

Suprime-Cam photometric survey of M33 galaxy

D. Narbutis¹, N. Arimoto^{2,3}, R. Stonkutė¹, V. Vasevičius^{1,4}

¹*Center for Physical Sciences and Technology, Lithuania, donatas.narbutis@ftmc.lt*

²*Subaru Telescope, National Astronomical Observatory of Japan, USA*

³*Department of Astronomical Science, The Graduate University of Advanced Studies, Japan*

⁴*Vilnius University Observatory, Lithuania*

Abstract

We have surveyed a complete extent of the M33 galaxy disk using multi-band photometric observations. The B , V , R , I , and H_α passband CCD images with typical seeing of $\sim 0.8''$ were obtained with Subaru Telescope equipped with Suprime-Cam mosaic camera. The stellar photometry was performed on all images in the survey field using DAOPHOT allframe program. We present a wide-field $\sim 70' \times 100'$ photometry catalog of stellar objects, reaching depth of $V \sim 25$ mag, and a preliminary morphological analysis of color-magnitude diagram spatial variation, focusing on the properties of the main sequence and red giant branch stars within the M33 disk.