

P102a **Analyses of the AKARI Phase 3 Prism Slitless Spectroscopic Data of the Large Magellanic Cloud**

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Since the Large Magellanic Cloud (LMC) is one of the nearest star-forming galaxies ( $d \sim 50$  kpc), we are able to observe individual stars in it. Heavy elements have important influences on stars when they are forming, and there would be differences in the formation processes of young stars. By investigating young stellar objects in the LMC whose metallicity is about half of that of the solar neighborhood, we can obtain a new perspective on the process of star formation. Based on the AKARI/IRC Phase 2 data of the Large-area Survey of the LMC, a point source catalog (Ita et al. 2008; Kato et al. 2012) and a near-infrared spectroscopic catalog (Shimonishi et al. 2013) have been released to the public. The slitless spectroscopy of AKARI suffers contamination from overlapping nearby sources. Between Phase 2 and Phase 3, the dispersion direction was rotated by  $180^\circ$  respected to the detector array, resulting in different overlapping parts of spectra. By careful analyses, more spectral information can be derived which could not be obtained only by Phase 2 data.

We performed the data reduction of AKARI Phase 3 near-infrared spectroscopy (2 - 5.5  $\mu\text{m}$ ) of the LMC, which covers almost the same area as in Phase 2 ( $\sim 10$  deg<sup>2</sup>). We have finished the initial process and investigated the flux calibration. We will report the progress of the data reduction as well as some of the results so far obtained.