“How to give a [good] talk”

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Slides here: https://github.com/holehouse-lab/supportingdata/tree/master/other/talks/

Outline for this (~25 min presentation)

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1. The objective and approach to structuring an engaging talk

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1. The **objective** and **approach** to structuring an engaging talk

2. **Practical guidelines** on talk execution and delivery

How should we parse advice?

How should we parse advice?

Generic advice by definition lacks a prior

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Important to integrate your own experience, situation, and priorities in the context of any guidance

Part I: Structuring a talk

The objective and approach to structuring an engaging talk

What is the objective of a talk?

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To communicate an idea, principle, or result

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Audience must…

What is the objective of a talk?

To **communicate** an idea, principle, or result

Audience must… Understand

What is the objective of a talk?

To **communicate** an idea, principle, or result

Audience must…

Understand

Remember

What is NOT the objective of a talk?

What is NOT the objective of a talk?

To show people how smart you are

What is NOT the objective of a talk?

To show people how smart you are

To show people how much work you've done

What is NOT the objective of a talk?

To show people how smart you are

To show people how much work you've done

To insult or ridicule something or someone

What is NOT the objective of a talk?

To show people how smart you are

To show people how much work you've done

To insult or ridicule something or someone

To list the things you did, in the order you did them

How do you share understandable & memorable information?

How do you share understandable & memorable information?

Narrative: A good talk is a good story

Some thoughts on how to structure a talk Arjun Raj (RajLab blog) (2016)

Once upon a time there was ____

Some thoughts on how to structure a talk Arjun Raj (RajLab blog) (2016)

Once upon a time there was ____

Background and context – define the state of the art

Some thoughts on how to structure a talk Arjun Raj (RajLab blog) (2016)

Once upon a time there was ____

However, this was a problem because ___

Some thoughts on how to structure a talk Arjun Raj (RajLab blog) (2016)

Once upon a time there was ____

However, this was a problem because ___

Introduce tension – why is the state of the art insufficient?

Some thoughts on how to structure a talk Arjun Raj (RajLab blog) (2016)

Once upon a time there was ____

However, this was a problem because ___

One day ___

Some thoughts on how to structure a talk Arjun Raj (RajLab blog) (2016)

Once upon a time there was _____

However, this was a problem because ____

One day ____

Introduce an experiment to address the tension

Some thoughts on how to structure a talk Arjun Raj (RajLab blog) (2016)

Once upon a time there was ____

However, this was a problem because ___

One day ___

Because of this, ___

Some thoughts on how to structure a talk Arjun Raj (RajLab blog) (2016)

Once upon a time there was ____

However, this was a problem because ___

One day ___

Because of this, ___

What did this experiment tell you?

Some thoughts on how to structure a talk Arjun Raj (RajLab blog) (2016)

Once upon a time there was ____

However, this was a problem because ___

One day ___

Because of this, ___

Repeat

Some thoughts on how to structure a talk Arjun Raj (RajLab blog) (2016)

Once upon a time there was ____

However, this was a problem because ___

One day ___

Because of this, ___

In the end ___

Some thoughts on how to structure a talk Arjun Raj (RajLab blog) (2016)

Once upon a time there was ____

However, this was a problem because ___

One day ___

Because of this, ___

In the end ___

What is the final takeaway and conclusion?

Some thoughts on how to structure a talk Arjun Raj (RajLab blog) (2016)

What? Once upon a time there was ____

However, this was a problem because ___

One day ___

Because of this, ___

In the end ___

Some thoughts on how to structure a talk Arjun Raj (RajLab blog) (2016)

What? Once upon a time there was ____

Why? However, this was a problem because ___

One day ___

Because of this, ___

Why? In the end ___

Some thoughts on how to structure a talk Arjun Raj (RajLab blog) (2016)

What? Once upon a time there was ____

Why? However, this was a problem because ____

How? One day ____

Because of this, ____

Why? In the end ____

Some thoughts on how to structure a talk Arjun Raj (RajLab blog) (2016)

People should remember the *journey*

(but not the details)

Part II: Executing a talk

Practical guidelines on talk design & execution

Each slide should convey one central idea summarized in a simple and stand-alone title

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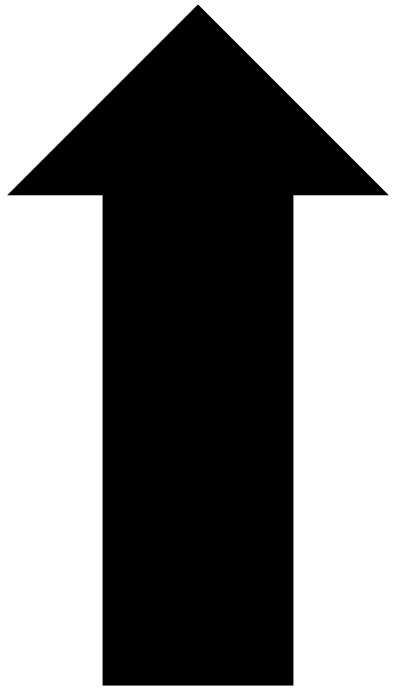
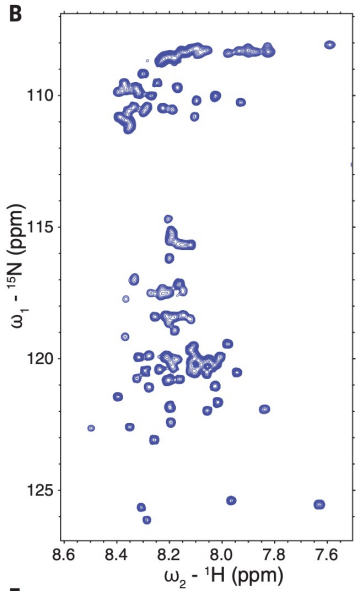
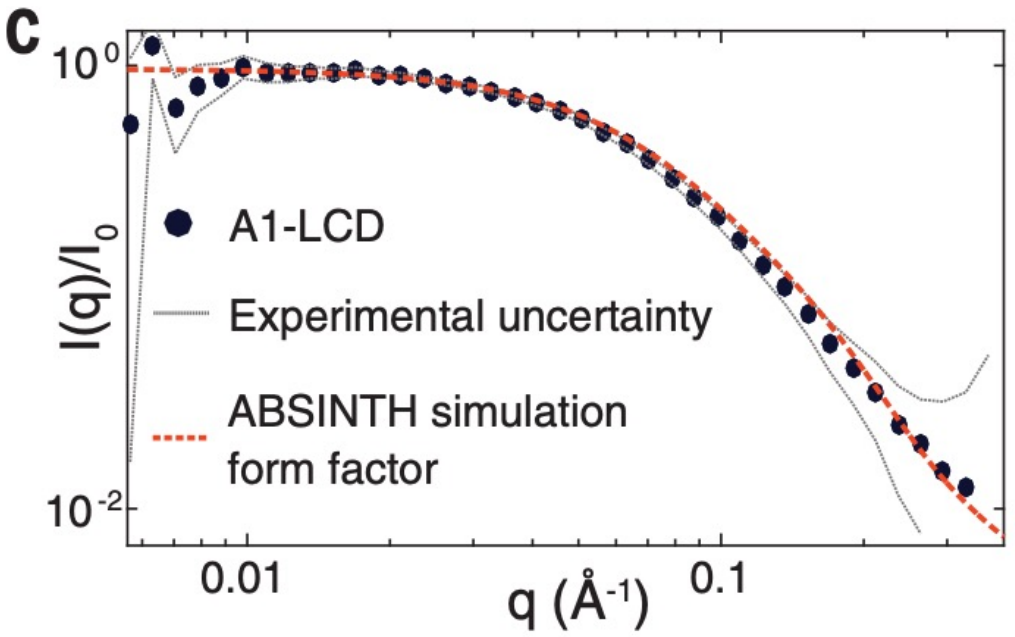


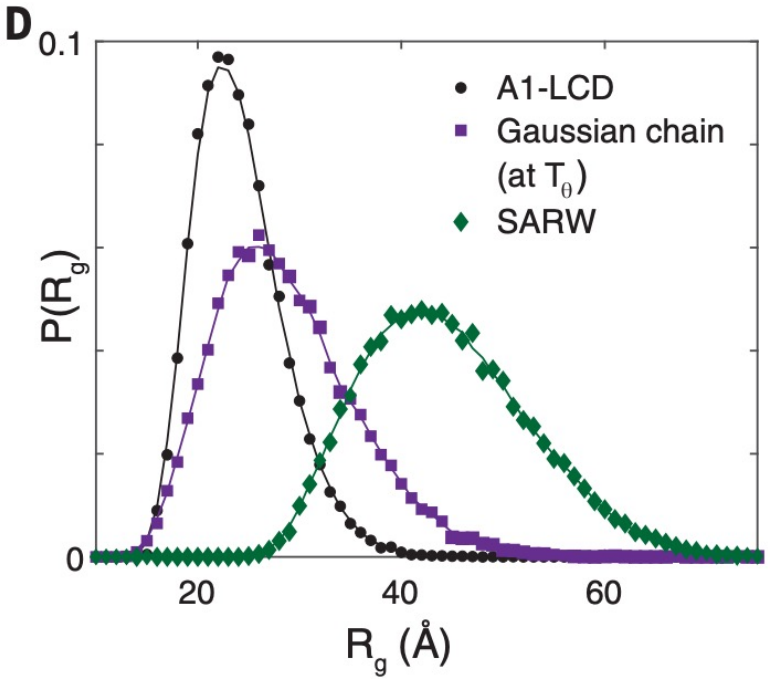
Bad Slide

The A1 LCD

MASASSSQRG RSGSGNFGGG RGGGFGGNDN FGRGGNFSGR GGFGGSRGGG
GYGGSGDGYN GFGNDGSNFG GGGSYNDFGN YNNQSSNFGP MKGGNFGGRS
SGPYGGGGQY FAKPRNQGGY GGSSSSSSYG SGRRF





