

# **ASTR 270**

# **Public Outreach in Astronomy**

## **Class 09**

## **Public Talks**

Prof. James Davenport (UW)

Spring 2024

# Presentation Plan

- **Send me your presentation ahead of time (e.g. video/audio/article)**
  - By default, we will use MY computer to present from, not yours.
- Day 1 will start in Planetarium (maybe whole time there), Day 2 in classroom
- Everyone must get up and present. 5-min is standard
  - Written articles, give us brief (< 1 min) overview, we will all read
- **You must provide feedback on all presentations as part of your grade**
  - 1 point per feedback post, via Canvas. Can be done later, but I suggest bringing laptop/tablet and doing in real-time if possible

# Assignments

- I *think* we are all caught up on grading
- Discussion threads for Presentation 1 will be posted ahead of time
- Pitch 2: Due May 7  
Start thinking about your next project right away!
- Homework 4 (Article Analysis): Due May 9  
One more Homework is planned for later in Quarter (Video Analysis)

# Today

- Public Speaking, tips & tricks
- Stage Fright



# Welcome to TJO

- Telescope from ~1891
- Built here in 1895, using leftover sandstone from Denny Hall
  - 2nd oldest building on campus (Lecture hall added later)
- Built for education & outreach, some research use until 1940's
- <https://astro.washington.edu/astronomy-history>





Property of MSCUA, University of Washington Libraries. Photo Coll 273

some research use until 1940's

- [https://astro.washington.edu/  
astronomy-history](https://astro.washington.edu/astronomy-history)



Property of University of Washington Libraries, Special Collections

# Monthly Outreach!

- Bi-monthly shows, April-Sept
  - Most are sold-out well ahead!
- Seattle Astronomical Society helps run, along w/ UW Astro
- 45 people fit in auditorium
- Speakers include undergrads, grads, faculty
  - YOU can give a talk here!

<https://astro.washington.edu/jacobsen-observatory>



# Public Talks

- Primary method of science communication and public outreach for many academics... we very often default to “lecture mode”
- If you can give a great public talk, you can probably adapt it to many other formats/mediums
- A super wide range of venues (classrooms, theaters, pubs, cruise ships, observatories, libraries, museums, national parks...)
- Audiences of ALL ages, often at the *same time*. (Challenging!)
- SO many good questions
- Usually keep material at a *relatively* basic depth

# **Giving Great Public Talks**

# **Practice**

# Giving Great Public Talks

- Remember all the tools/tips we've already covered:
  - Know and respect your audience
  - Have a clear story or message to share, make it personal
  - Use effective analogies and metaphors
  - Use audience engagement strategies like demos and questions
- Skip the “outline” slide
- Skip the “THANKS!” slide

# Giving Great Public Talks

- Speak clearly, naturally, slow down!
- Use pointer, sparingly!
- Watch the clock, manage your time
- Stand where people can see you
- Stand in the spotlight, if available
- Look at the audience, NOT the screen
- Don't just read your slides, provide narrative

