

# Scientific presentations

— some things to think about —

Now Alice gets to stand on her soapbox...

# Some caveats...

- **Not everything applies to every talk**
  - It depends strongly on the context, audience, length, aim of the talk
- Don't let my advice cramp your personal style!
- My experience and perspective comes from scientific and academic conferences.
  - Presentations in industry settings may look **very** different and have very different requirements.
- (Some of) this is my personal preference

Question #1

Who is my audience?



Question #2

What do I want them to understand after my talk?

Question #3

How do I guide them towards that understanding?

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Question #2

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Question #3


How do I guide them towards that understanding?

**It doesn't matter what  
you say!**

**What matters is what  
your audience  
understands!**



Tell a  
story!

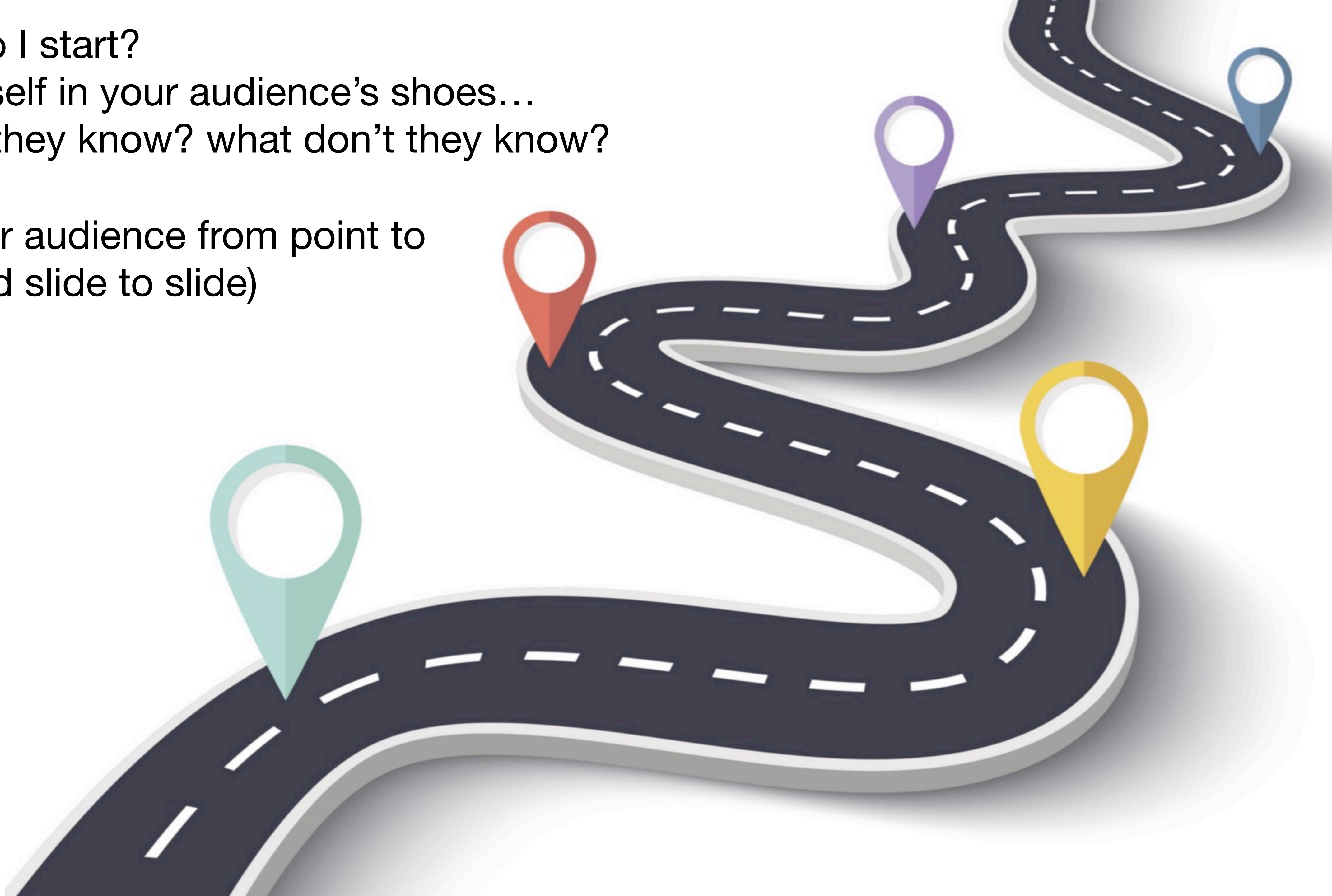


Speak with  
enthusiasm!



