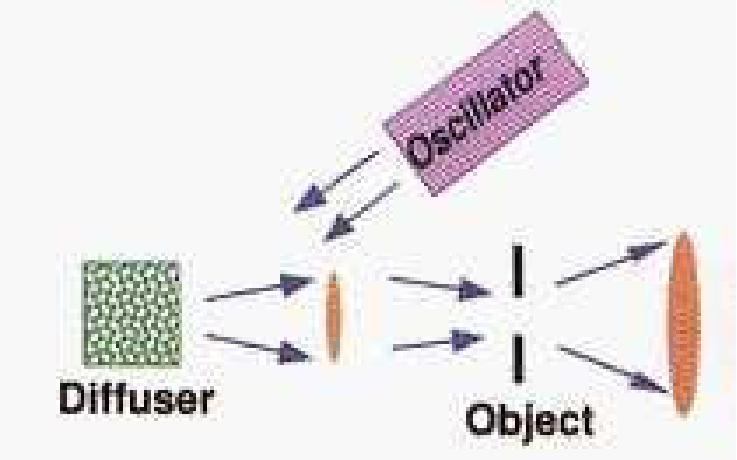
….or too many distracting images



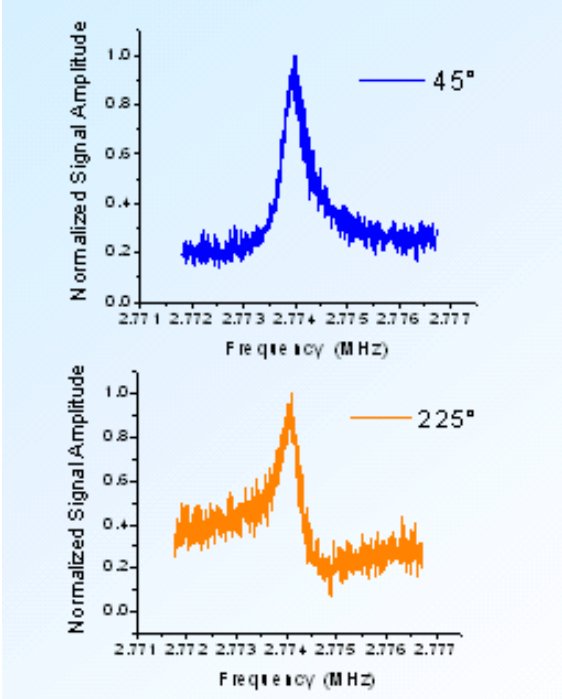


Label all elements in a figure

- Point out important features
- Label both axes of graphs and show units
- Provide a brief caption
- Give credit to source



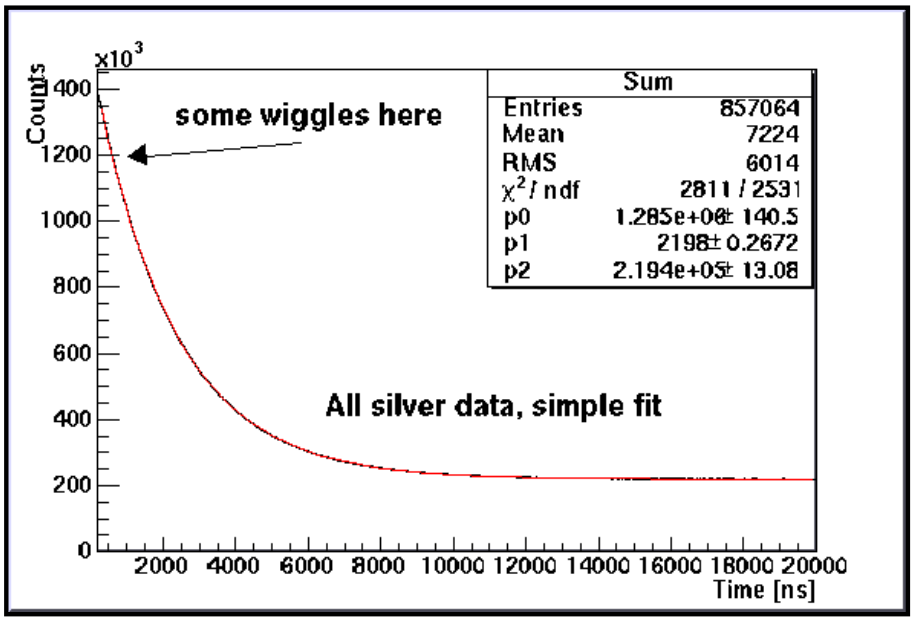
The Nike laser system uses discharge pre-amplifiers.
(*Courtesy US Navy*)

