

# The Nature of Dark Matter from Properties of Galaxies

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The cosmic concordance model (LCDM) has become the standard theory of cosmological structure formation, within which cosmological measurements are confronted and interpreted. Although its predictions appear to be in good agreement with data on large scale structure, a number of discrepancies with data emerges on the galactic and sub-galactic scales.

In this talk I will show the distribution of dark matter in late Hubble type galaxies and, in particular, in the spiral galaxy NGC 3198. I will also address the key challenges of galaxy formation and evolution in the LCDM scenario by means of the kinematics of a sample of dwarf disk galaxies. Finally I will speak about the universal rotation curve of dwarf disk galaxies, which are crucial objects in testing the LCDM scenario.