

A SYNOPTIC VIEW OF THE MAGELLANIC CLOUDS:
VMC, GAIA AND BEYOND

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Faint and ultrafaint dwarf satellites of the Magellanic system

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According to LCDM theory satellites of the Milky Way also once had companions. The recent discovery of several ultra-faint dwarf galaxy candidates in close proximity to the Magellanic Clouds provides a unique opportunity to test this theory. I will summarize results from cosmological N-body simulations that study LMC-analogs and their tidal evolution within Milky-Way like potentials. Due to the inferred recent infall, the once companions of the LMC should distribute in space and velocity in a well defined manner that allows to reconstruct prior membership to the LMC halo. According to proper motion measurements from GAIA, several classical and ultrafaint dwarfs are candidates to have been associated to the LMC in the past; in agreement with predictions from the LCDM model. We study also cosmological hydrodynamical zoom-in simulations of isolated 10^{11} Msun dwarf halos in FIRE. For those satellites that form stars, we characterize the stellar mass and internal kinematics, presenting the very first theoretical predictions for the dark matter content of ultrafaint dwarf companions that were accreted as part of the LMC system.