Presentation  
=  
Performance

- Where do I start?  
Put yourself in your audience's shoes...  
what do they know? what don't they know?
- Lead your audience from point to point (and slide to slide)



# A slide about slides (1/3)

- Slides can serve two purposes:
  1. To support your audience's understanding of your speech
    - ▶ Include key words, main conclusions
      - ▶ Avoid overloading the slide with text
      - ▶ No complete sentences!
    - ▶ Include plots, figures, diagrams, cartoons
      - ▶ 1-2 plots/slide
      - ▶ need to explain what is shown in plots (axes, marker colors, etc)
    - ▶ Highlight 1 main conclusion per slide

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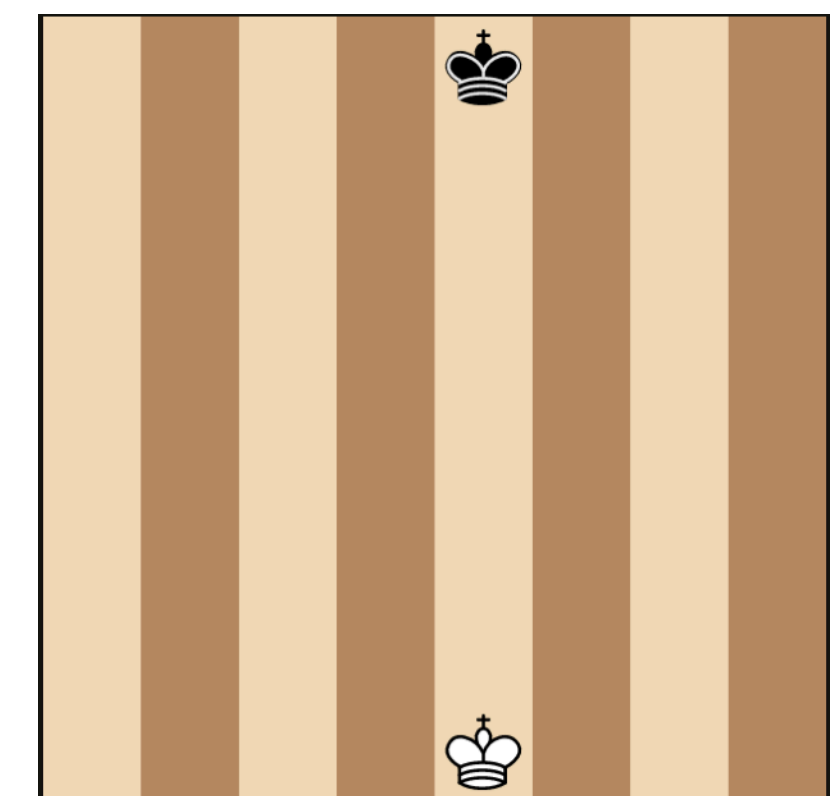
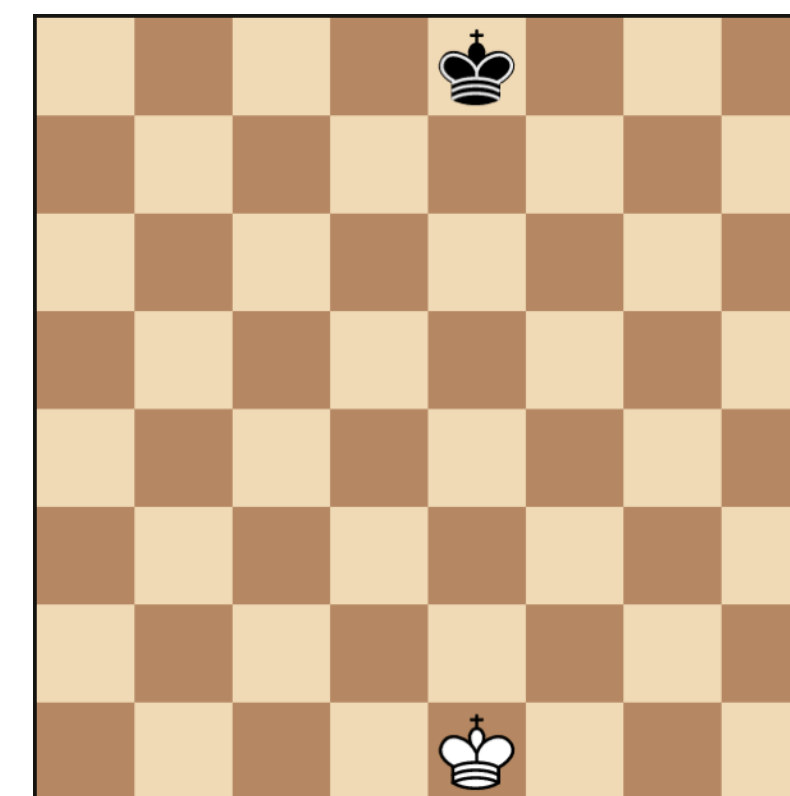
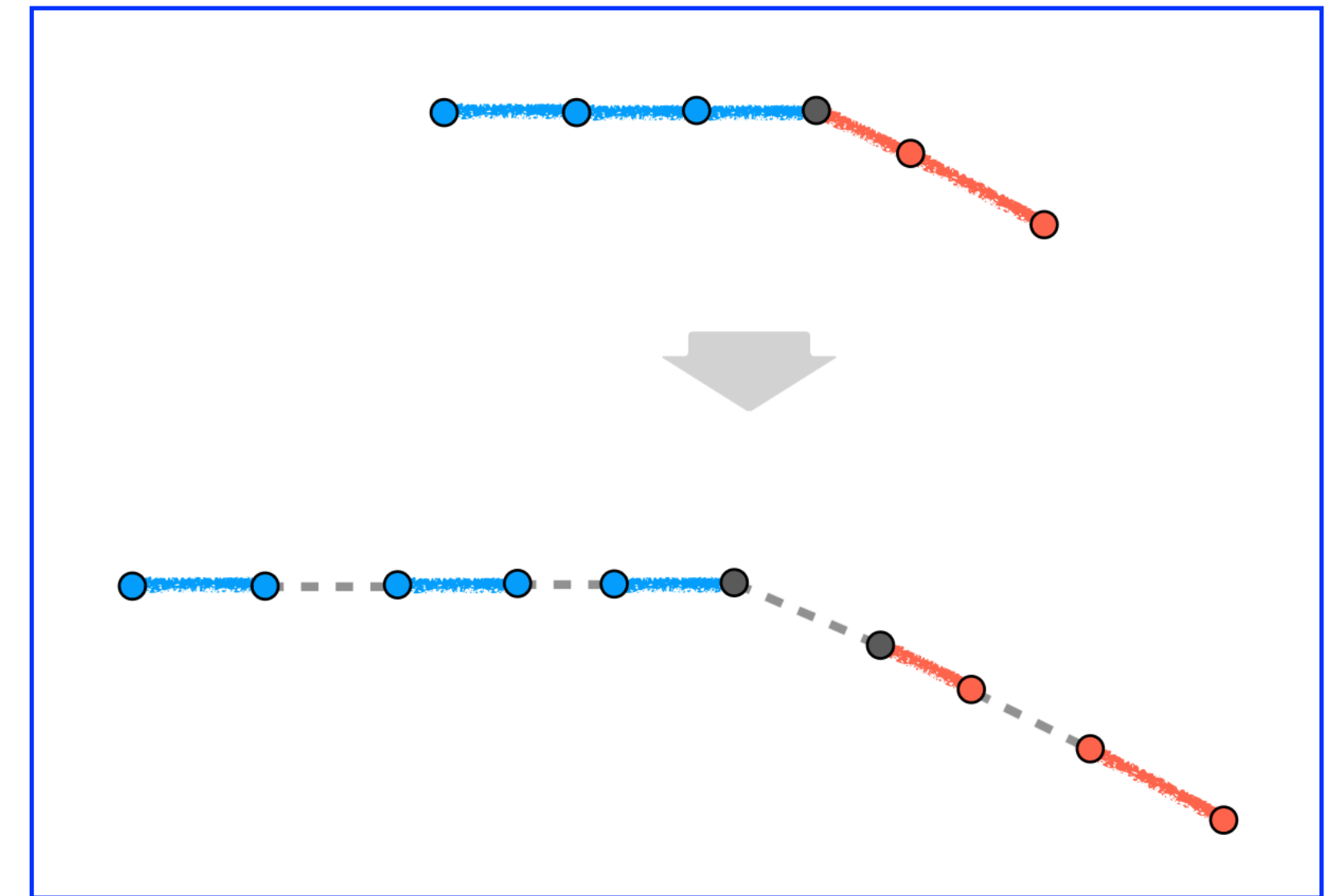
If your audience is reading,  
they are not listening  
(and vice versa)



