

ASTR 270

Public Outreach in Astronomy

Class 09

Public Talks

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



Property of University of Washington Libraries. Special Collections

some research use until 1940's

- <https://astro.washington.edu/astronomy-history>

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

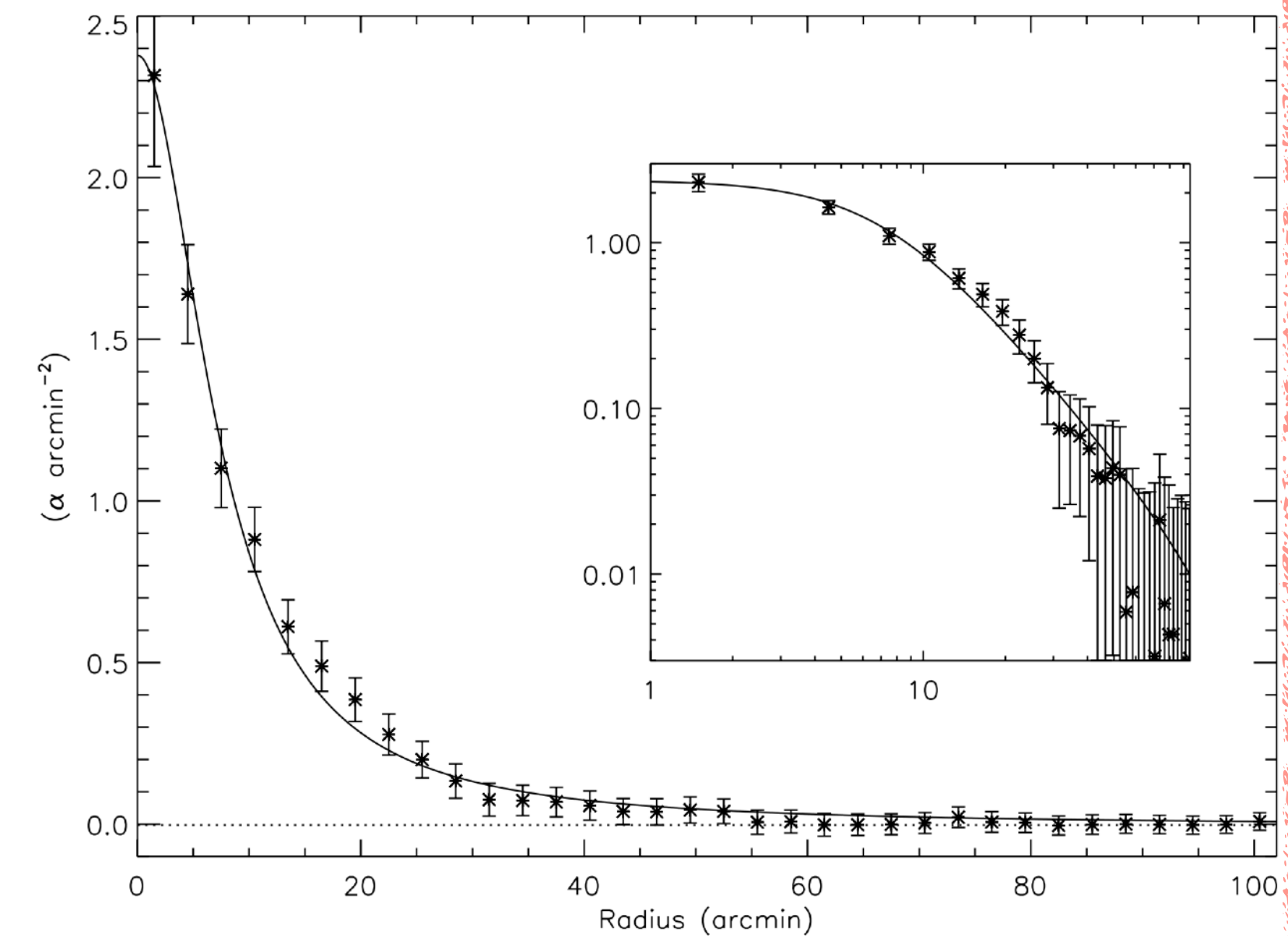
