My talk

my name, my collaborators, my advisor
my department
my university

this project was funded by ...
location & date of presentation

key points for presentations

- organization

- appearance

- preparation

- presentation

- formatting

Based largely on an example from Prof. Mankey for PH491/591

organization

- Outline

- Introduction

  - context for the topic

  - impact/implications of the work

  - who, what, hows of previous work

- Main Body

  - organization logical & flows well

  - emphasize key assumptions, results, implications

- Summary

  - what is the conclusion

  - impacts and implications

  - need for future work?

appearance

- brief phrases & keywords for reinforcement
    - only a few complete sentences on each slide
    - never just have a graph and no explanation
    - don't read the text verbatim!
- Use the PH255 template
    - no fonts below 16 point
    - can you read it from the back of the room?
    - no more than 3 font colors
- don't put too much on the page
- forget tables
    - graph or histogram if possible

preparation

- make sure you can use the equipment

  - fumbling is embarrassing, distracting, inefficient

- make sure image is focused and fills the screen

  - if we can't read it, what's the point?

- test the slide show before presenting

- practice (even if you're alone) - have the words ready!

- make sure fonts & graphics are readably sized

presentation

- know your audience's level

  - avoid or explain jargon

- don't block the screen

  - be aware of your surroundings

- talk to the audience

  - don't face the screen

- don't striptease your slides

 - it frustrates the audience

presentation (cont)

- vary the amplitude of your voice, no monotone

- reinforce / repeat the particularly important points

  - make sure they know what is most important

- develop a narrative which builds expectation for your results

- make eye contact with all parts of the audience

- don't fidget

- entertain the audience

formatting

- use a single file with the slides in the correct order

- use a template and stick to it - uniformity!

- make it readable in handout form (6 slides per page)

  - minimum 16 or 18 point, typically
  - scale graphics accordingly

- put graphs/pictures in an image format (JPEG)

  - object-linked embedding may fail on another PC ...

- enter page titles using the slide layout to make a table of contents automatic

- with your permission, presentations will be put on the PH255 web site
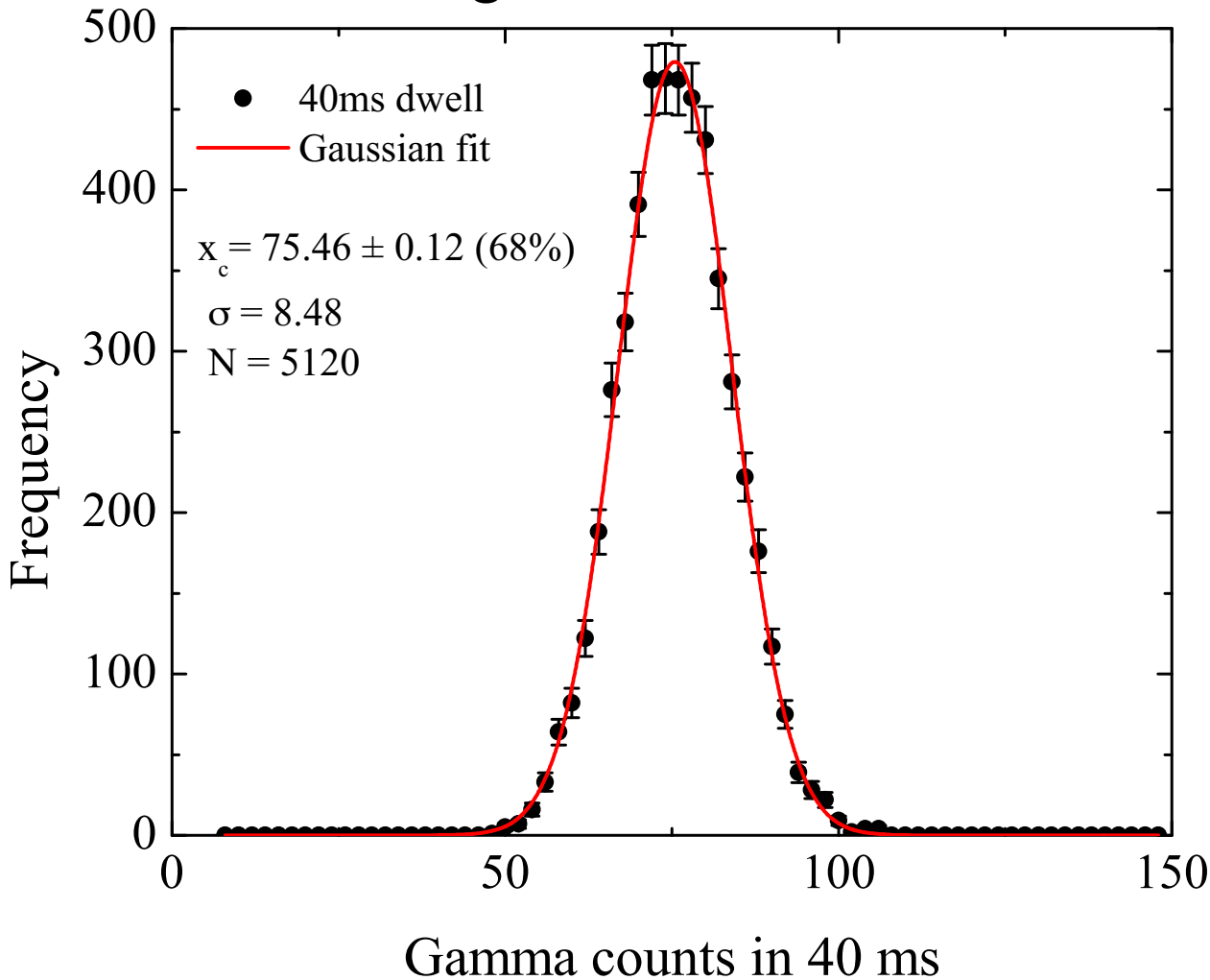
picture guidelines

