

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

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**A metallicity map of the SMC using
near-infrared passbands of the VMC
VISTA Survey**

**Choudhury Samyaday, Department of Physics and
Astronomy, Research Centre for Astronomy,
Astrophysics, Macquarie University**

One of the important probes to understand the evolution and interaction processes of the the LMC & SMC is the estimation of their chemical composition and its spatial distribution. In previous works, we estimated first-of-their-kind metallicity maps for the inner regions of the LMC & SMC by combining large-area photometric (OGLE III and MCPS V and I bands) and spectroscopic data. The slope of the Red Giant Branch (RGB) is used as an indicator of the mean metallicity of a small region within the galaxy, and it is calibrated using spectroscopic data for field and cluster RGB stars. The VMC VISTA survey has observed a much larger area of the LMC & SMC than the MCPS and OGLE III surveys, covering inner as well as outer regions. In addition, the effects of reddening will be less important in near-infrared passbands compared with optical bands. Presently, we are employing our technique of metallicity estimation, using the Y and Ks photometric bands and VMC data, to construct near-infrared metallicity maps for the general field of the SMC. The resulting near-infrared metallicity map is expected to complement its optical counterpart. Details and initial results will be presented.