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The key role of magnetic field to disentangle radio emission in the mini halo of RBS797

Wednesday 29 November 2023 11:50 (20 minutes)

In this talk, I will present results from LOFAR HBA observations of the mini halo in the cluster RBS797. The cluster is known to host a powerful AGN at its centre with two pairs of jets propagating in orthogonal directions. We have investigated the radio emission, classified as radio mini halo, and its connection with the central AGN.

We have found an unexpected trend for the spectral index behaviour of the mini halo, and propose three different scenarios to explain it. A detailed knowledge of the magnetic field would be fundamental to discriminate between the three scenarios. I will then show preliminary results on the cluster A2034, demonstrating the power of MeerKAT L-band observations to constrain magnetic fields in galaxy clusters.

Research area

Magnetism

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