# Giving Great Public Talks

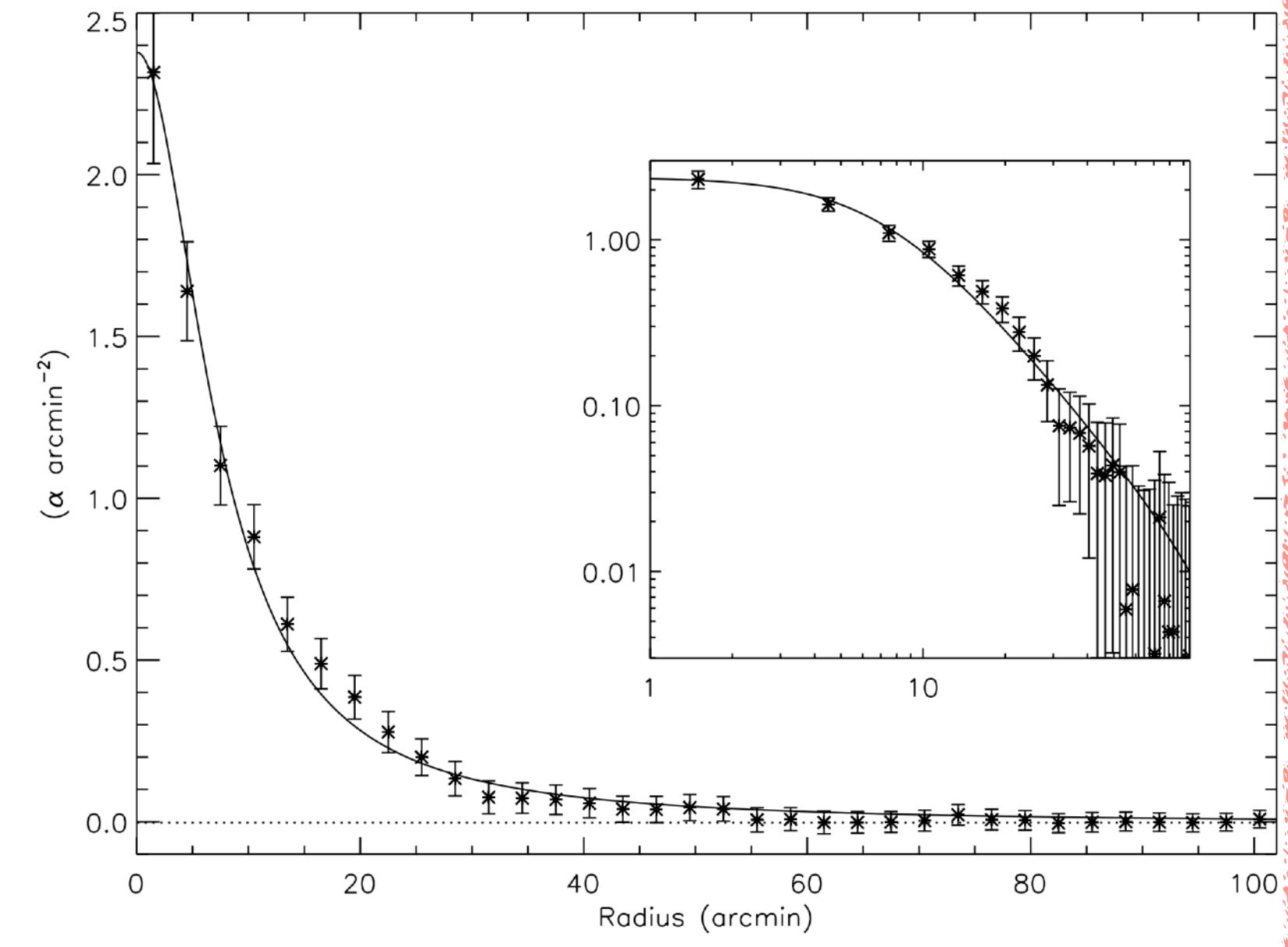
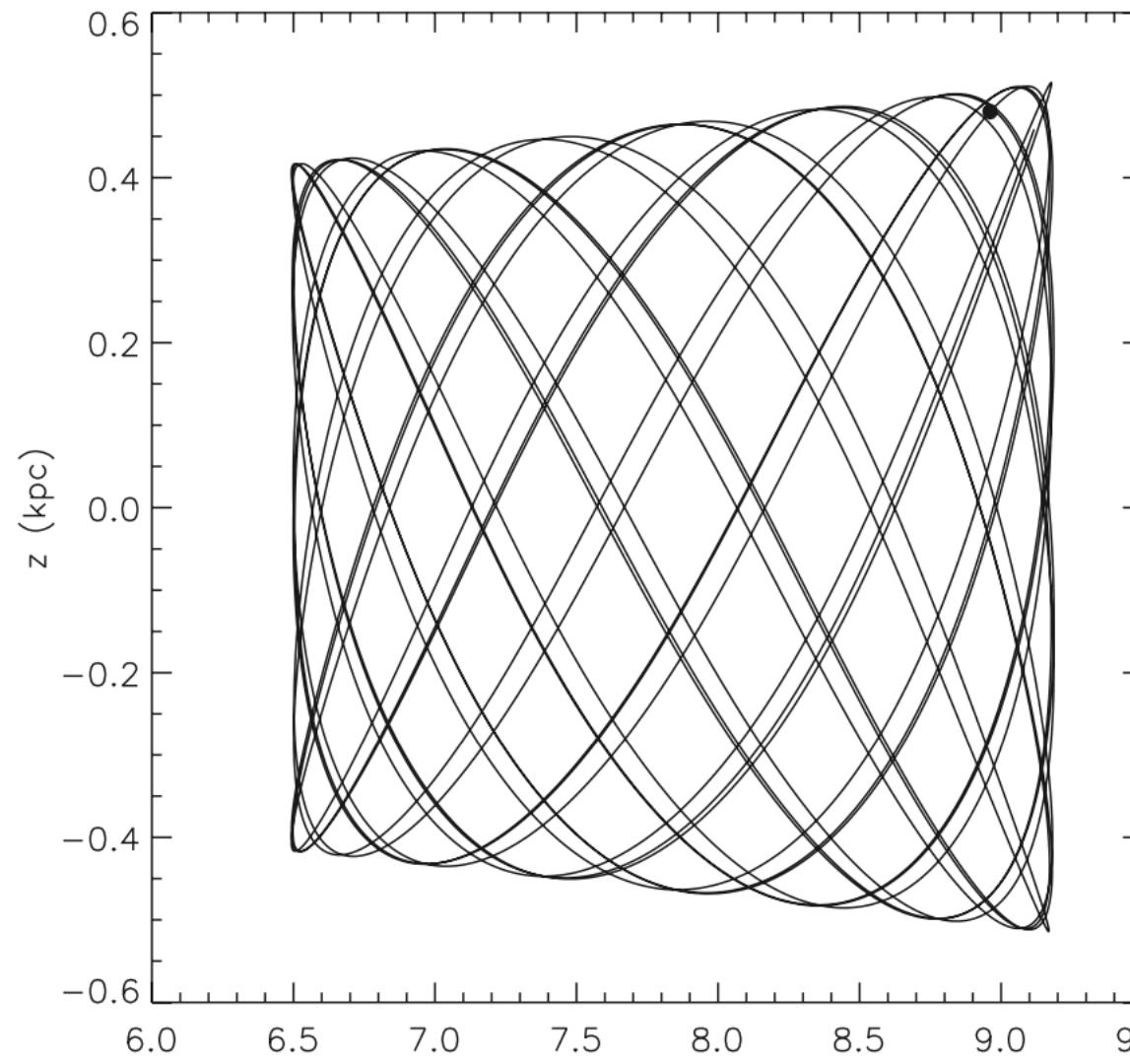
- Take everything out of your pocket, silence phone/notifications
- Make sure your computer doesn't go to sleep
- If something goes wrong: pause, then keep going (don't panic!)
  - Technical difficulties happen
  - Unexpected interruptions can occur
- Look for feedback, from peers, advisors, comment box, watch recordings.