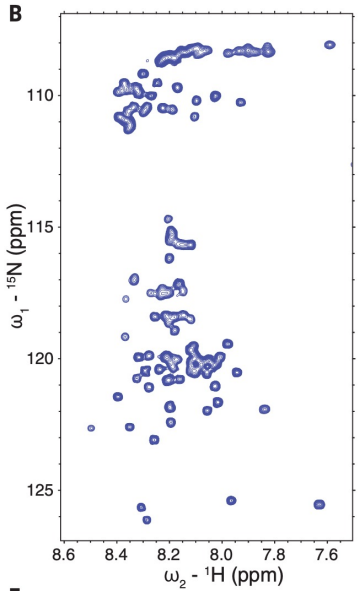


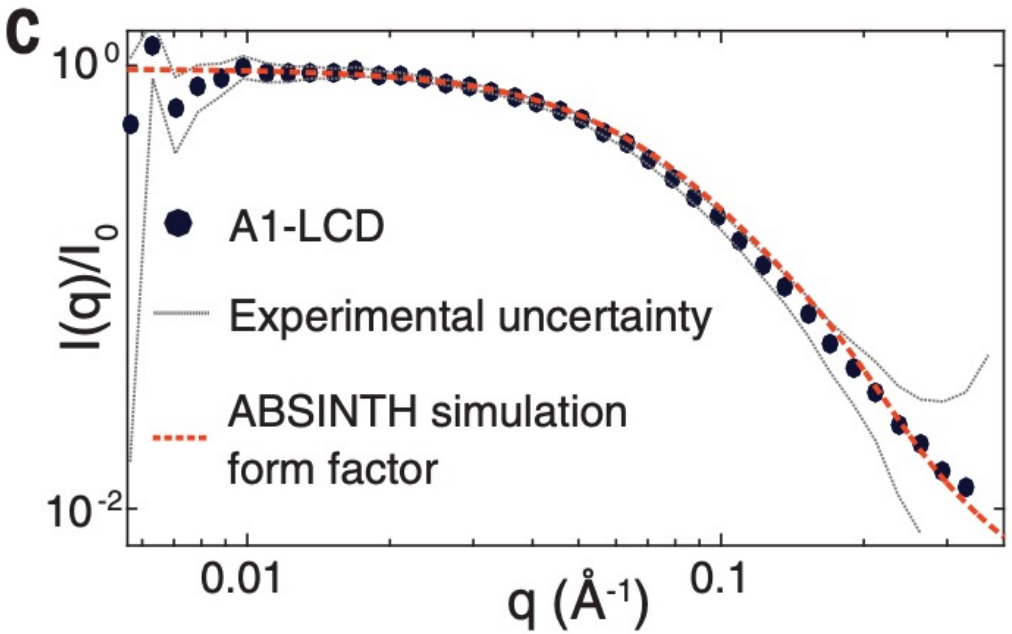
Bad Slide

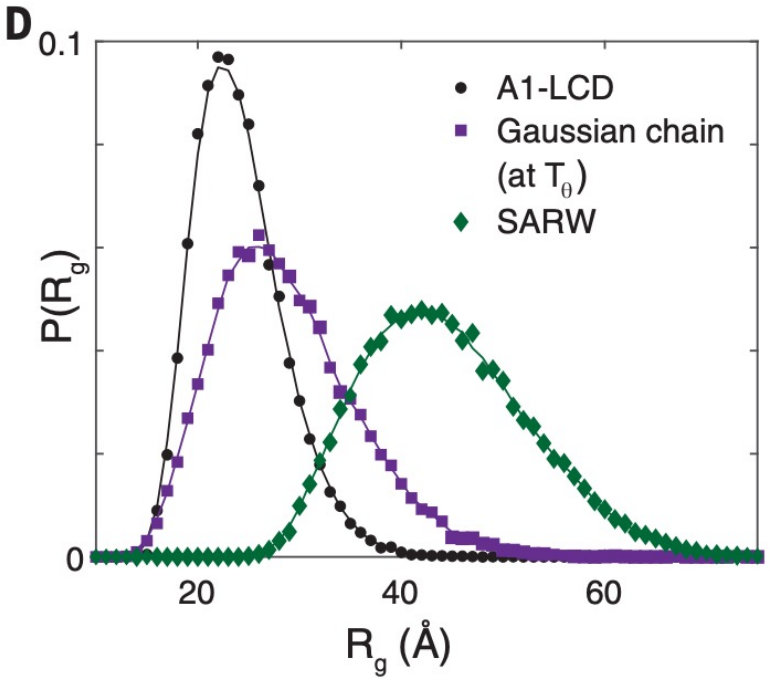
The A1 LCD

Lots of stuff going on – people will read whatever they see

MASASSSQRG RSGSGNFGGG RGGGFGGNDN FGRGGNFSGR GGFGGSRGGG
GYGGSGDGYN GFGNDGSNFG GGGSYNDFGN YNNQSSNFGP MKGGNFGGRS
SGPYGGGGQY FAKPRNQGGY GGSSSSSSYG SGRRF





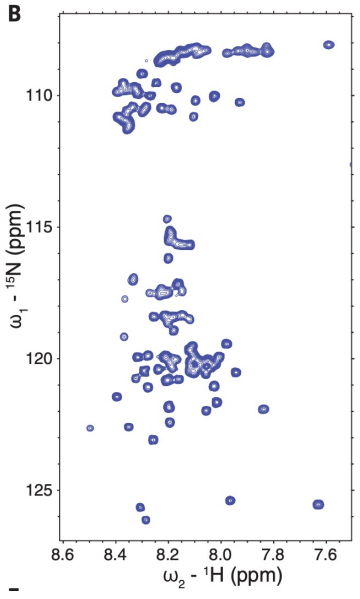


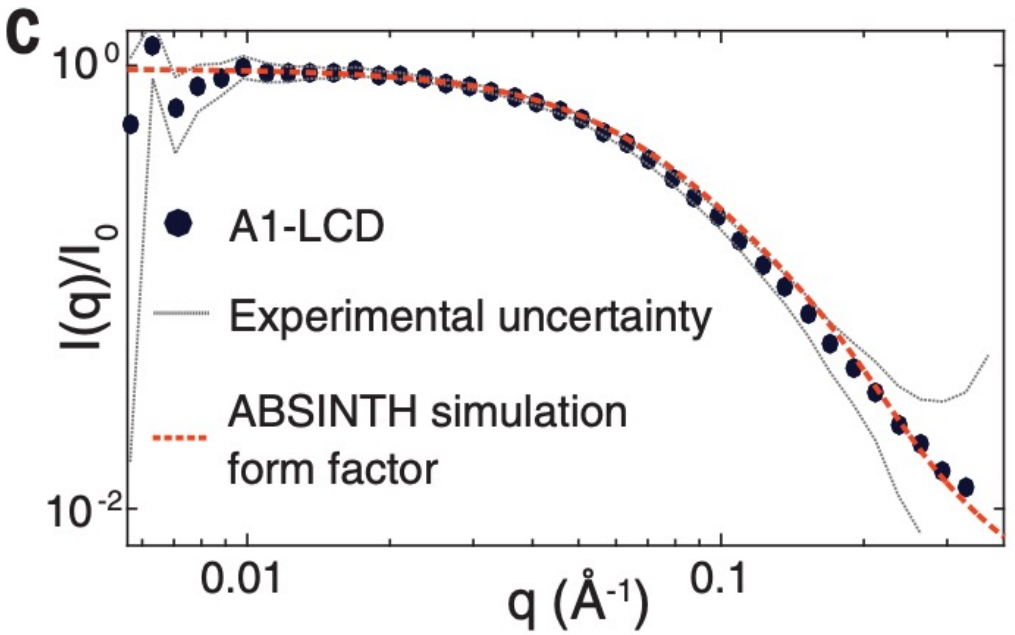
Bad Slide

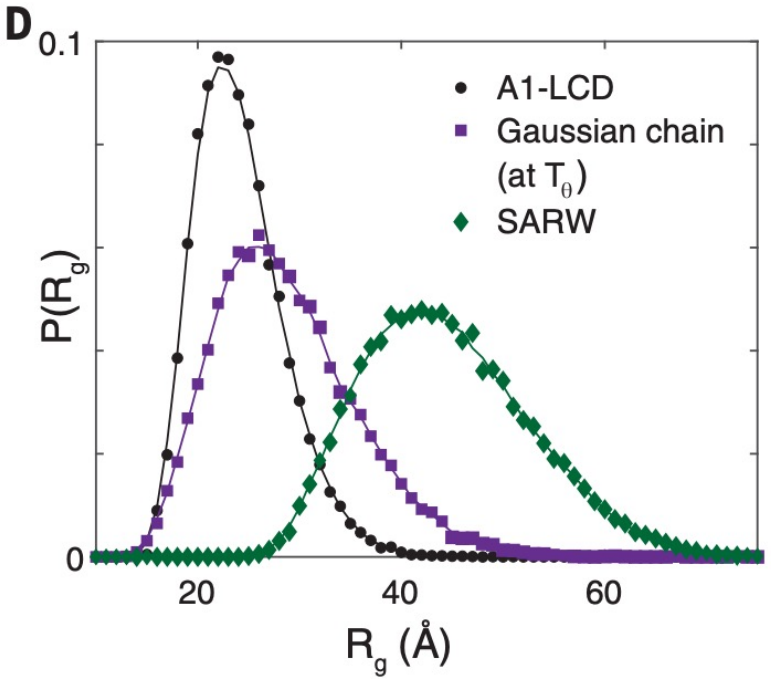
The A1 LCD

No information

MASASSSQRG RSGSGNFGGG RGGGFGGNDN FGRGGNFSGR GGFGGSRGGG
GYGGSGDGYN GFGNDGSNFG GGGSYNDFGN YNNQSSNFGP MKGGNFGGRS
SGPYGGGGQY FAKPRNQGGY GGSSSSSSYG SGRRF







