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

ESO-HQ, GARCHING BEI MÜNCHEN, GERMANY September 9-13, 2019

Invited review talk: VMC and Gaia contribution

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I will present new accurate Period-Luminosity (PL) and Period-Wesenheit (PW) relations in the V,J,Ks bands, based on a sample of about 4300 Classical Cepheids in the Large Magellanic Cloud (LMC) in the context of the VISTA Magellanic Cloud (VMC) Survey. The extreme precision of these data allows us to study the geometry of the LMC and to establish a firm baseline for extragalactic Cepheid distance scale studies. The zero points of the PL and PW relations are calibrated using Gaia Data Release 2 parallaxes for more than 1500 Milky Way Classical Cepheids possessing good photometry. The implications in the context of the Hubble constant tensions are discussed.