

The MIGHTEE continuum survey: cross-matching, source classification and science results

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MIGHTEE is a galaxy evolution survey currently underway with the MeerKAT radio telescope. Once complete, the survey will cover 20 square degrees in four fields to a depth of ~ 2 μ Jy rms/beam at 1.3 GHz, providing a unique combination of depth and breadth. Crucially, the MIGHTEE fields have excellent multi-wavelength coverage, enabling a full census of galaxy properties.

I will describe recent work identifying multi-wavelength counterparts for the sources detected in MIGHTEE Early Science data (Whittam et al., 2024) and provide an update on the work currently in progress cross-matching the full MIGHTEE survey. I will then outline the methods used to classify the MIGHTEE sources into different source types (e.g. AGN, SFG) using the extensive multi-wavelength information available, and the insights this gives us into the nature of the faint radio source population (Whittam et al., 2022).

Finally, I will highlight some recent science results from the MIGHTEE continuum survey. This will include the properties of the radio galaxies in the field; in particular, I will discuss whether or not there is evidence for a dichotomy in the accretion rates of high-excitation and low-excitation radio galaxies, and the implications this has for the role radio galaxies play in galaxy evolution.

keywords

survey overview, cross-matching, AGN, radio galaxies, source classification

In-person or online?

online

Career level

ECR

Primary authors: WHITTAM, Imogen (University of Oxford / University of the Western Cape); HALE, Catherine (University of Oxford); JARVIS, Matt (Oxford University / University of the Western Cape); HEYWOOD, Ian (University of Oxford)

Presenter: WHITTAM, Imogen (University of Oxford / University of the Western Cape)

Session Classification: Surveys