Bad Slide

The A1 LCD

Un-introduced acronyms or jargon

MASASSSQRG RSGSGNFGGG RGGGFGGNDN FGRGGNFSGR GGFGGSRGGG
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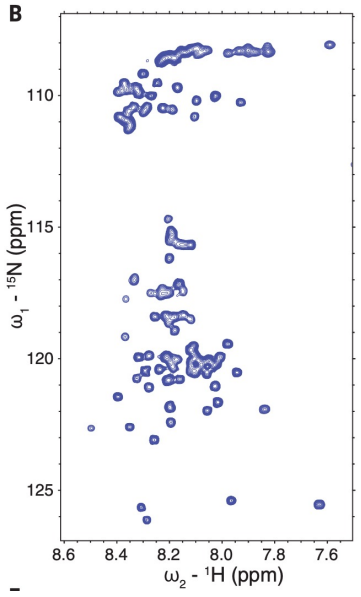

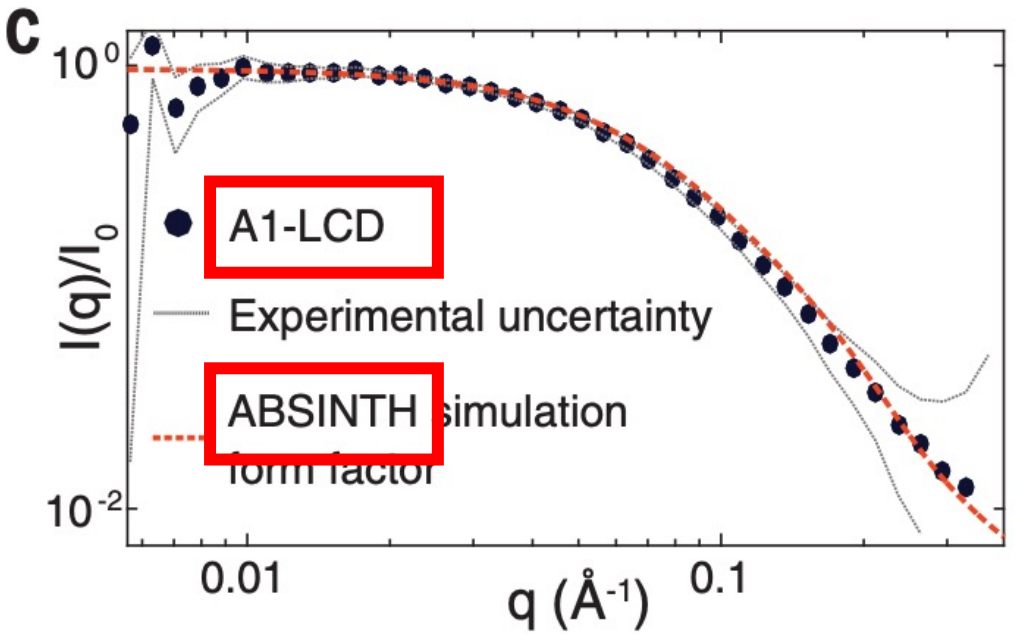

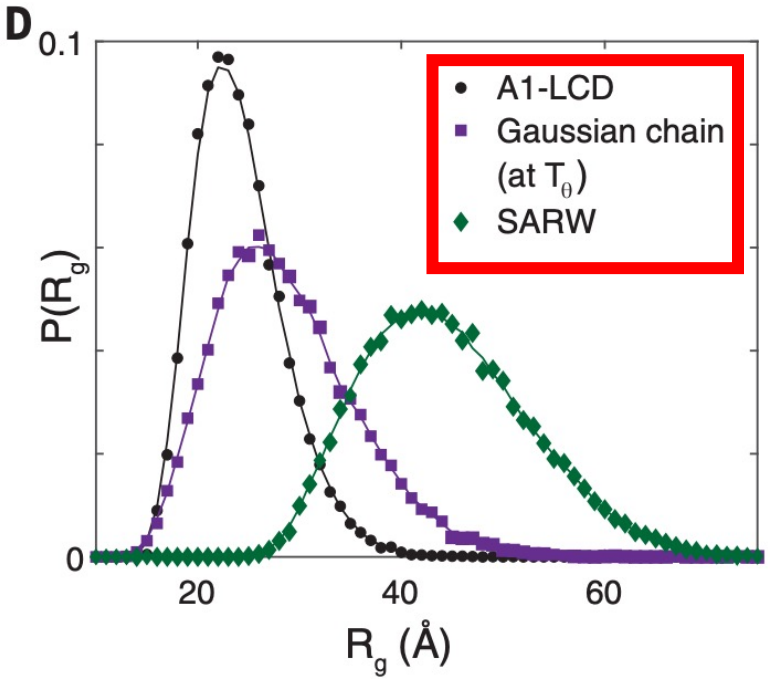

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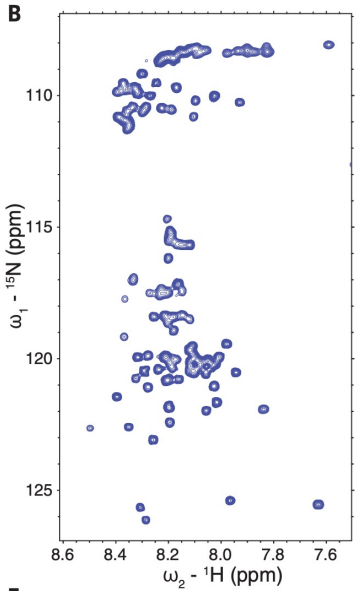
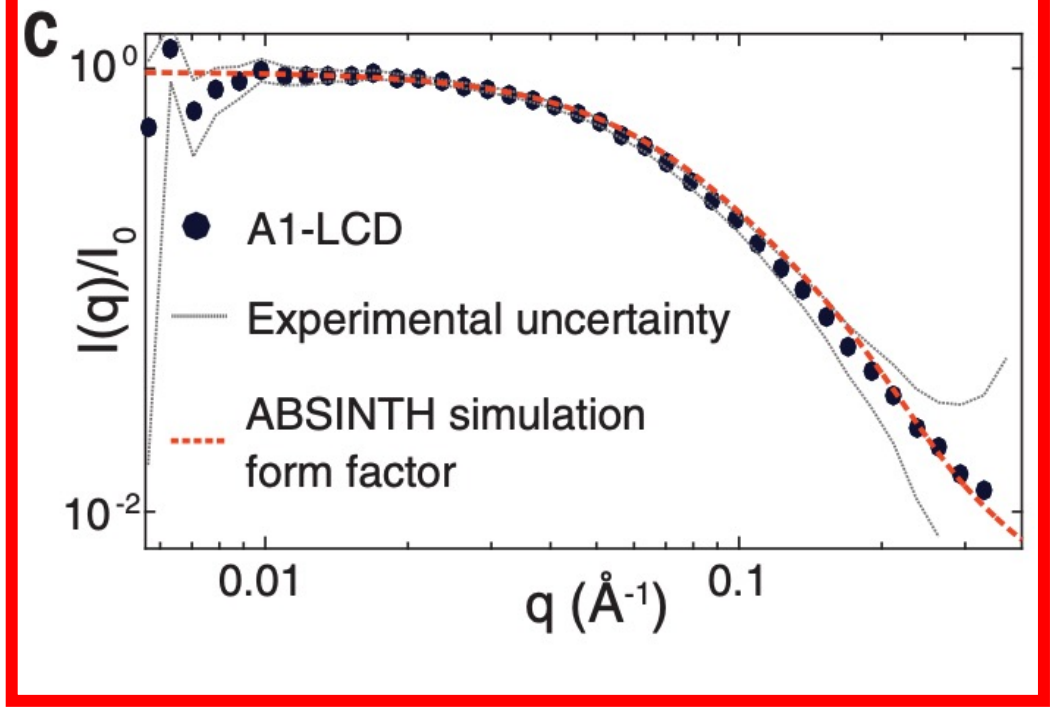
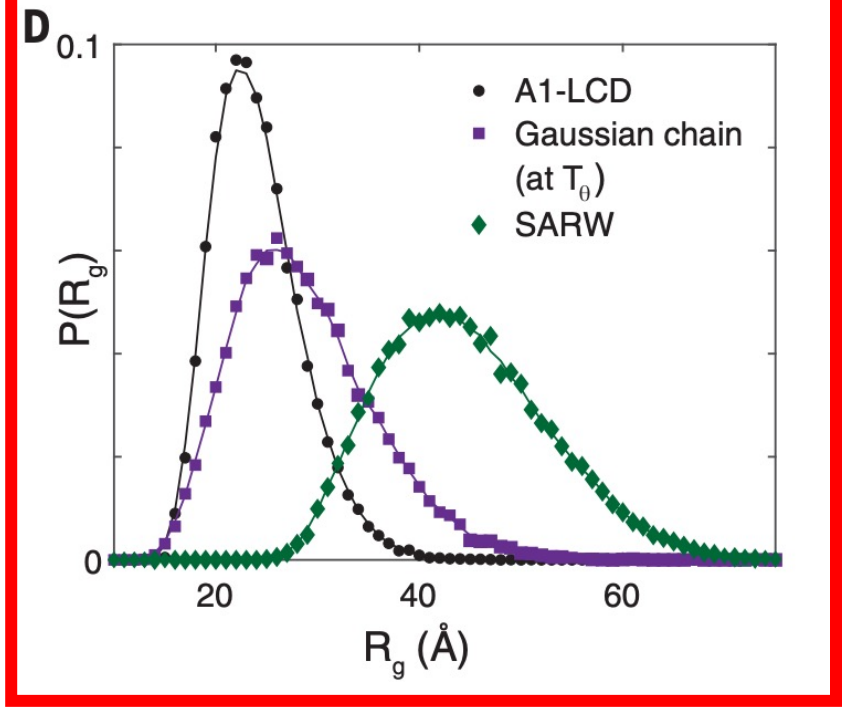
GYGGSGDGYN GFGNDGSNFG GGGSYNDFGN YNNQSSNFGP MKGGNFGGRS
SGPYGGGGQY FAKPRNQGGY GGSSSSSSYG SGRRF