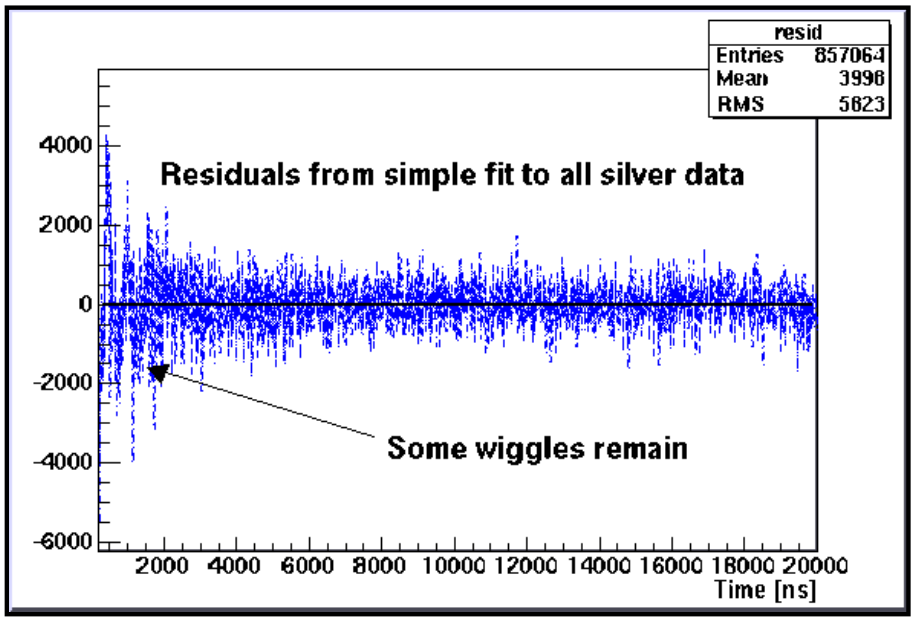


Sample normalized signals from the two-beam optical drive.
(*Courtesy C. Michael*)

Presenting data is your most important and challenging task

- Avoid copying a graph from a formal article – they have a different style, e.g., labels are too small
- Use color and make lines thick, labels legible
- Label axes and annotate important points with arrows and add words
- Use tables sparingly – if used, highlight important parts
- Remove unnecessary information from graphs/figures

