

Title

Unveiling the polarimetric properties of filaments around the Bright Central Galaxies in the Shapley Concentration Core

Abstract

Recent observations with highly sensitive radio telescopes have highlighted the presence of a few kiloparsec long filaments and trails of radio emission around radio galaxies. However, the origin of the cosmic rays and the magnetic structure of such emission is still unclear and poorly investigated. We propose MeerKAT observations in L, S0 and S2 bands to unveil the complex filamentary morphology and the magnetic fields properties by means of highly detailed polarisation analysis of the trails around the brightest cluster galaxies (BCGs) in the mildly disturbed cluster complex A3528, in the Shapley Supercluster Core.