Can your audience understand these data 'natively'? Probably not…







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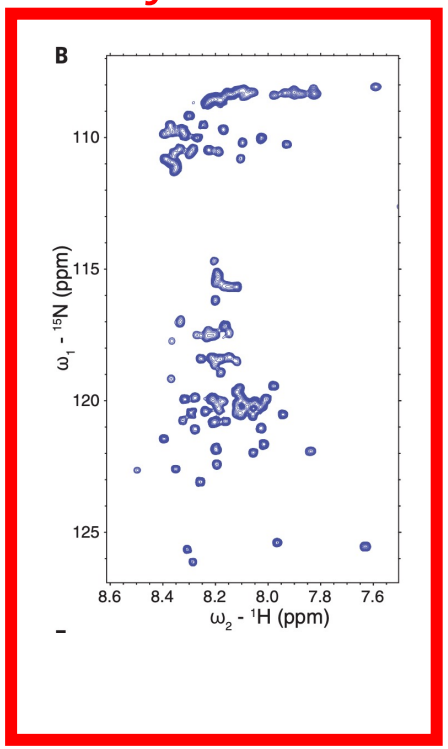
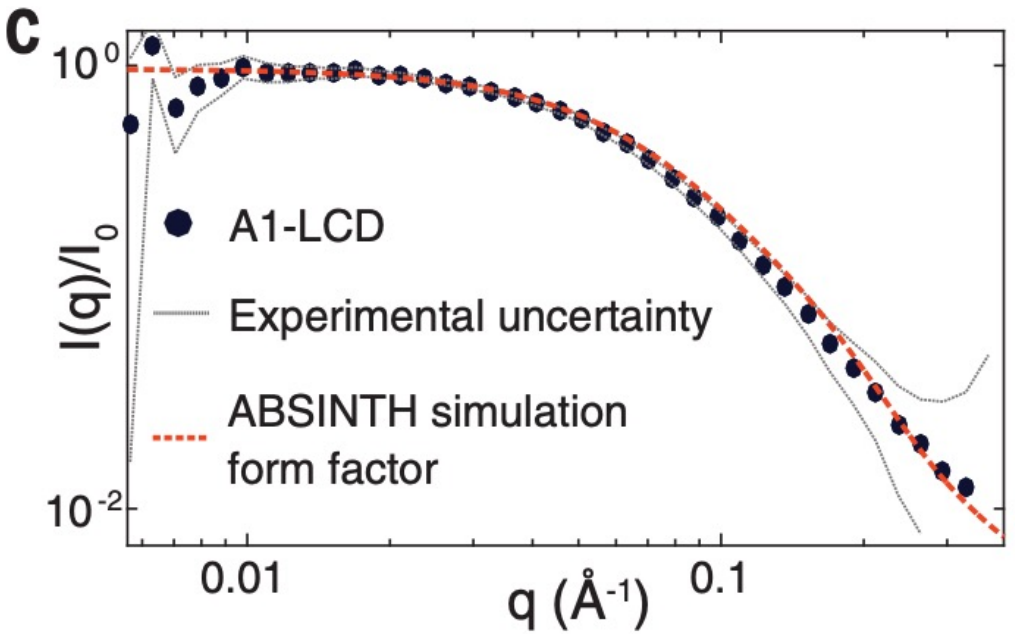
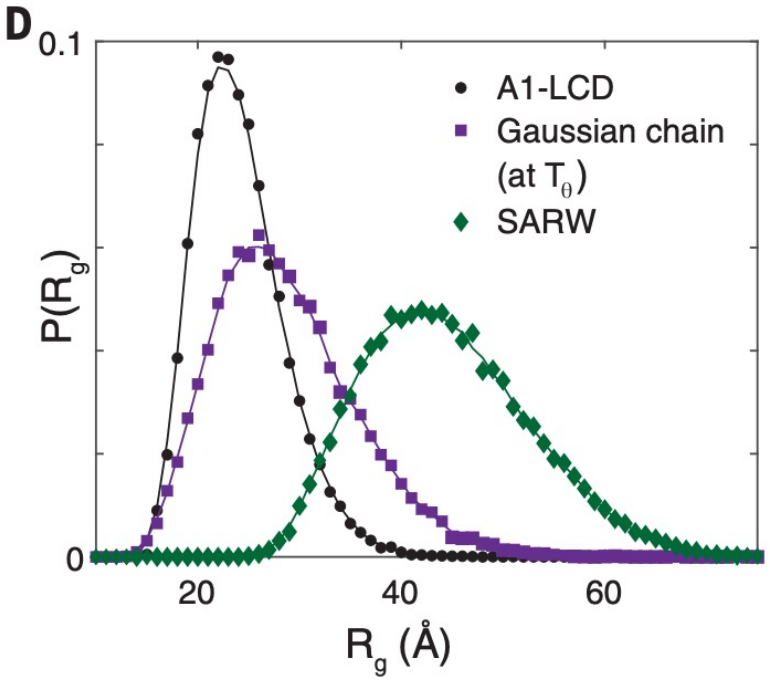
GYGGSGDGYN GFGNDGSNFG GGGSYNDFGN YNNQSSNFGP MKGGNFGGRS
SGPYGGGGQY FAKPRNQGGY GGSSSSSSYG SGRRF

Can your audience read this (tiny) font?







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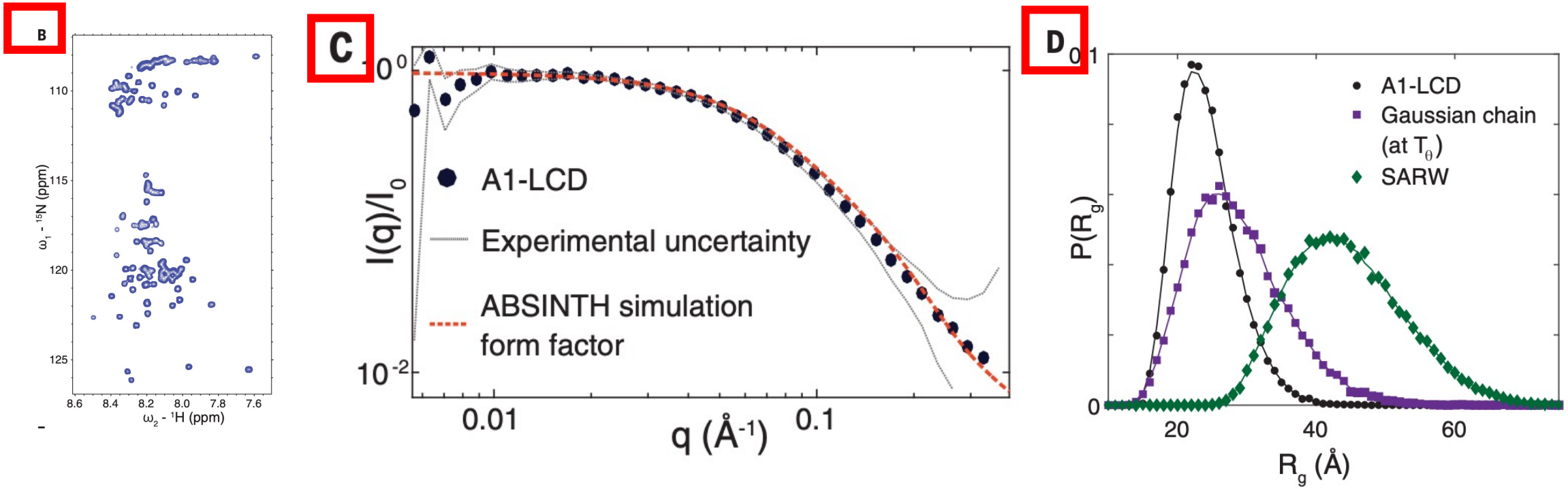
GYGGSGDGYN GFGNDGSNFG GGGSYNDFGN YNNQSSNFGP MKGGNFGGRS
SGPYGGGGQY FAKPRNQGGY GGSSSSSSYG SGRRF