PH255 electrical transport setup (photo: P. LeClair)
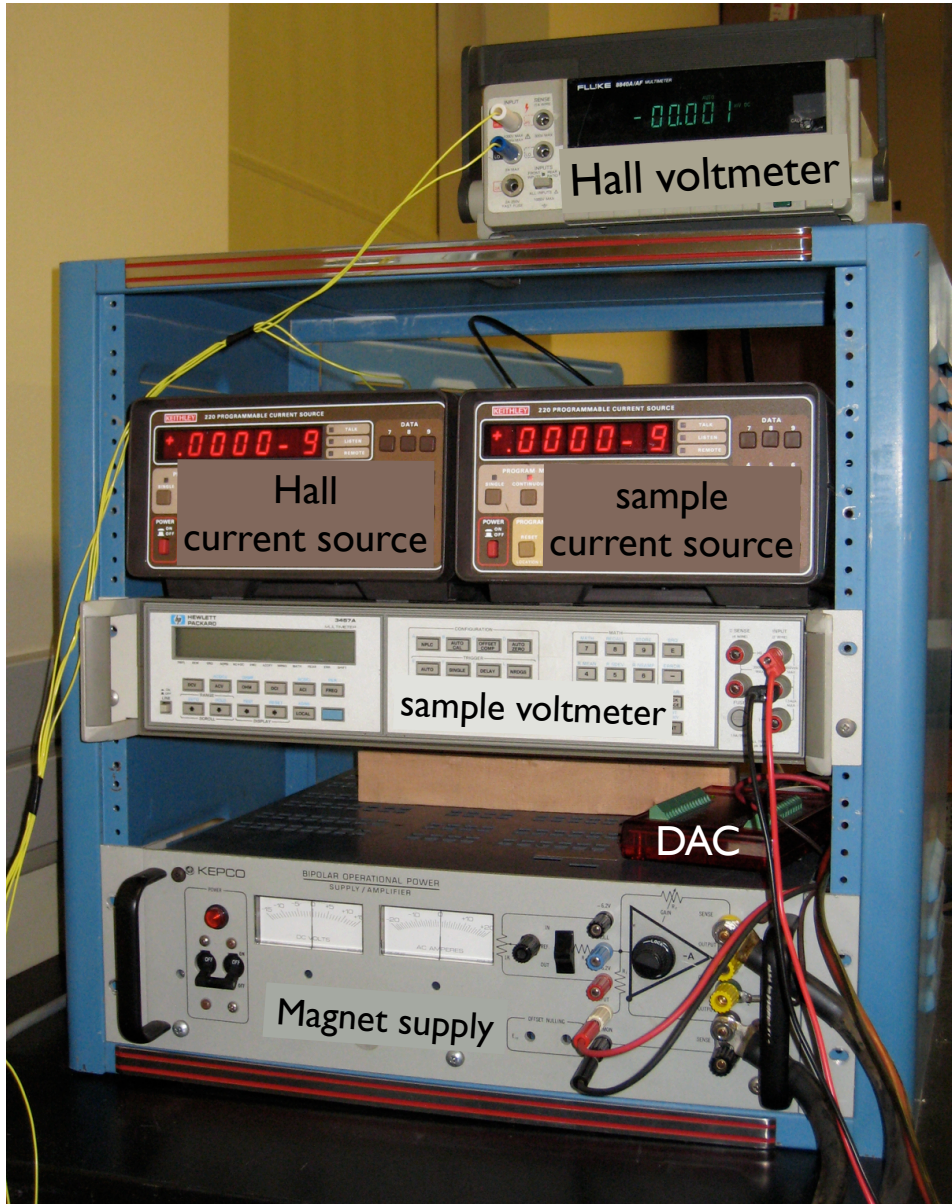
- avoid drag & drop

