

A 1.28 GHz MeerKAT survey of 12MGS Galaxies in the Southern Hemisphere

Abstract

We propose snapshot continuum and polarisation observations (21 hrs) of $z < 0.05$ IRAS 12- μm Galaxy Sample (12MGS) galaxies to study the interplay between AGN and star formation. 12MGS composite or SF-AGN galaxies are local analogues of galaxies at the peak of the Cosmic Star Formation History (CSFH) ($z \sim 1 - 3$), so by studying them we can better understand the physics governing their high- z counterparts. SALT spectra are available for ALL the 43 12MGS galaxies in the Southern sky for which Spitzer/IRS and Herschel/PACS-SPIRE infrared/submm spectroscopy/photometry are also available. 14/43 galaxies have already been observed with MeerKAT as part of the "MeerKAT 1.28 GHz Atlas of Southern Sources in the IRAS Revised Bright Galaxy Sample", and we now aim to observe the other 29 at a similar depth and resolution to complete the statistical analysis of the full sample. MeerKAT observations combined with spectral models constrained by the available spectrophotometric data will greatly improve our understanding of the physics governing the AGN/SF activities in SF-AGN objects.