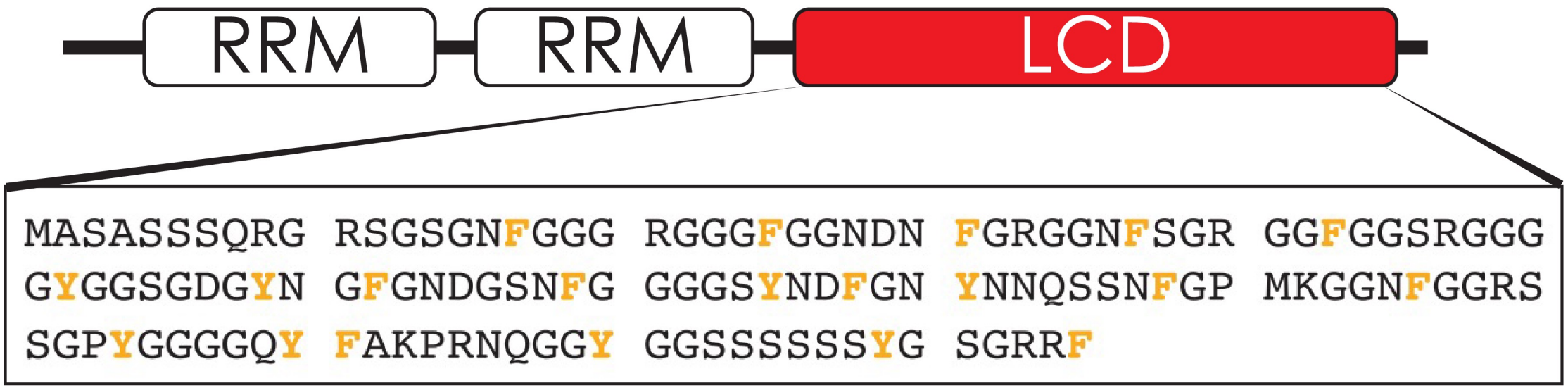
What do these numbers refer to?



What would an alternative approach be?

Better Slide

The low complexity domain from hnRNPA1 contains evenly distributed aromatic residues



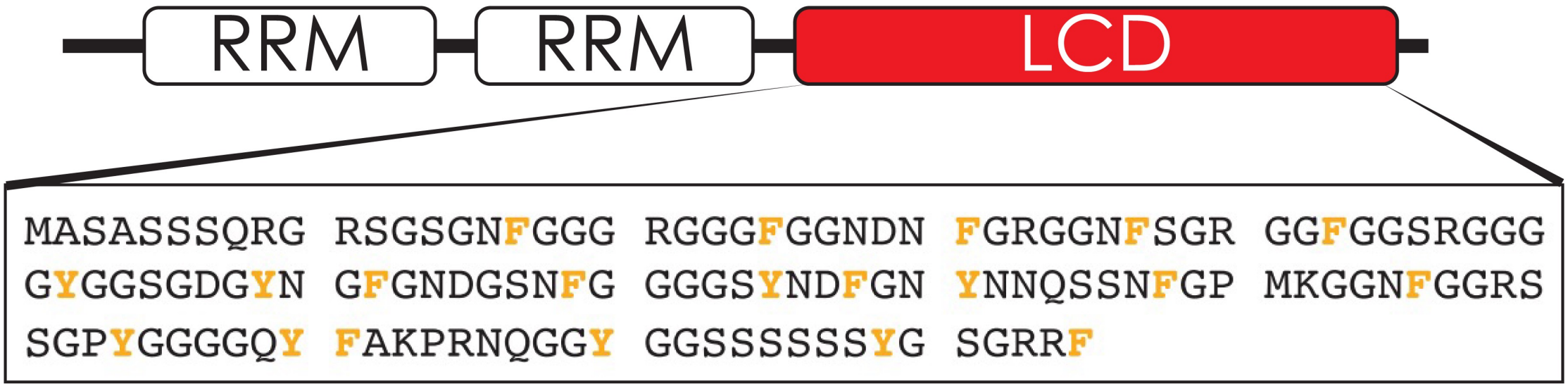
Best Slide

hnRNPA1 is an RNA binding protein with an intrinsically disordered C-terminal Low-Complexity Domain (A1-LCD)

RRM: RNA Recognition Motif

Best Slide

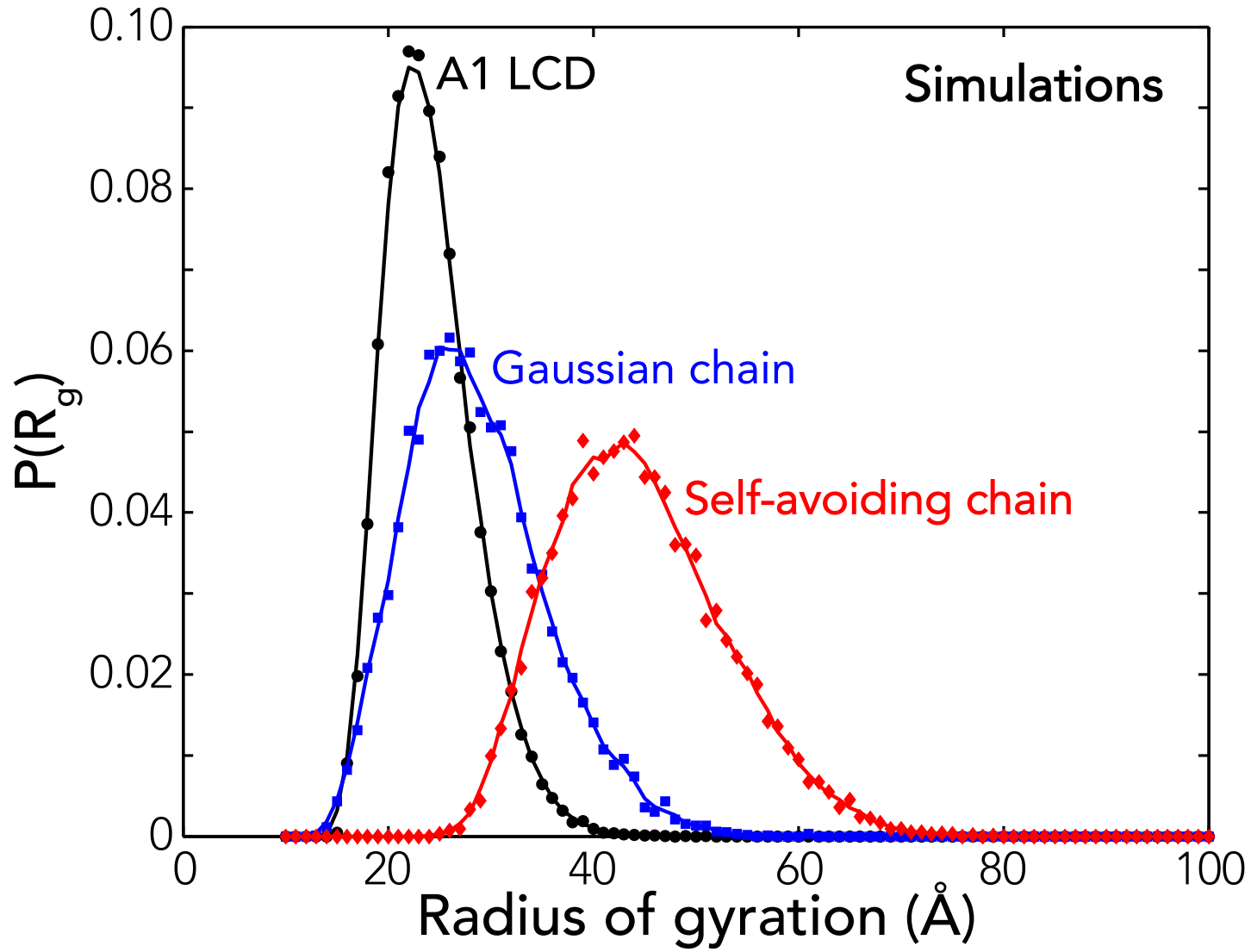
The A1-LCD contains evenly distributed aromatic residues



What about showing data?

