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Search and modelling of remnant radio galaxies at 150 MHz with LOFAR - 15'

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Low frequency observations have finally opened the way to the search and study of remnant radio galaxies. These sources represent the last evolutionary stage of radio galaxies when the jets have switched off, and have remained elusive and poorly understood so far. For a long time there have been claims that new sensitive surveys would lead to the discovery of many more remnant radio galaxies, especially at low frequency, and LOFAR now gives us the opportunity to investigate whether this is the case.

In this talk I present an extensive search for remnant radio galaxies at 150 MHz in the Lockman Hole, a well-studied extragalactic field, and JVLA follow-up observations of the candidate sources. In addition to this, I will show the results from Monte-Carlo simulations that we have performed to predict the fraction of remnants that should be found in radio flux limited samples, to be compared with observations.

This study puts the basis for a statistical investigation of remnant radio galaxies over larger sky areas using new generation surveys performed with SKA precursors, such as the LOFAR Two-metre Sky Survey, The MeerKAT International GHz Tiered Extragalactic Exploration and GAMA Legacy ATCA Southern Survey.

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