

Café Scientifique Headingley

Monday 12th June 2023

The rise and fall of the giant planet (occurrence rate)

By: Heather Johnston



Webb NIRC2 composite image of Jupiter from three filters – F360M (red), F212N (yellow-green), and F150W2 (cyan) – and alignment due to the planet's rotation. Credit: NASA, ESA, CSA, Jupiter ERS Team; image processing by Judy Schmidt.)

Outline: Giant planets like Jupiter play a key role in shaping the architecture of planetary systems. However, they make up only a tiny fraction of the 5,000+ exoplanets known today. Giant planets are found most frequently around stars 1.7 times as massive as the Sun, and the occurrence rate drops to zero around stars 2.5 times as massive as our Sun. My talk will explore how giant planets form, why they are special, and the rise and fall of the giant planet occurrence rate.

Speaker: *Heather Johnston is a 3rd year Astrophysics PhD student at the University of Leeds. She obtained her MSci in Physics at the University of Dundee in Scotland where she worked on modelling spot activity in young, active stars.*

Her current research involves exploring giant planet formation around different kinds of host stars and connecting theoretical models to observations.

Venue: The New Headingley Club, 56 St Michaels Road, LS6 3BG

Time: Room opens 7:30pm, Talk begins promptly at 7:45pm

Entry: Donation please for room hire and expenses: £4 at the door

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