

# Active galaxies in the LoTSS DR2 survey

*Thursday, 9 May 2024 11:30 (15 minutes)*

The second data release of the LOFAR Two-Metre Sky Survey (LoTSS) covers 27% of the northern sky, with a total area of  $\sim 5,700 \text{ deg}^2$ . We have used a combination of automatic cross-matching, citizen science, and expert visual inspection to find optical identifications for around 3.5 million radio sources in the survey, generating by far the largest catalogue of identified radio sources ever and providing some important learning points for the SKA era. The unsurpassed statistics of the dataset allow us to pioneer new approaches to removing star formation contamination from AGN samples, generating of order 500,000 robustly selected AGN. These in turn allow new tests of radio AGN unified models, and greatly improved estimates of the importance of AGN feedback in the local universe. I'll discuss some preliminary results from these projects.

## keywords

cross-matching, AGN

## In-person or online?

in-person

## Career level

Mid-Senior

**Primary author:** HARDCASTLE, Martin (University of Hertfordshire)

**Presenter:** HARDCASTLE, Martin (University of Hertfordshire)

**Session Classification:** AGN/ High-z