

## LeMMINGS: the eMERLIN radio legacy survey of nearby galaxies

*Tuesday 9 October 2018 16:30 (15 minutes)*

I will present the first data release of high-resolution 1.5-GHz radio observations of 103 nearby galaxies with the eMERLIN array, part of the LeMMINGS survey. The sample consists of active and non-active galaxies, taken from the Palomar sample. The radio images reveal a broad variety of morphologies: one/two-sided jets, double-lobed jets, complex structures and star formation regions on a typical scale of  $\sim 100$  pc, down to a radio luminosity of  $10^{32}$  erg/s. The most important result is the detection of pc-scale jetted structures associated with black hole masses down to  $10^6 M_{\odot}$ . By dividing the sample into optical classes, LINERs show more core-brightened radio morphologies and appear to be the scaled-down version of FRI radio galaxies; Seyferts show less collimated jets than LINERs; HII galaxies and Absorption-line galaxies are a mixed population of weakly active and silent black holes. In addition, I also find that that jetted radio sources follow the optical fundamental plane of black hole activity, suggesting a common disc-jet relationship.

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