

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

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

**Using APOGEE to Determine
Abundance-Age Trends in the Large
Magellanic Cloud**

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Dwarf galaxies are the most abundant galaxies in the universe, but are especially difficult to study because they are intrinsically faint and most are quite far away. However, the proximity of the Magellanic Clouds lends them to be the perfect laboratories because individual stars can be resolved and studied. The dual-hemisphere Apache Point Galactic Evolution Experiment (APOGEE), which provides accurate radial velocities and chemical abundances, is an excellent tool to study galactic evolution in our local neighborhood. An important component of the APOGEE-2 South observations is the survey of 5000 red giant branch stars in the Magellanic Clouds. These data span a large radial and azimuthal coverage range and provide an ideal dataset to study the evolution of the Clouds. For this work, we make use of APOGEE DR16 stellar parameters and abundances, the accurate LMC SMASH red clump distance map (Choi et al. 2018a), and stellar isochrones to calculate star-by-star ages. I will present preliminary results for LMC abundance-age trends, spatial abundance gradients, and what they can tell us about the chemical evolution of the Magellanic Clouds.