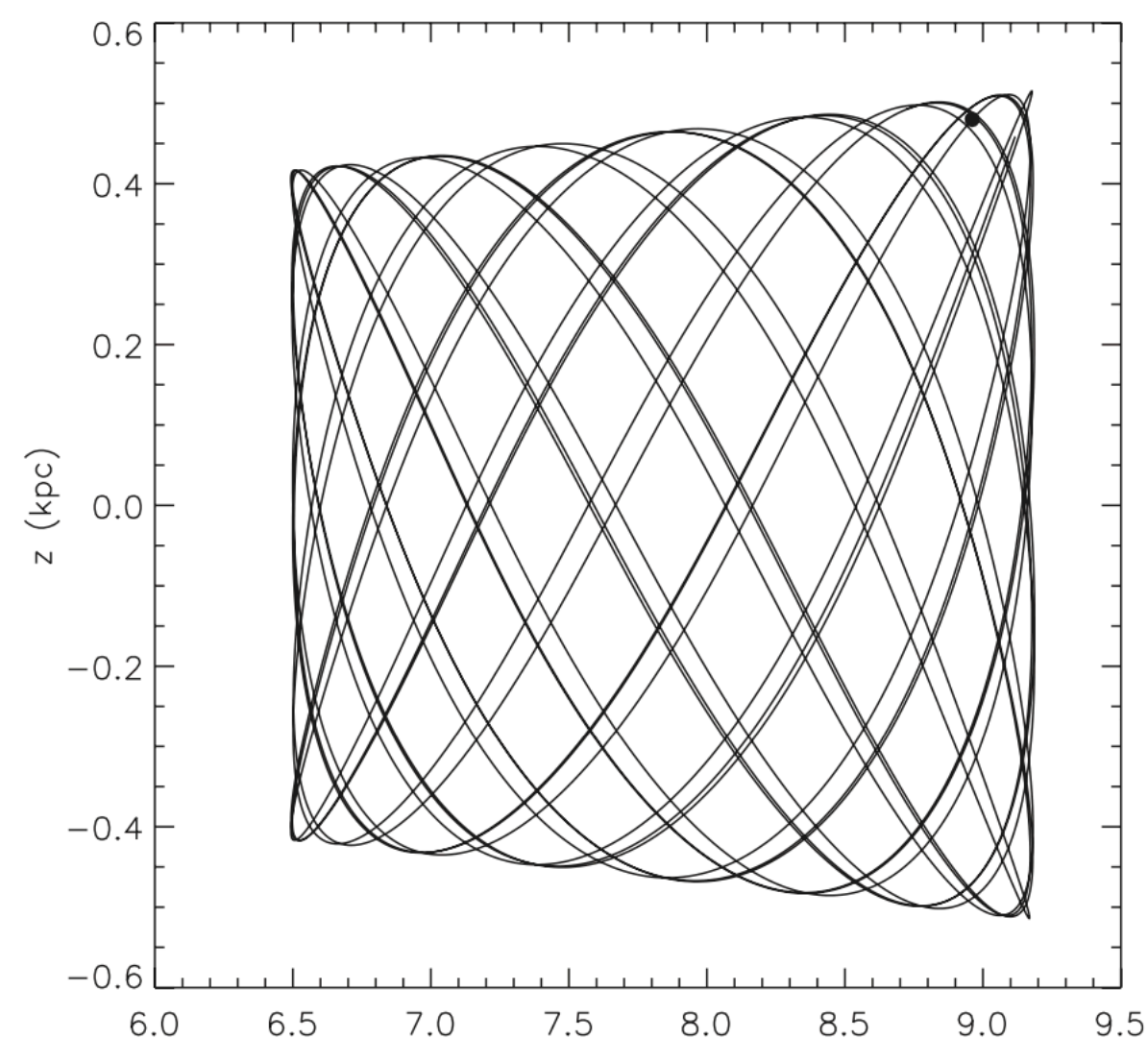
- Take everything out of your pocket, silence phone/notifications
- Make sure your computer doesn't go to sleep
- If something goes wrong: pause, then keep going (don't panic!)
 - Technical difficulties happen
 - Unexpected interruptions can occur
- Look for feedback, from peers, advisors, comment box,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

