

Beyond the sphericity assumption in dynamical HI models

P. Buyle

Ghent University

HI observations still are the best tool to explore the dark matter distribution beyond the optical radius of galaxies. However dynamical models derived from HI observations are mostly based on spherical symmetry. Clearly the kinematics of galaxies are more complex. We started a project on the ATCA and GMRT to observe a large sample of galaxies, that are homogeneously distributed along the Hubble sequence, with the aim to dynamically model these systems by their HI emission. The code that we use is based on quadratic programming and allows for spherical symmetric and axisymmetric geometries. By means of these models we will investigate both the dark matter content as a function of Hubble type and its relation with the putative central supermassive black hole that is predicted by the recently found v_c - σ relation.

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