# ΛCDM and the dark matter distribution in spirals

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We present the results of the mass modelling of 5 spiral galaxies, based upon the combination of Hα and HI rotation curves (RCs). The HI RCs are derived by creating model observations (data cubes) of the HI layer, which turns out to be a very reliable way of deriving the kinematics. The mass modelling points towards dark halos with constant density cores; on the contrary, the predictions of the ΛCDM theory fit the data badly, and so do MOND and the scaling-up of the HI surface density. We will also present some preliminary results aiming at making steps forward in deducing the dark matter distribution in spirals: a way of measuring the stellar M/L ratio, a test of the ΛCDM predictions in the outer parts of galaxies and the study of the outer dark matter distribution in galaxies, through very extended RCs, both in terms of linear distance and of stellar exponential scale lengths.