OK slide

The A1-LCD has a compact disordered state



Better Slide

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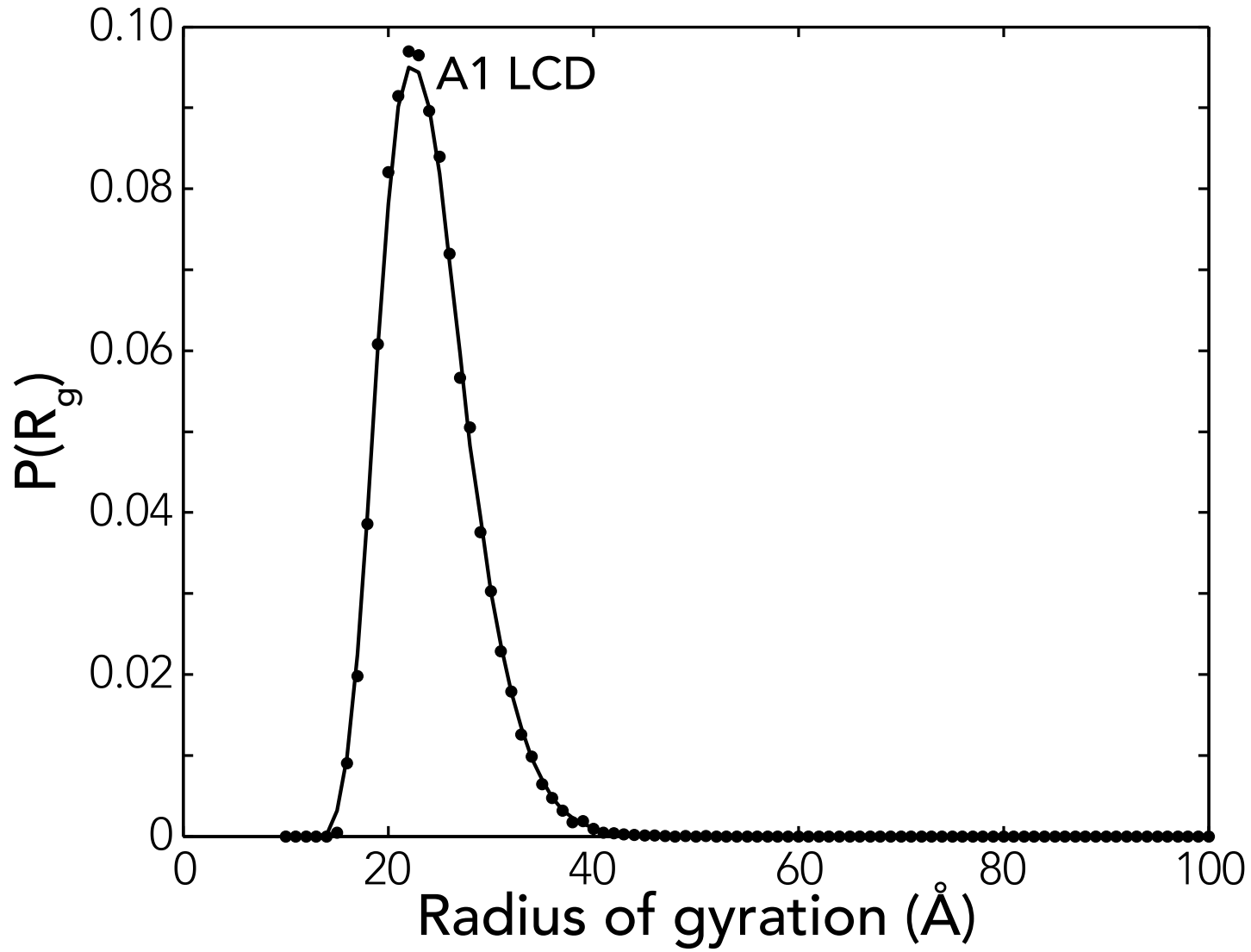

Better Slide

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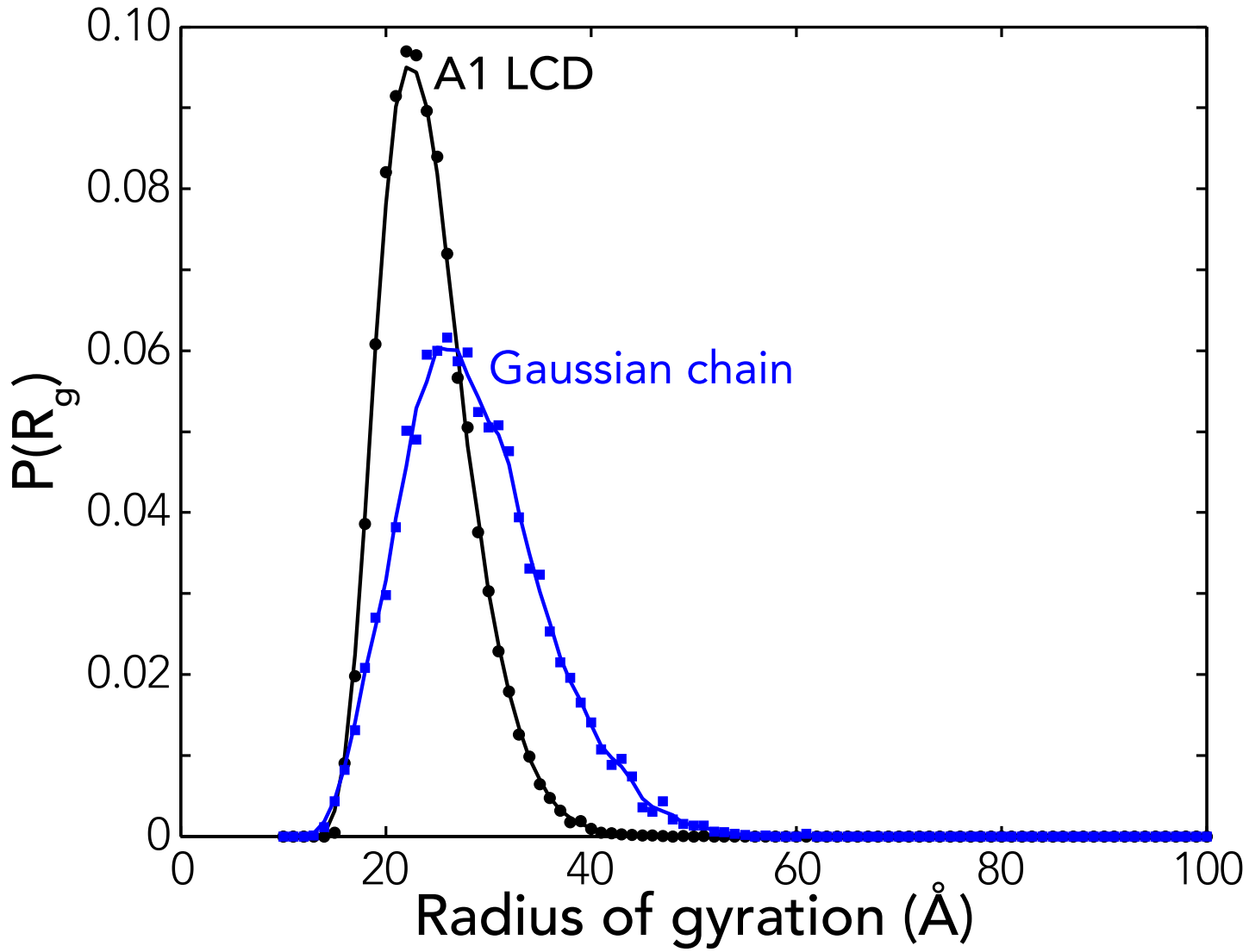

Better Slide

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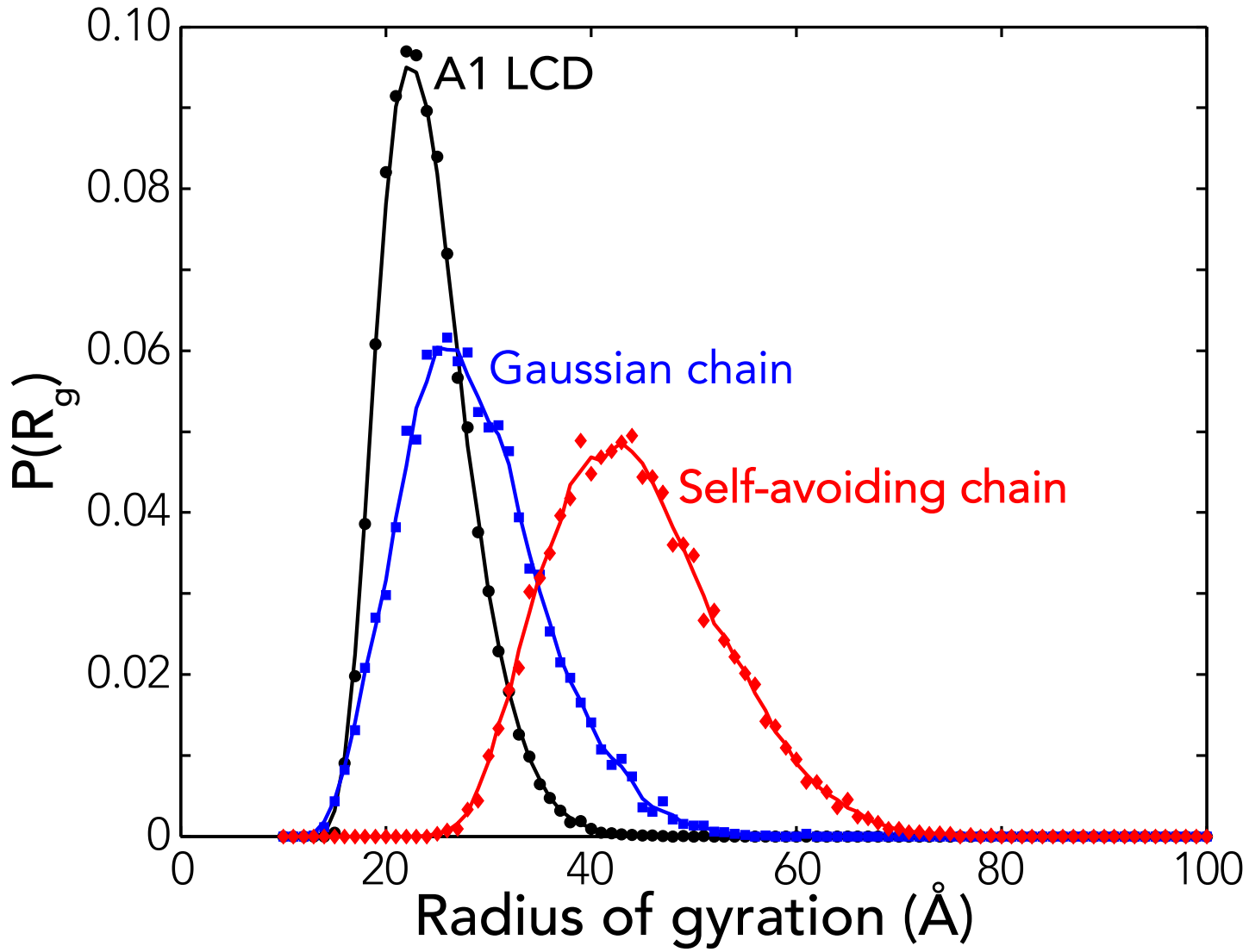

