R05a **AKARI 2.5-5 micron Spectra of Luminous Infrared Galaxies**

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Luminous Infrared Galaxies (LIRGs) have infrared luminosities of more than $10^{11}L_{\odot}$ and morphologies that cover all of the galactic merger stages, from isolated spirals to final stage mergers. Gas-rich galaxy mergers are one of the main triggers of starbursts and/or active galactic nuclei (AGN). The Great Observatories All-Sky LIRG Survey (GOALS) consists of multi-wavelength imaging and spectroscopy of a flux-limited sample of 202 LIRGs in the local Universe ($z < 0.09$) taken with Spitzer, Hubble, Chandra and GALEX. Lately we have obtained AKARI $2.5-5\,\mu$m spectra as part of GOALS to cover the whole GOALS sample. In AKARI Phase 3-I, 39 sources had already been observed. In addition, 107 targets will have been observed in AKARI Phase 3-II. Combined with AKARI archived data, the AKARI spectra all of the GOALS targets will be obtained. The AKARI spectra are dominated by $3.3\,\mu$m polycyclic aromatic hydrocarbon, Br-alpha, and hot dust continuum emissions. In this presentation, we will discuss the first 39 spectra which we obtained in Phase 3-I and compare them with the corresponding Spitzer mid-infrared spectra.