

# The growth and structure of nearby galaxies based on HI observations: capabilities of SKA pathfinders: KAT-7 and MeerKAT.

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Studying galaxies provides the best glimpse at how the universe is organised on a large scale, making their properties an important part of understanding the universe's nature and evolution. The Neutral hydrogen (HI), 21-cm line emission is a powerful tracer of an essential component of baryonic matter in the Universe. Unlike other tracers at other wavelengths, HI can be traced to a much larger distance from the galactic centre thus an ideal medium to trace the kinematics, dynamics, and environmental effects of galaxies out to larger radii. The Square Kilometer array, which is hosted jointly by South Africa and African partner countries, is a next-generation power telescope that will enable a deeper probe of HI. In the midst of the SKA implementation, there have been ongoing observations of nearby galaxies using its pathfinders KAT-7 and MeerKAT. I will describe the observations, discuss some of the derived results, and how these observations contribute to answering key questions about cosmology and astrophysics.

## **Abstract Category**

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**Primary author:** Dr NAMUMBA, Brenda (Wits Centre for Astrophysics, South Africa)

**Presenter:** Dr NAMUMBA, Brenda (Wits Centre for Astrophysics, South Africa)

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