



Contribution ID: 43

Type: not specified

## The variability of brightest cluster galaxies at high radio frequencies

*Wednesday, 30 June 2021 16:55 (20 minutes)*

The radio variability of AGN is a product of many underlying physical processes which connect the host galaxy to its supermassive black hole. These include the rate and manner of the black hole fuelling, spectral index changes due to interactions within the AGN, and evolving energy densities within radio jets. Studying and quantifying variability can therefore inform us about these processes. We report on an Owens Valley Radio Observatory (OVRO) campaign monitoring the high radio frequency variability of 20 nearby, cool-core brightest cluster galaxies. The observations are at 15 GHz, typically have an interval of 10 days, and span between 8 and 13 years. Using a range of variability detection techniques, we have analysed changes in the lightcurves on week to decade long timescales. Using additional observations from KVN, SCUBA2, and NIKA2, we also show how this variability relates to the sources' spectral properties at radio frequencies of up to 353 GHz.

**Primary author:** ROSE, Tom (Durham University)

**Presenter:** ROSE, Tom (Durham University)