# Giving Great Public Talks

- Be thoughtful about slide design!
  - (My lecture slides  $\neq$  public talk slides)
  - Graphs: make them cleaner
  - Words: use fewer
  - Titles: drive key points home

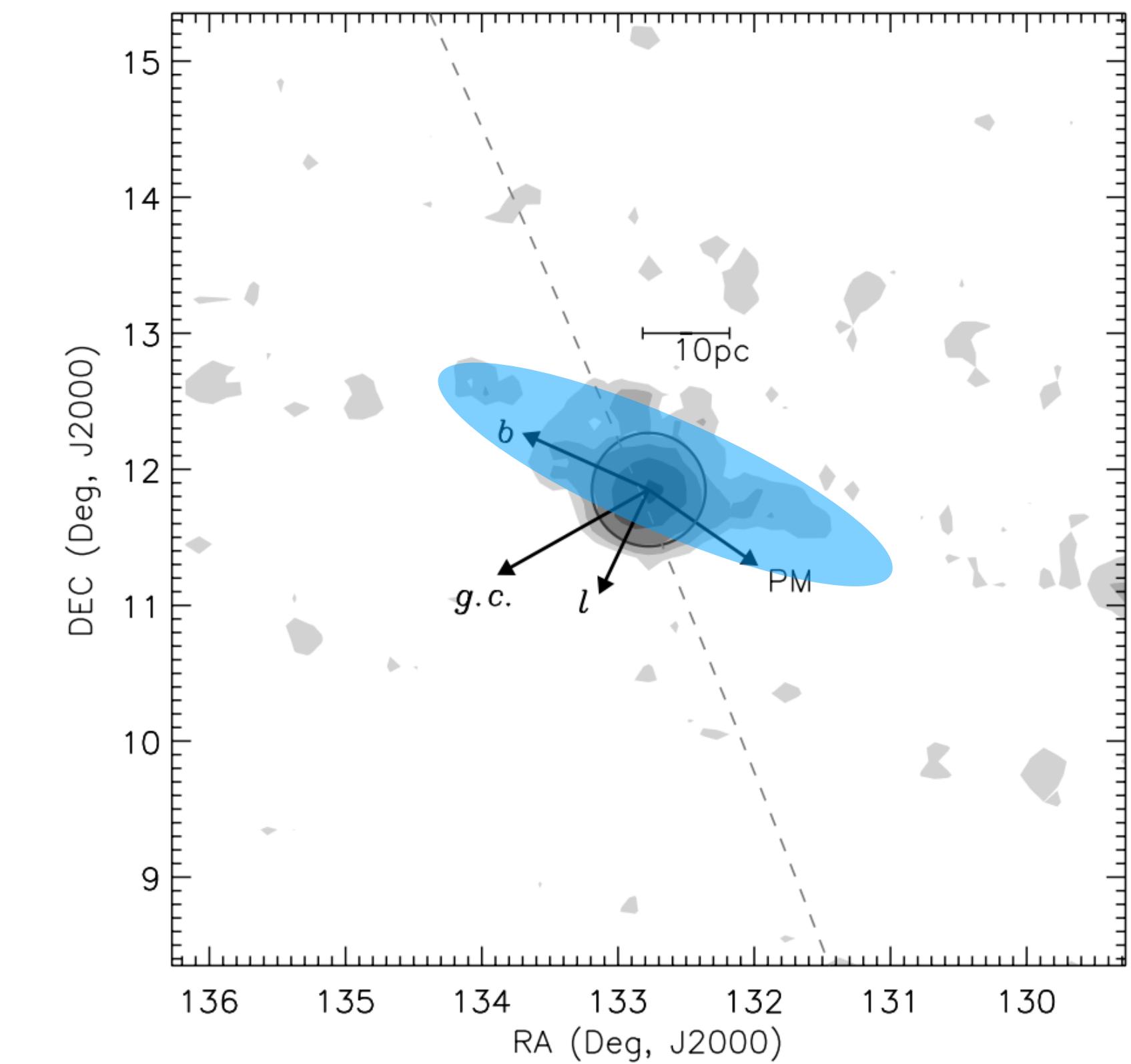
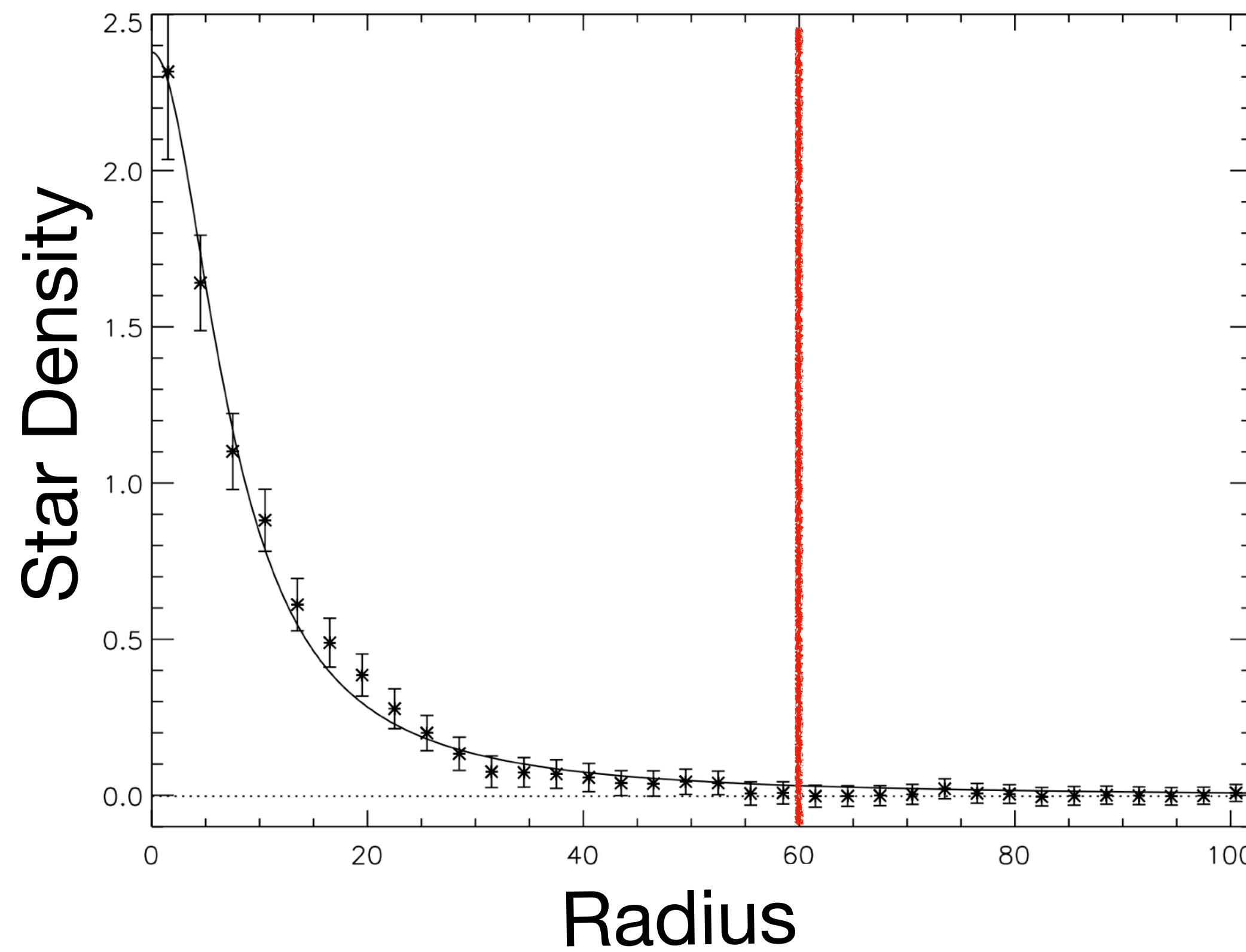
# Cluster profile

