

AstroChallenge 2015

Day 1

Opening Address

Christopher Cheng
Chairman

Opening Address

Cao Shan
Vice-Chairperson

A Guide to Doing Well in AC

Kia Yee

Head QM

MCQ Round (+2/-1)

- The optimal strategy is to leave blanks only if you can't eliminate more than 1 choice.
 - If you eliminate 2 choices, the *expected* reward from randomly choosing 1 of the remaining 3 options is 0
 - You can usually eliminate at least 1 option by inspection
- Use your (7) blanks optimally!

DRQ Round

- There is ECF... but don't go overboard
 - Don't write answers that you know are obviously wrong!
 - We will never give you a star the size of the Milky Way...
 - If you can't find a mistake in your calculations, acknowledge the error (in words), and assume a more realistic answer for subsequent parts
- Explain your workings (with words!)
 - If we don't know what you are doing and the answer is wrong...

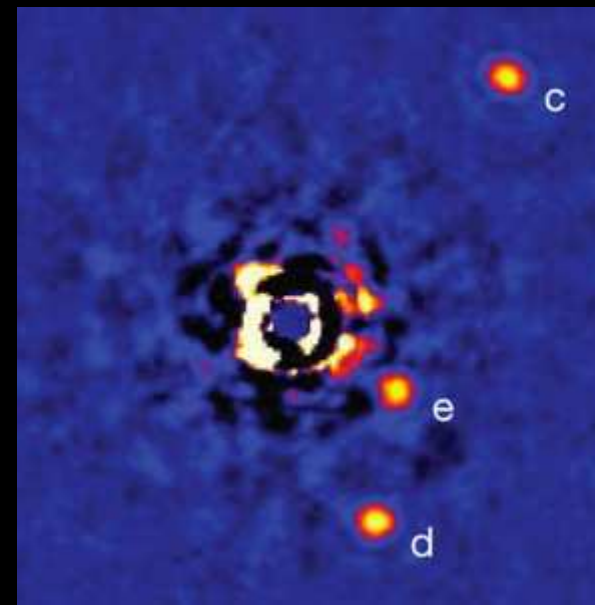
DRQ Round

- Unless explicitly stated, we aren't expecting essays
 - Keep your pens under control!
- Not all questions are created equal
 - Use your time wisely!
- As far as you can, attempt all parts!
 - Intuitive reasoning can overcome seemingly intractable problems!

AC-2015 Science Brief

AC-2015 System Review

- Mass estimated through RV and direct imaging
 - Radii are poorly constrained
- Asteroids/comets probably roam the system
- What little information we have comes from spectroscopic observations and modelling



Mission Parameters (Default)

- 10 young, fit and healthy individuals will be trained to operate and manoeuvre the ship
 - Booster rockets + Nuclear propulsion
- Estimated travel time to reach AC 2015: 8 years (Earth)
 - Combination of gravity assists/engine firings to slow down.

Questions?