

UV Photometry of Globular Clusters and the Nucleus Field of M31

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The near- and far- UV images of M31 in the UIT archive have been investigated for the UV properties of globular clusters in the galaxy, and for the radial UV color gradient of the nucleus field. The fluxes of 20 member clusters in the nucleus field and 22 in the disk field have been measured in a near ultraviolet (NUV ~ 2500Å) bandpass. In the far ultraviolet (FUV ~ 1500Å), however, only 2 clusters in the nucleus and 7 in the disk field have been observed. UV color gradient of M31 nucleus field is also investigated from the concentric circular annuli surface photometries. In this paper, we have explored the credibility and the feasibility of the existing data processing techniques. We argue that some results of previous studies using similar UV photometric image data are susceptible because of the uncertainty involved in the employed reduction technique. This work is the first of a series of studies to setup a suitable reduction procedure for the upcoming GALEX UV data, which is expected to come out starting 2002.