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# A slide about slides (2/3)

- Slides can serve two purposes:
  2. To support you as you speak
    - ▶ To avoid forgetting key points
    - ▶ To avoid going on tangents
    - ▶ To help you with tricky explanations

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    - ▶ To help you with tricky explanations

**Be direct!**  
**Say what you want to say,  
no more, no less**

# A slide about slides (3/3)

Avoid yellow and light green against a white background

Clean, consistent formatting

Legend and axis labels of the plot are too small (I would need to describe them)

Requirements of the ALICE Collaboration

A bit too much text (in this case it's useful for a technical explanation) —> animate text to help your audience, but don't overdo animations

## Identity Method for $\pi$ , $K$ , $p$ identification



- For any value of TPC  $dE/dx$ , probability that a particle is a  $\pi$ ,  $K$ ,  $p$ , is known from inclusive distribution
- Particles are identified statistically, weights ( $w$ ) are assigned according to probability that particle is of a given species
- Calculate sum of weights ( $W$ ) instead of sum of particles ( $N$ ) in a given event
- Find moments of  $W$  distribution, then transform into true moments
- Identity Method makes it possible to account for misidentification/impurity without lowering efficiency by imposing strict selection cuts

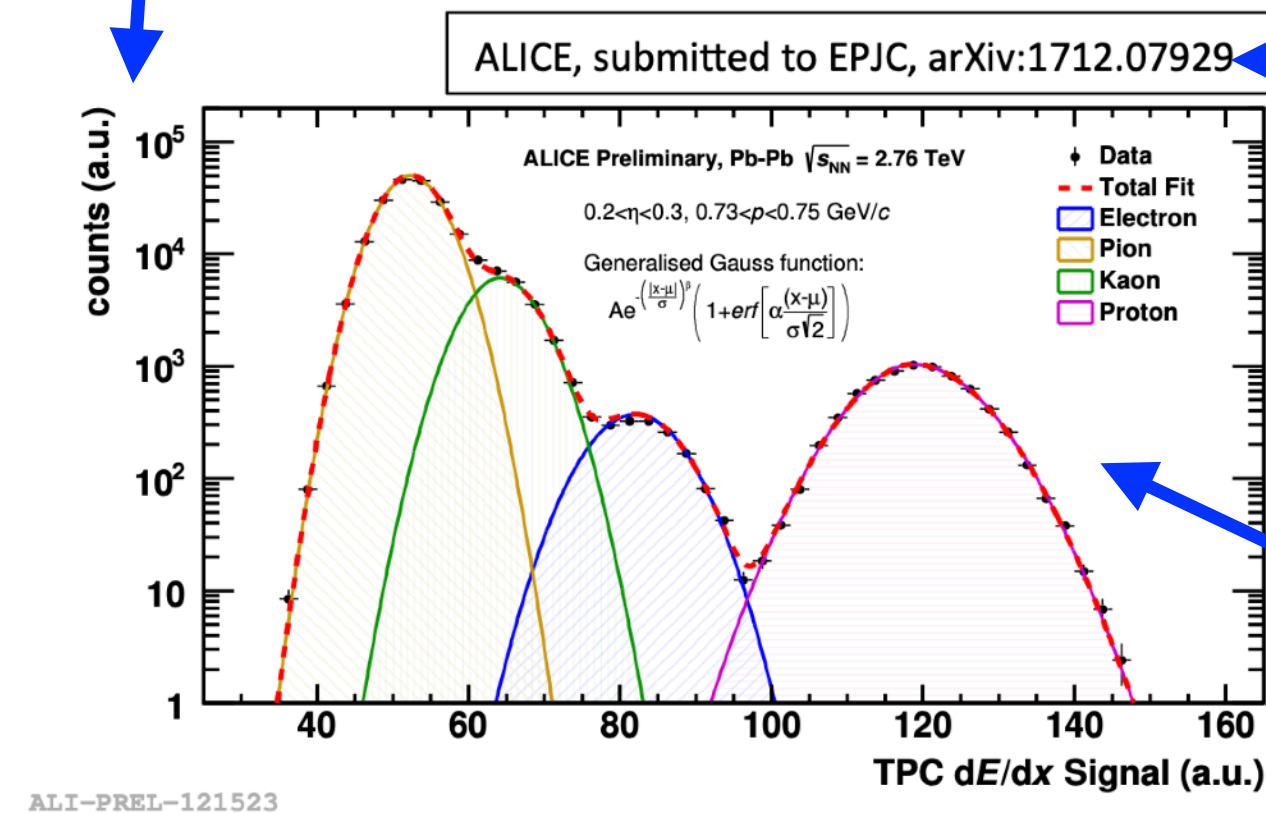


Image credit

One plot per slide

Uniform font size/style (different for references)

M. Gazdzicki et al., PRC 83 (2011) 054907, arXiv:1103.2887 [nucl-th]

M. I. Gorenstein, PRC 84, (2011) 024902, arXiv:1106.4473 [nucl-th]

A. Rustamov, M. I. Gorenstein, PRC 86 (2012) 044906, arXiv:1204.6632 [nucl-th]

References

14. May 2018

Net- $A$  fluctuations in ALICE -- A. Ohlson

9

Date and/or conference

Short title & speaker's name

Slide numbers

# Do I need an outline slide?

- It depends... **what do you want your audience to get out of it?**
- Some things to think about:
  - ▶ An outline slide can be useful as a roadmap if you're giving a long seminar (45+ minutes) or with multiple parts
  - ▶ In a short talk (10-15 minutes), you likely only have 1 story to tell, so an outline may not be a good use of time
  - ▶ An outline slide should be **useful**

One technique to save time:  
add your "outline" on the title slide

## Outline

- Introduction
- The detector
- My analysis
- My results
- Conclusions



## Outline

- Timeline of a heavy-ion collision
- Collective behavior of the QGP
- Using jets to probe the QGP
- More hard probes: heavy-flavor
- What have we learned, and where are we going?



## The quark-gluon plasma — an experimentalist's perspective —

Alice Ohlson (Lund University)

- Collective behavior of the QGP
- Using jets to probe the QGP
- More hard probes: heavy-flavor

# Pointers about pointers

- Use it to draw attention to specific things, but not every word (put it down if you need to)
- Don't swing the pointer around!

# Some tips on public speaking

- Face the audience!
- Not too slow and not too fast!
  - ▶ Most people present ~1 slide/minute
- Record yourself (e.g. on zoom) to see if you have any verbal habits (“um,” “uh,” “like,” or ending every sentence with a question)
  - ▶ Avoid “meta” comments<sup>1</sup>
- Stand still (if you tend to pace or rock, hold on to the lectern)
- Lots of resources for help with “stage fright” (performance anxiety)
- Rehearse!



<sup>1</sup> Commentary on the presentation itself: “This may not be relevant...” “We probably don’t need to go over this...”<sup>13</sup>

# Some more tips

- The hardest part of the talk are transitions (first slide, last slide, any topic changes), so rehearse these!
- At the start: Be prepared that the session chair might read your title verbatim
- Don't show anything you don't want the audience to focus on
- At the end: Leave the conclusion slide up, it's ok if you run out of time to just let people read it



# The main take-aways

"If there's one thing that you would like people to remember from your talk tomorrow, or next week, what would it be?" — Mike Sokoloff



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