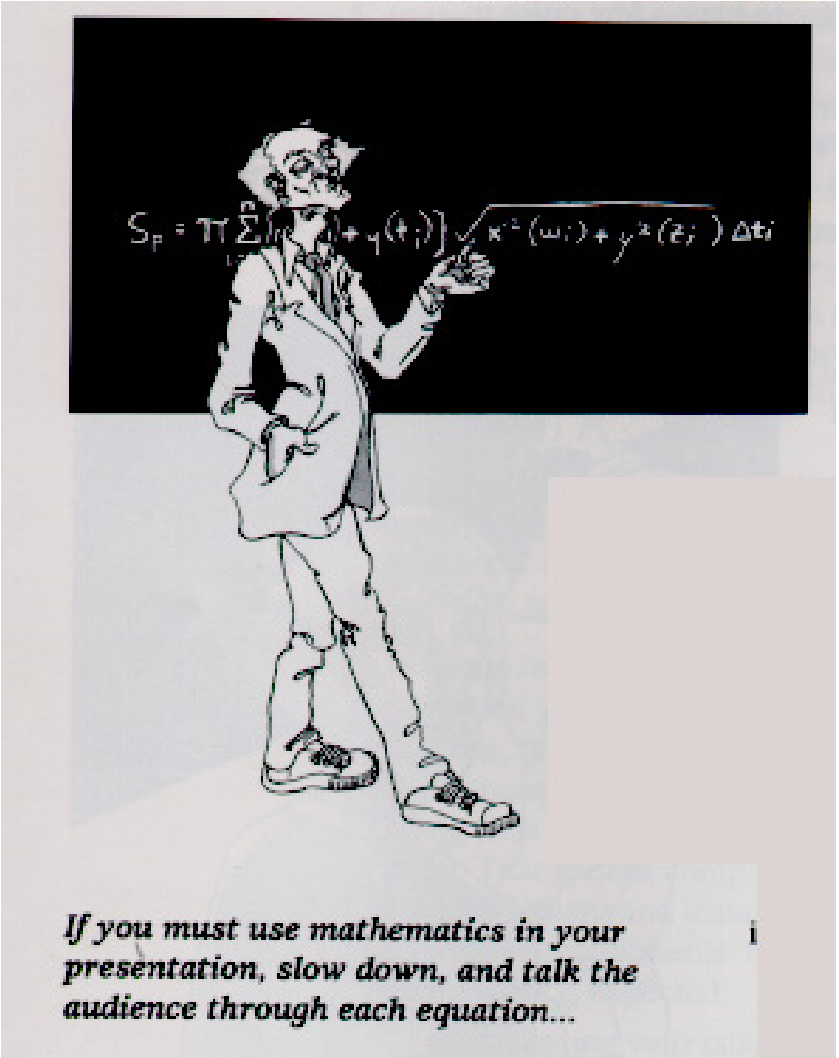


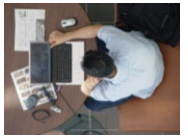


Explain the physics behind your equations

If you use equations

- Define parameters
- Provide physical explanations of different terms in equation
- Provide an intuitive explanation of what the equation means
- Combine the equation with a picture that illustrates the physical principle involved



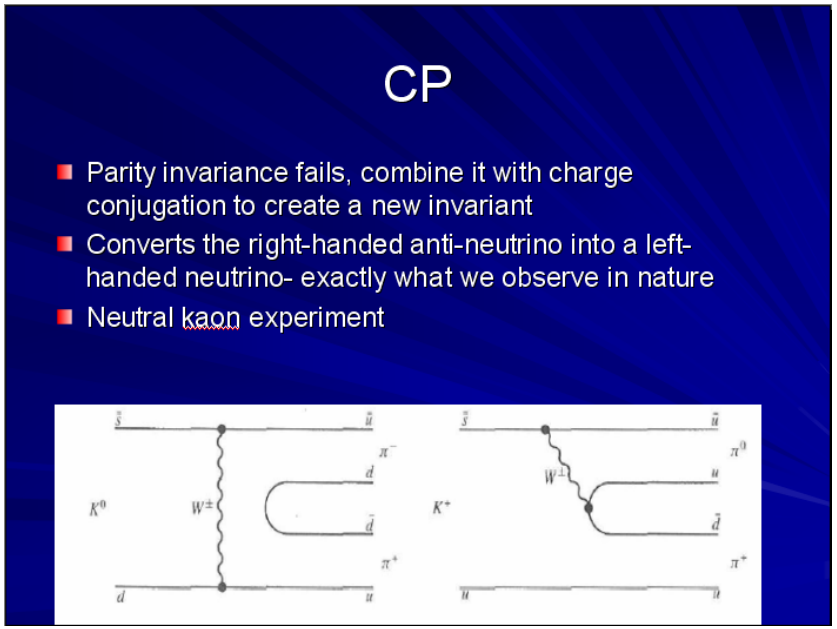


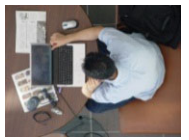
Remember, your goal is to convey your ideas, so avoid distracting text and effects!

Don’t overuse PowerPoint animations and sounds!

