[AK01] Nature of Infrared Sources in 11 mm Selected Sample from Early Data of NEP Deep Survey

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We present the properties of 11 mm selected sources detected in the early data of North Ecliptic Pole (NEP) Deep Survey of AKARI. The AKARI data set covers 6 wavelength bands from 2.5 to 11 mm, with the exposure time ranging from about 10 to 20 minutes. This field resides within the CFHT survey with four filter bands (g′, r′, i′, z′). Therefore we were able to obtain nearly continuous SEDs at $\lambda = 0.4 \sim 11 \mu m$. In particular, we examined the spectral energy distribution of 77 sources whose 11 mm AB magnitudes are equal to or brighter than 18.5. The 11 mm band has advantage of sampling star forming galaxies located at redshift $z = 0.2 \sim 0.4$ since the 7.7 mm PAH feature appears in this band. Therefore the 11 mm selected objects are ideal for exploring the obscured star formation activity at moderate redshift. In fact, we find that the majority of 11 mm bright sources are star forming galaxies in $z \leq 0.5$ based on the close inspection of SEDs. In addition, we find several AGNs at various redshifts, some late type stars, and one brown dwarf candidate. There are also several sources whose nature cannot be easily judged by the infrared and optical data alone. Such examples include those detected in near- and mid-infrared, but not in optical bands.

[AK02] The Spatially Resolved AKARI Observations and its Far-IR Properties

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We present the spatially resolved all-sky survey observations for IRAS sources with Japanese Infrared satellite AKARI during the performance verification (PV) phase. We extracted reliable point sources matched with IRAS catalog. We found possibilities that flux measurements of some IRAS sources with a bad flux quality were overestimated and flux measurements are affected by a local background rather than a global background. AKARI all-sky survey observation is expected to verify the IRAS sources and find new extragalactic point sources.