

Searching for fast outflows of cold gas at intermediate redshifts

Abstract

It is well established that AGN feedback processes play a crucial role in the evolution of galaxies, but conclusive observational evidence of this remains elusive. One such signature of feedback are fast outflows of cold gas observed in a number of powerful radio galaxies. The sensitivity of MeerKAT, combined with the wide frequency coverage in a radio-quiet site allows us to search for these outflows at intermediate redshifts. This proposal requests 12hrs in the UHF band to observe 9 sources with known HI absorption lines to study the interaction between radio jets and the cold gas in galaxies, shedding light on how jets impact their environment at a critical point in the lifecycle of radio galaxies. These observations will shed light on how galaxies have evolved over the past 8 billion years and provide a much needed observational basis to inform future simulations of galaxy evolution.