Best Slide

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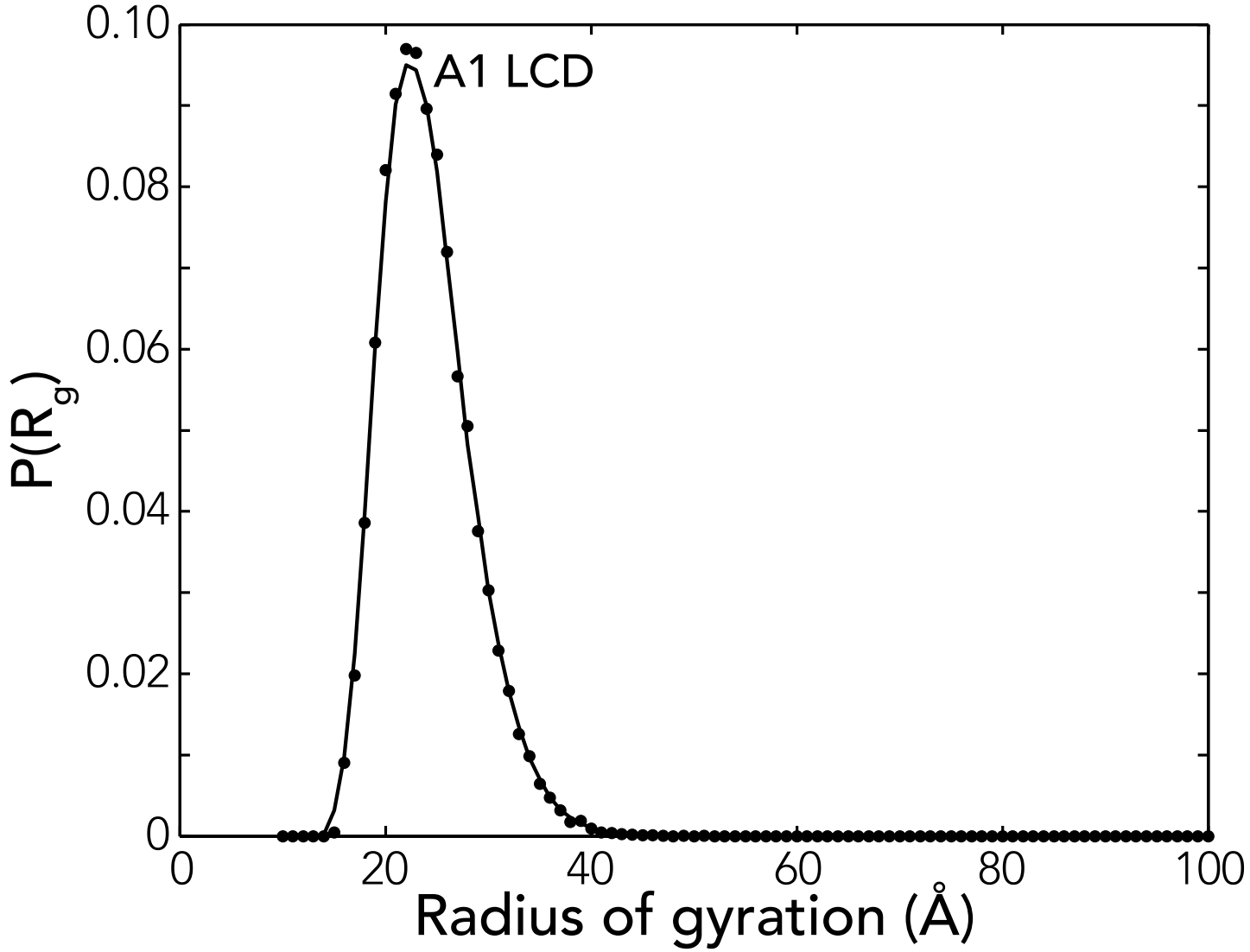
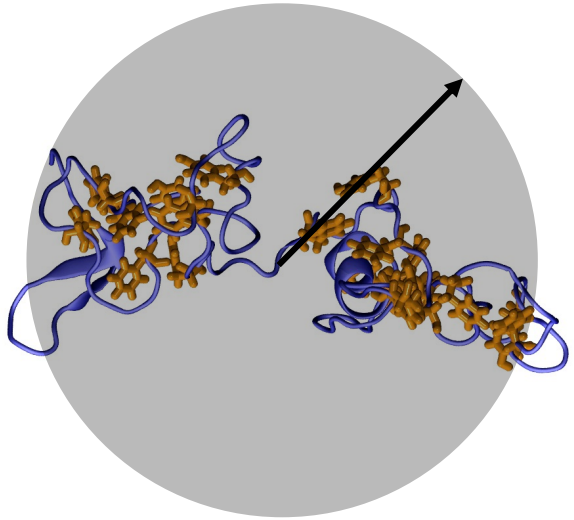


Radius of gyration (R_g)



A1-LCD

Best Slide

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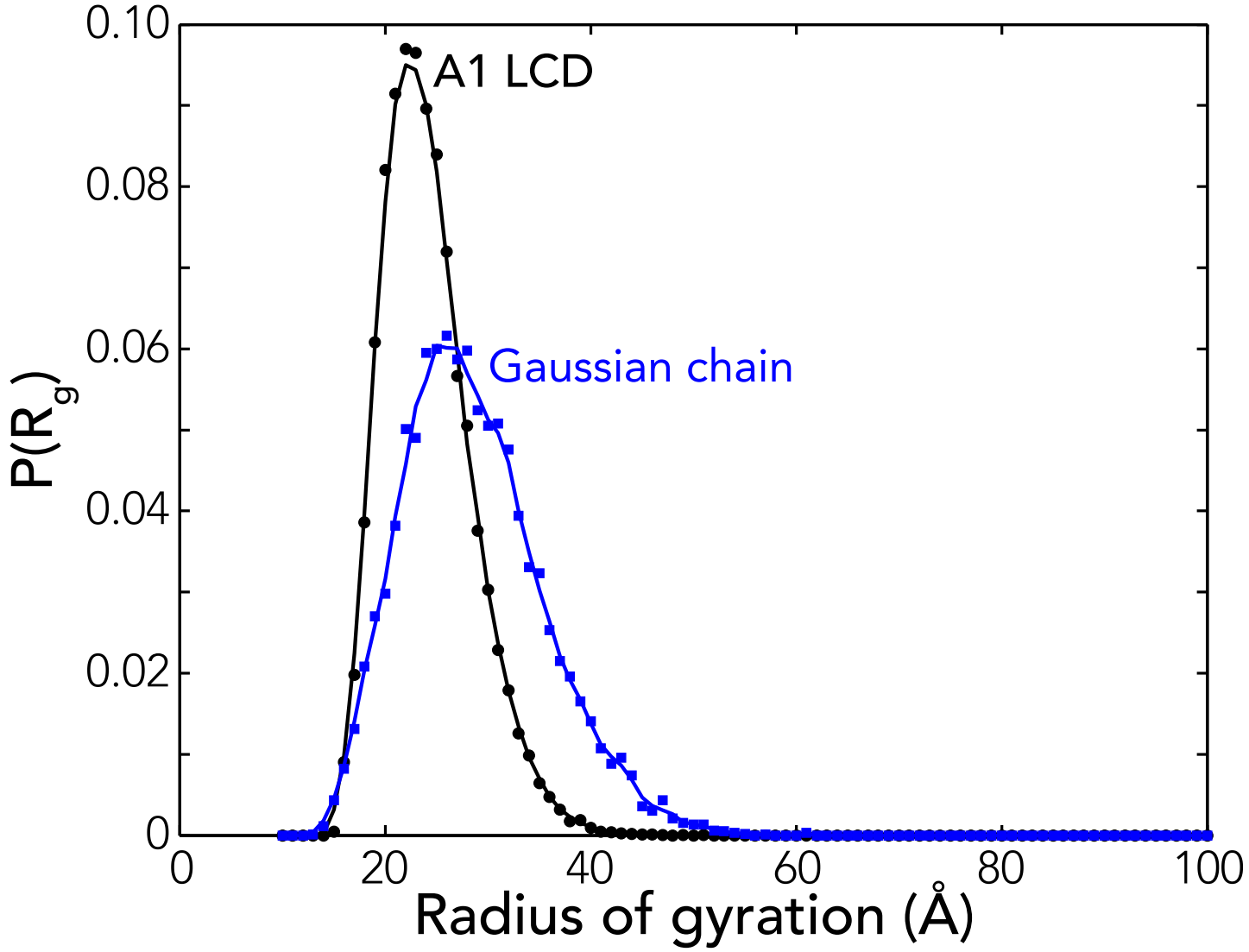