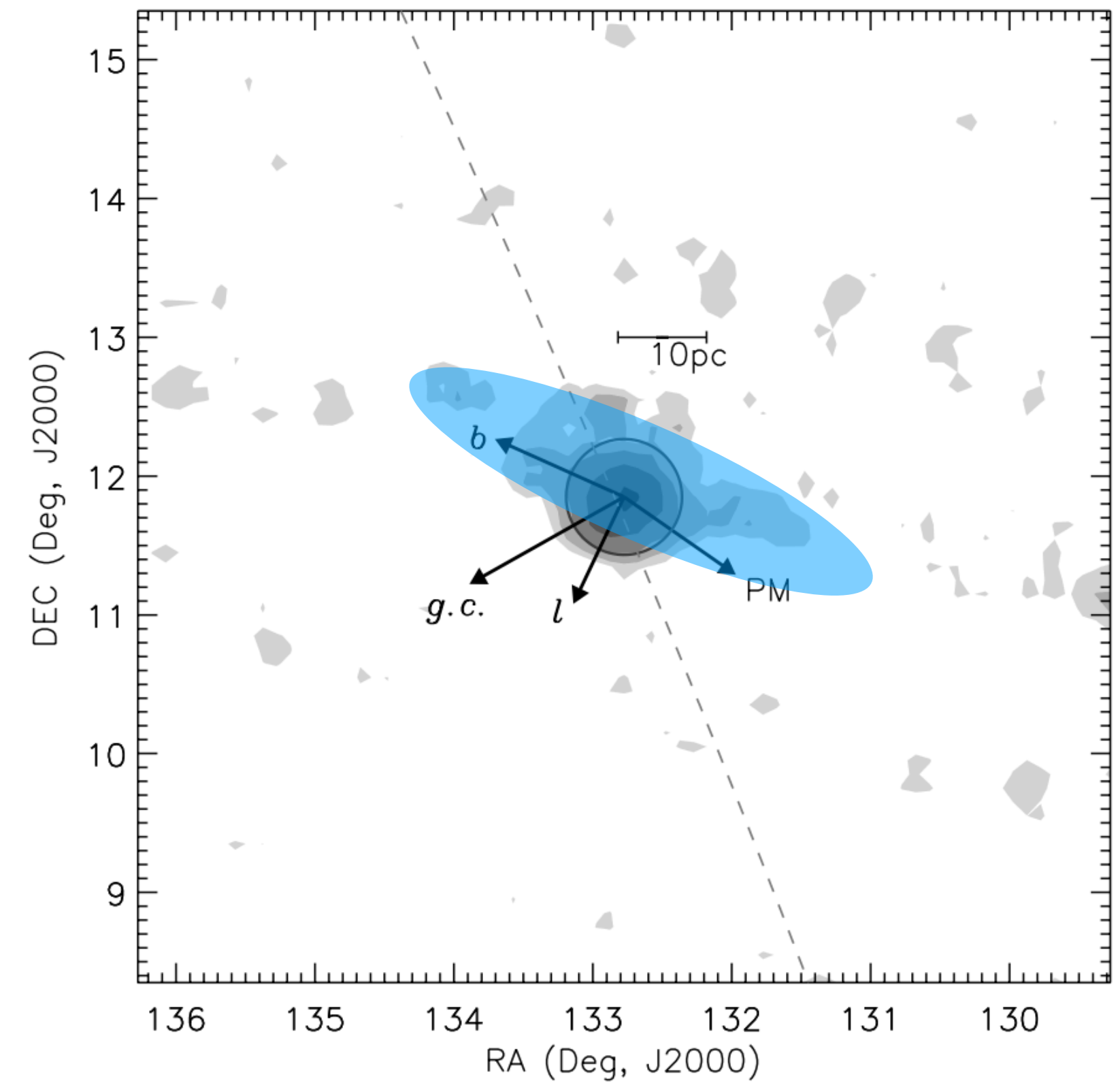
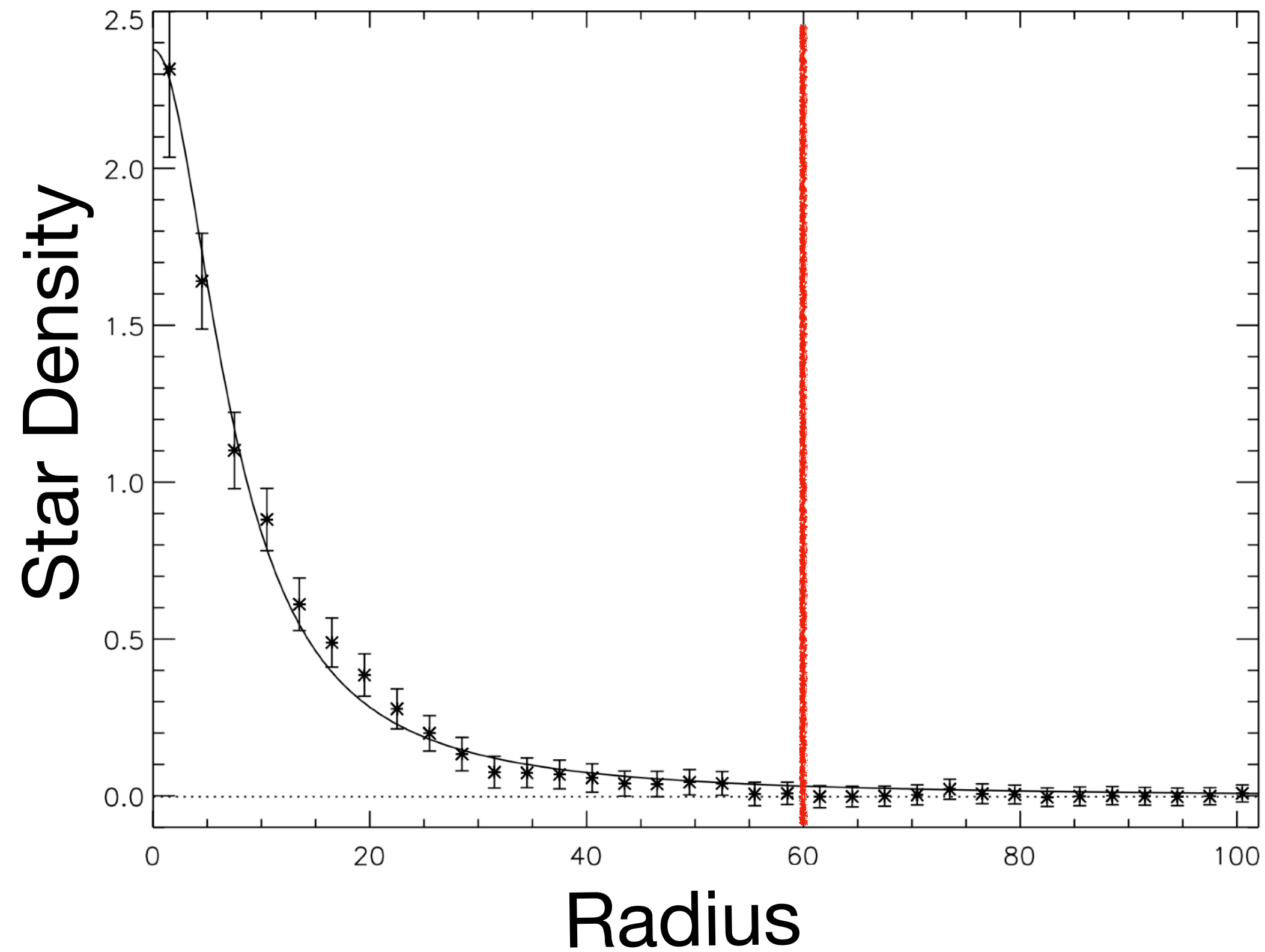
Cluster profile

- 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?

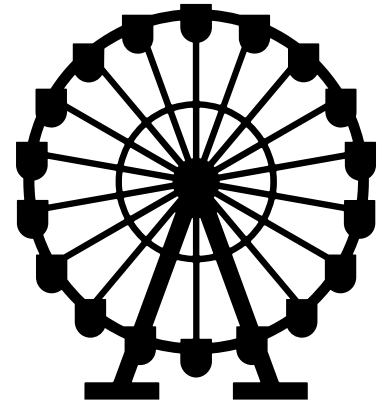
- Give yourself a softball to start (a joke, anecdote, highly structured title or introduction)
- You can cut the tension, acknowledge your nerves
- Make eye contact with audience. Good for engagement, and for YOU
- Move around, before and during performance
- Take breaths, stop, drink water, try to 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!

