

MeerKAT follow-up of newly-discovered distant clusters in the eROSITA All-Sky Survey

Abstract

Merging galaxy clusters often host Mpc-size diffuse radio sources tracing the synchrotron radiation due to accelerated particles and microGauss-level magnetic fields. Recent observations with the new generation of radio telescopes (e.g. LOFAR and MeerKAT) of diffuse radio emission in a number of distant ($z > \sim 0.6$) clusters opened a new window on the study of the evolution of these sources over cosmic time. Here we propose MeerKAT observations of six galaxy clusters newly discovered in the eROSITA All-Sky Survey in the redshift range of 0.7-1.2. With these observations we aim to test the magnetic field evolution and particle acceleration at GHz frequencies at the epoch of the largest-scale structure formation.