

# Radio filaments at the centre of Abell 3560: new insights on the radio plasma/ICM interaction

## Abstract

Abell 3560 is a galaxy cluster located in the central region of the Shapley Concentration. X-ray studies show that it has a sloshing core, most likely induced by a minor merger event. In the radio band it is dominated by the emission associated with one of the two nuclei of the dominant cluster galaxy. This radio galaxy, J1332-3308, shows a complex morphology, which has been interpreted as the result of at least two episodes of nuclear activity. The most prominent feature is a filament departing from the radio galaxy and extending towards the brightest regions of X-ray emission. Recently, ASKAP has found a second filament, which was undetected in previous observations. This second filament runs parallel to the first one and extends from the active lobes of the radio galaxy out into the ICM.

MeerKAT has the sensitivity and angular resolution requested to study both filaments and provide insights on their origin. Total intensity imaging, total and in-band spectral imaging and polarization information will be used to derive information on the age of the radiating electrons, for comparison with the lobes and older emission associated with J1332-3308, and on the properties of the magnetic field along these intriguing features.