Make sure there is good contrast between text and background

Use simple (or no) backgrounds on slides





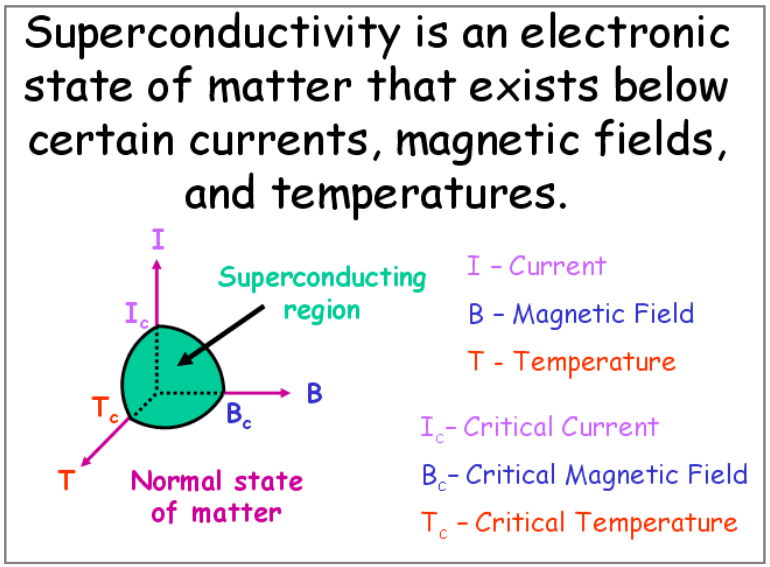
Use “normal” colors

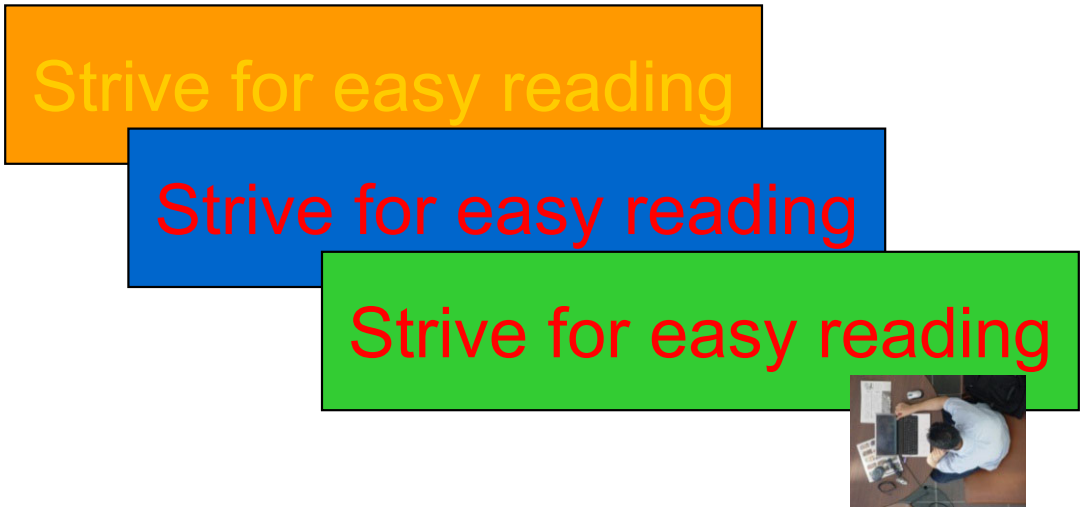
DON’T use red/green or red/blue as contrasting colors

Make sure colors looks the way you expect using an LCD projector!