    - object embedding may fail on other PCs

    - PDF/TIFF may fail too

    - save graphs as images & import

- resolution 300~600dpi

- resize images in a picture editor, not powerpoint

- font/color consistency with slides

- caption + reference ...

graphs

Histogram and Gaussian fit

- ~300 dpi (or ~6x6 in)
- fonts:
  - title ~36pt
  - axes titles ~32
  - legend ~28
- import as picture
- units on axes if relevant
- legend
- same fonts everywhere
- symbol size/line thickness!
- watch the color combos
- Excel defaults are terrible

equations

- use the equation editor! don't fake it with a text box!

- under Size / Define change font sizes as follows:

  Full: 24 Point.
  Subscript/Superscript: 14 Point.
  Sub-subscript/Superscript: 10 Point.
  Symbol: 36 Point.
  Sub-Symbol: 24 Point.

$$\tau_{ij} = \begin{bmatrix} \tau_{xx} & \tau_{xy} & \tau_{xz} \\ \tau_{yx} & \tau_{yy} & \tau_{yz} \\ \tau_{zx} & \tau_{zy} & \tau_{zz} \end{bmatrix}$$

- resizing affects formatting and makes some formulae unreadable
- even better: use a LaTex-based program like TexPoint ….

$$\vec{\nabla} \cdot \vec{F} = \frac{\partial F_x}{\partial x} + \frac{\partial F_y}{\partial y} + \frac{\partial F_z}{\partial z} \qquad \vec{\nabla} \cdot \vec{j} = -\frac{d\rho}{dt}$$

more on equations

- they won't print/display correctly if they use special fonts installed only on your computer

- To eliminate this problem, edit your equation in a Microsoft Word document, save the Word document as an html file into a dummy directory, and the equation will be saved as ImageNNN.gif in the dummy directory where NNN is an equation number assigned by the Word program. Then use 'insert picture'

- even better: TexPoint or similar (e.g., LaTeXIt for the mac)
  - (downside: learning LaTeX markup. upside: beautiful.)
- use the font settings from equation formatting to make it the right size

explanatory text

- make it self-contained: people reading the slides afterward should understand

- still, no lengthy sentences.

- questions to answer:

  - what is the experiment?

  - what did you expect?

  - did you get it?

  - what does it tell you

- PROOFREAD and spell check

slide titles

- keep it short - 7 words or less

- make it a phrase

- will be in the table of contents when exported to HTML for PH255 site

- use terminology that will produce hits on search engines

presentation content

- all presentations have title, introduction, main body, and conclusion slides

- outline the presentation before you start

  - saves time, keeps you organized

- limit the content to ~3 main points: don't overwhelm

- introduction: state the problem and method of approach

- main body: what you did, how you did it

- conclusion: restate problem, how you contributed to solution

- conclusion can include future work/outstanding problems

miscellanea

- animations & transitions are really, really unlikely to help. they distract, mostly.

- exotic backgrounds don't help either.

- clean & crisp

- scientists are not above valuing pretty

- cite published background work

- emphasize your unique contributions

- you cannot practice too many times

    - have the words ready, eliminate pauses

- you cannot proofread too many times

miscellanea

- make title slides informative

- *summarize* relationships - no long derivations

- make assumptions clear

- identify all symbols, try to tell what symbols & equations *mean*

- always present some raw data as well as processed data

- always compare to a model

- report uncertainty in results (e.g., x = y.yy ± z.zz) and compare to known values ... how many standard deviations away are you?

- describe how errors are determined