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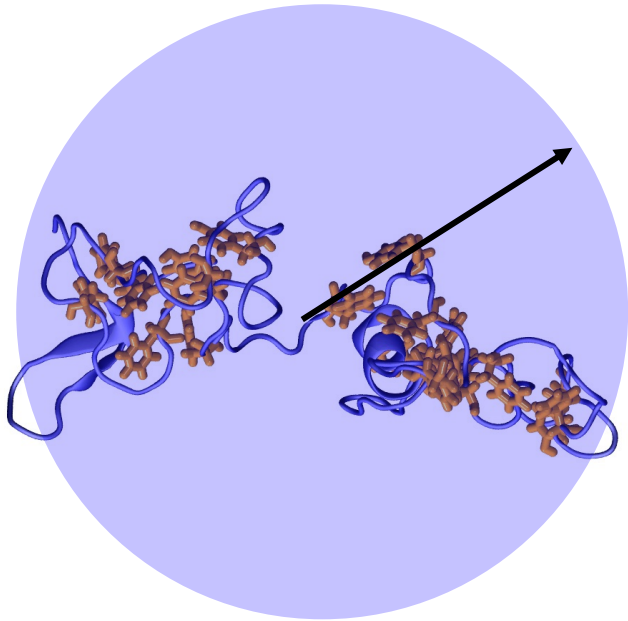

Non-interacting polymer (Gaussian chain)

Best Slide

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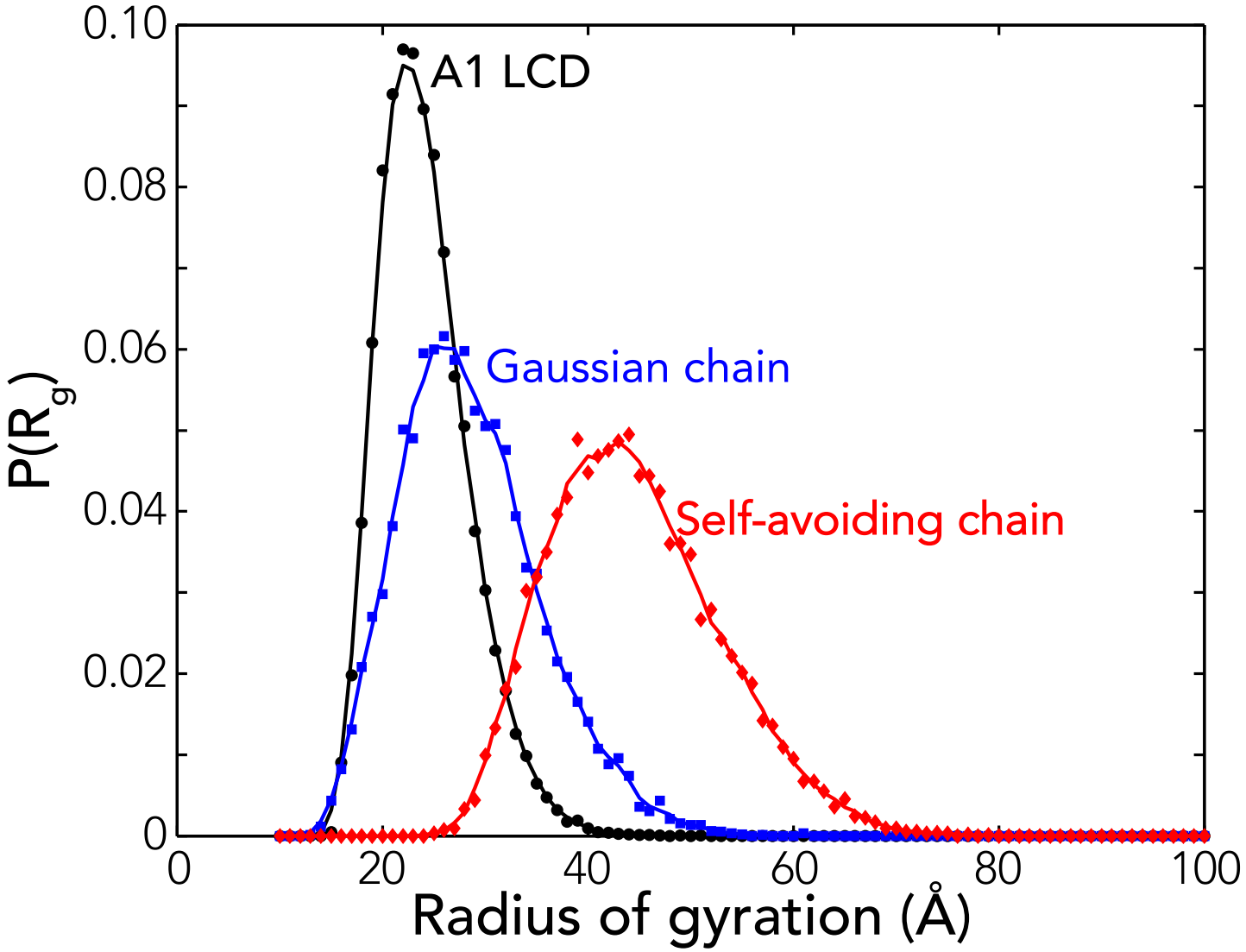

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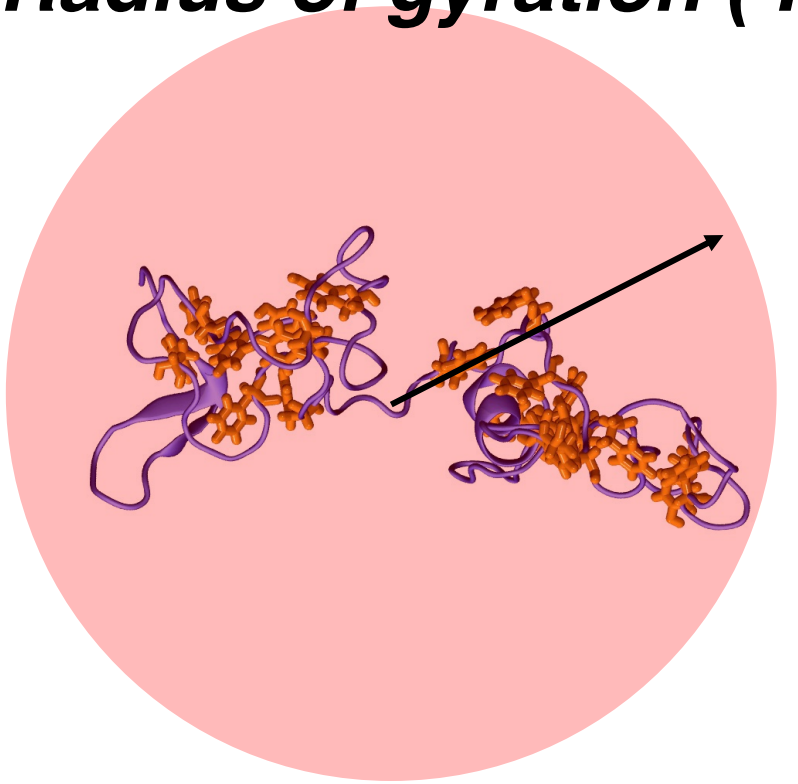

Self-avoiding chain

The following sides are *bad* but are there to catalyze discussion/offer a check list…

KNOW YOUR AUDIENCE

- Presentation content, slides and detail should match the expectation and expertise of the audience you are aiming at
- For example – in a departmental seminar cannot assume people understand the details of your experimental approaches
- However, in a specialized meeting do not need to provide a ton of background on the topic

Key points when designing a [data] slide (1/2)

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  - Can even have two slides showing same thing (one for the lay person, one for the fans)

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- Consider color blindness when choosing colors/display styles

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- Minimize distractions however possible
  - Consistent font style & size
  - Easily legible font (size 20 minimum – yes, remake figures)
  - Consistent color schemes
  - Using animations/movies sparingly
  - Consider ‘minimum ink’ philosophy for data presentation

Key points when presenting a [data] slide (1/2)

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- Tell your audience what you're showing them
  - Explain axes
  - Describe pathways/structures
  - Slowly reveal information bit-by-bit *as* you explain it

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- Summarize a 'key takeaway' at the end of a complicated data slide - give people an "out" of they got lost

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- Practice to people who are unfamiliar with what you do

Key points when preparing for a talk

- PRACTICE OUT LOUD (alone)
- Practice to people who are unfamiliar with what you do
- Make sure you’re not speaking too fast and are not going over time

- Wash U has dedicated resources for giving good talks (!!)

Additional resources

http://rajlaboratory.blogspot.com/2016/09/some-thoughts-on-how-to-structure-talk.html

Naegle, K. M. (2021). Ten simple rules for effective presentation slides. *PLoS Computational Biology*, *17*(12), e1009554.

PRACTICE ! PRACTICE ! PRACTICE