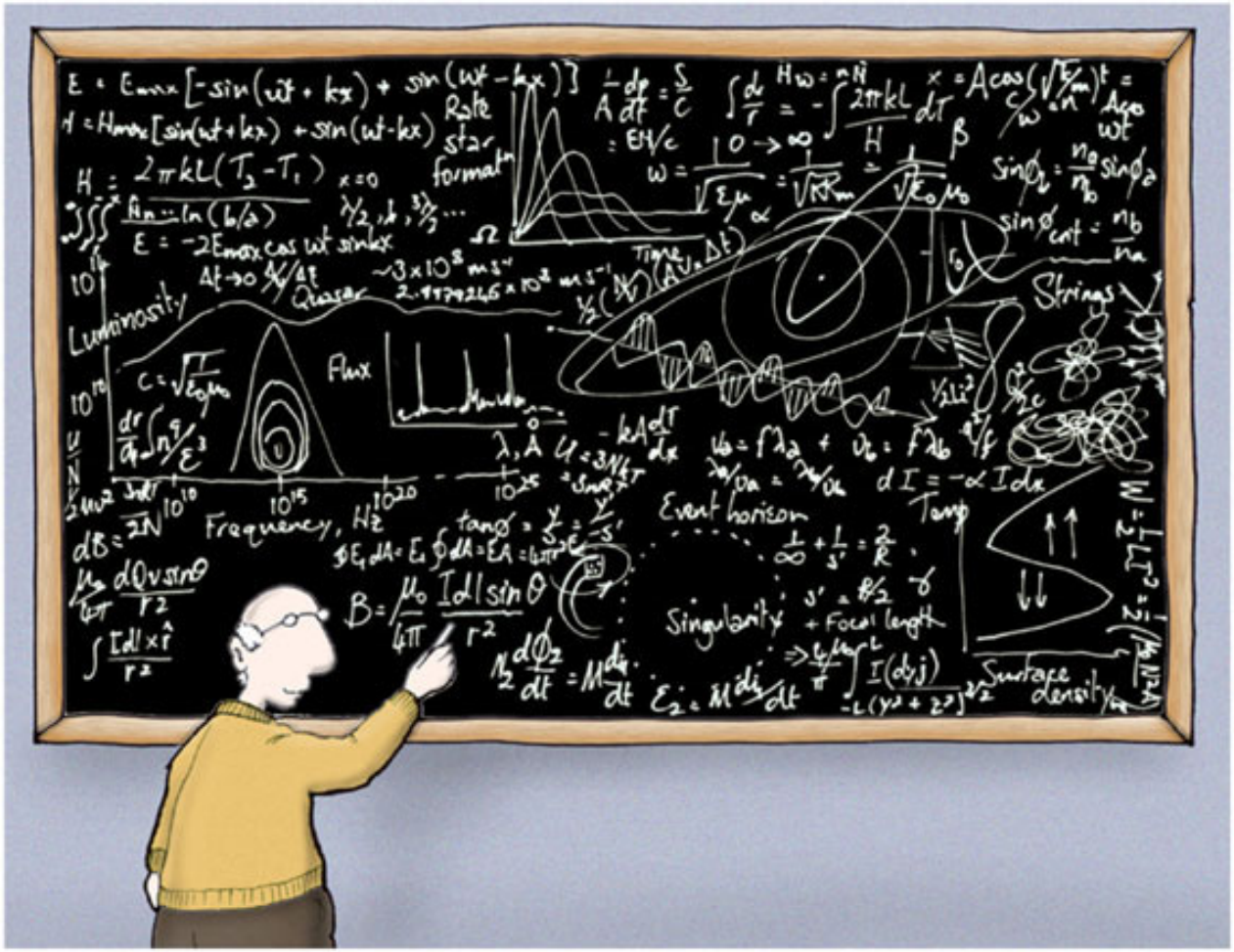
Avoid neon colors and pastels

Don’t use many random colors; people expect color to *mean* something

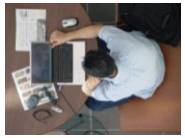




Tips for presenting you prelim/final talk



Astrophysics made simple



Pointers for giving the best possible talk:

Maintain eye contact with audience
Don't stare at screen or monitor

Do not read your talk!

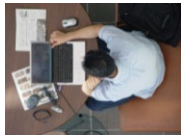
Avoid nervous mannerisms
Pacing, bobbing, waving arms, jingling coins

Use laser pointer or stick directed at screen
Don't point directly at overhead on projector
Don't block the screen

Train yourself to speak slowly and distinctly—practice!

Avoid "fillers": "uh", "like", "um", "okay"

Be enthusiastic!
If you don't act excited by your results,
don't expect the audience to be!



Pointers for giving the best possible talk:

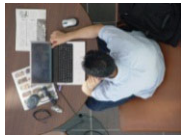
Don’t show any material on slides (e.g., figures, equations, text, etc.) you can’t explain!! This will invite questions you don’t want!!

Rehearse how you’ll end your talk

Don’t end with “Well, I guess that’s it…”

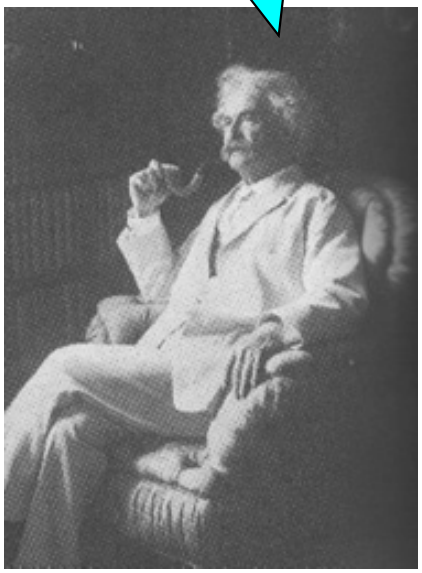
Don’t just stop and let the committee guess that you’re done

Thank the audience!



The best way to prepare for a talk is to Know Your Material

It takes three weeks to prepare a good ad-lib speech



Practice, practice, practice

Practice in front of friends and/or group members, encourage them to ask questions so you can get used to being interrupted

Focus on communicating, not performing

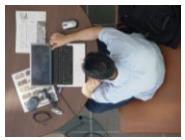
Humor is good, but don't overdo it

Keep explanations simple

Emphasize the physics and intuitive explanations

Prepare key phrases and words

If you notice you have trouble saying a physics phrase or term, practice saying it so you don't stumble over the term during your presentation



Check *everything* just before your talk

Check the projector

- Make sure you know how to turn it on
- See that it is plugged in
- Check which way to position your slides
- Adjust the focus

Check microphones, pointer, other tools

Arrange your slides, notes, and other materials

- Be able to reach everything without moving
- Be able to go through your slides without fumbling

Have a "clock" handy to check the time