

# Results from the first tier of the MERGHERS survey

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The MeerKAT Exploration of Relics, Giant Halos, and Extragalactic Radio Sources (MERGHERS) survey is targeting a homogeneously selected sample of SZ-detected galaxy clusters with the aim of probing the cosmic and mass evolution of diffuse cluster radio emission. Almost all statistical cluster samples studied for diffuse radio emission are restricted to low-redshift, high-mass clusters due to historical telescope sensitivity limitations. MERGHERS is designed in statistically complete tiers, to build up to a large statistically significant cluster sample across wide redshift and mass ranges, as yet unprobed at mid-MHz and GHz ranges. I will present the results of the first tier of the MERGHERS project, which focuses on mid-to-high redshift clusters ( $0.4 < z < 0.6$ ) from the Atacama Cosmology Telescope DR5 cluster catalogue, providing the first mass-selected statistical sample in this redshift range.

## keywords

clusters, diffuse emission

## In-person or online?

in-person

## Career level

Mid-Senior

**Primary author:** KNOWLES, Kenda (Rhodes University / South African Radio Astronomy Observatory)

**Presenter:** KNOWLES, Kenda (Rhodes University / South African Radio Astronomy Observatory)

**Session Classification:** Clusters/LSS