- This is a badly designed slide on purpose
- The figures are hard to read, and even if you could read them its unclear what they mean
- There are lots of words
- Weird use of negative space



# M67: Very Extended Structure!

- Cluster members detected **+1 deg** away



- Hints of “tidal tails”?!

# Giving Great Public Talks

- Start with a **BANG!**
  - Wake your audience up, connect with them, be thought provoking or attention grabbing immediately
- Give talk a logical flow, even for 5min, no non-sequiturs!
  - Every slide needs a purpose
- End with a message
  - DO use summaries or highlight takeaways
  - Calls to action very helpful

# **Giving Great Public Talks**

# **Practice**

In my opinion, the only way to conquer **stage fright**  
is to get up on stage and play.  
Every time you play another show,  
it gets better and better.

-Taylor Swift

# What \*IS\* stage fright?

- Fear/stress -> performance or social anxiety
- Can start *weeks* before a show/lecture
- Can experience lingering anxiety effects long after
- Can be very physical (e.g. nausea, shaking, dry mouth, stutter/muttering)
- Very mentally challenging (sleep, appetite, anxiety/dread, forgetfulness, confusion)
- Can negatively impact quality and enjoyment of public speaking

# What \*IS\* stage fright?

- A form of Fight/Flight/Freeze... any of the 3 can occur on stage
- Super common, even celebrities & professional speakers experience it
- Can return, sometimes unexpectedly
- Can go away suddenly, especially while performing

# **What stage fright \*IS NOT\*?**

- A dealbreaker, reason to not perform
- Unfixable, permanent, guaranteed
- A sign of lack of knowledge or intelligence

# How to address stage fright?

# Practice

# How to address stage fright?

- Write your material ahead of time, leave time for edit/improvement
- Practice in front of a mirror, your cat, your partner
- Video record yourself, *and watch it*
- Remember your fear is “emotional”, not “rational”
- Don’t give up or panic! Don’t fixate or “catastrophize”. Positive self talk!
- Practice relaxation techniques, especially minutes before performance
  - Not magic, just helping control your nervous system

# How to address stage fright?

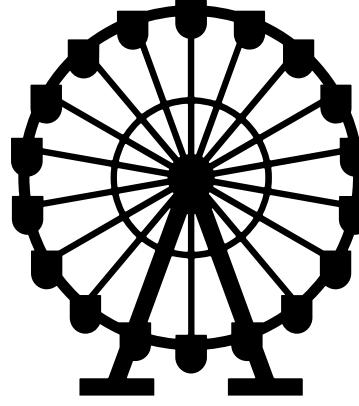
- Give yourself a softball to start (a joke, anecdote, highly structured title or introduction)
- You can cut the tension, acknowledge your nerves
- Make eye contact with audience. Good for engagement, and for YOU
- Move around, before and during performance
- Take breaths, stop, drink water, try to stay calm on stage
- Use your note cards or outline, a little
- **Remember you're in a safe, fun crowd here!**

# How to address stage fright?

- Limit caffeine/sugar/alcohol. They can all help AND hinder
- Do your homework, learn about your audience
- Show up early, learn the space
- Take everything out of your pockets
- Face the audience, not the screen.
- Try to view the performance as a challenge, not a threat
- Show up for others, be an active audience member (as appropriate)

# How to address stage fright?

# Practice



# It can be scary AND fun

- Even if you're anxious, you can find a “flow state” on stage!



# Thursday

- Social Media & Online Outreach
- TJO tour!

