

# Astronomy 596/496 APA

## Lecture 7

Oct. 15, 2015

### Today's Agenda

- ★ Colloquium Recap
- ★ Order of Magnitude Derby
- ★ Colloquium Preview

No homework was due today. Hope that's okay.  
There will be some for next week.

this past Tuesday: Jeff Cooke, Swinburne U.

- “Deeper, Wider, Faster: A multi-facility, multi-wavelength search for the fastest bursts in the sky”

*Q: What was the talk about?*

*Q: Key/memorable results?*

*Q: What did you like about the presentation?*

*Q: Lingerin questions?*

*Q: Other comments?*

# Order of Magnitude Derby

## The Great APA Order of Magnitude Derby

- Form teams of  $\sim 3$  people
- Agree on a team name and color
- get a paper and writing instrument
- no internet!

## Derby Questions: Milky Way Black Holes

How many stellar-mass black holes are in our Galaxy?

- A** Think of as many ways as possible to estimate the number  $N$  of stellar mass black holes in the Galaxy.
- B** Decide on the best method and use it to estimate  $N$ .
- C** Estimate the distance to the nearest black hole.
- D** Is there more mass in Sgr A\* or stellar-mass black holes?

## Colloquium Preview

Next week, Oct. 20: **Greg Laughlin**  
“*The Galactic Planetary Census*”

*Q: around when was the first confirmed exoplanet discovered?*

*Q: why did it take so long—why is it hard?*

*Q: about how many confirmed exoplanets are there?*

*Q: what technique has found the most?*

*Q: how can we learn about exoplanet mass? size? composition?  
atmosphere?*

*Q: is the Solar System typical or atypical?*