

Cosmic dance in the cluster complex A3528-A3532 in the Shapley Concentration Core

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Superclusters are the perfect environments where to study galaxy clusters and groups at different stages of their dynamical activity. Particularly, the Shapley Supercluster is richest and most massive concentration of galaxy clusters known to date, and it presents a large variety of radio sources, from radio bridges to radio galaxies.

Here, I will present the newest high-fidelity images of the cluster complex A3528-A3532 in the Shapley Concentration Core, through uGMRT band 3 to 5 and MeerKAT L-band observations. The impressive resolution and sensitivity of the two facilities have revealed for the first time the presence of radio-emitting filaments and bubbles around the brightest cluster galaxies (BCGs), as well as diffuse radio emission on the few hundred kpc scale (e.g. mini-halos). These observations, therefore, provide new insights on the role of cluster minor-mergers on the mechanisms of particle (re-)acceleration, the impact on the radio galaxy activity and the interplay with the surrounding intracluster medium.

keywords

galaxy clusters; diffuse radio emission; BCG; uGMRT; MeerKAT

In-person or online?

in-person

Career level

Mid-Senior

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