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A MeerKAT view on gas deficient galaxies in the Virgo III filament

Abstract

We propose H I imaging of 7 fields distributed along the cosmic filament Virgo III that is connected to the Virgo cluster. These observations will characterise, in a comprehensive way, the properties of gas deficient galaxies, either in molecular or neutral hydrogen content, as identified from previous integrated measurements. The MeerKAT spatially resolved images, in combination with a unique set of ancillary data, from the UV to the far-IR, will enable the identification of the physical processes leading to star formation quenching well before galaxies fall on the cluster core. Our goals will be reached in 42.35 hours which includes all overheads.