

2020—2021 ASTROPHYSICS SEMINAR SERIES

Radio exoplanets and stars at low-frequencies

One key question that astronomy is attempting to answer is whether there are habitable planets around stars other than our Sun. While we have entered an era where identifying nearby exoplanets has become standard, discerning whether the environmental conditions dictated by the host stars are suitable for life has proved far more elusive. The detection of radio emission from an exoplanet provides a direct probe of the planet's magnetic field - information crucial for assessing the potential habitability of the planet. However, it is only with the recent development of sophisticated megahertz-frequency sensitive telescopes, such as the Low Frequency Array (LOFAR), that a search for the faint radio exoplanetary emission is now possible. In this talk, I will outline our LOFAR survey of stellar systems, with a focus on our recent detection of strong, highly circularly polarised low-frequency radio emission associated with nearby stars - the expected signpost of a star-exoplanet interaction.

**Monday, March 29th**

3:30 - 4:30 p.m.

See website for Zoom details

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