X43a JCMT/SCUBA2 mapping of the AKARI NEP WIDE field

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Understanding infrared (IR) emission is fundamental to revealing the cosmic star formation history and AGN evolution. The AKARI space telescope performed deep mid-infrared observation with its continuous 9-band filters in the NEP field (5.4 deg2), using 10% of the entire pointed observations available throughout satellite's lifetime. AKARI's mid-IR data are truly unique in that Spitzer and WISE have filter gaps in mid-IR. No other telescope can provide continuous 9-band photometry in mid-IR wavelength (2-24 μ m) in 5.4 deg² of wide area.

However, the AKARI NEP field lacks complimentary far-infrared data. Hershel coverage is too shallow to match AKARI's deep photometry. To rectify the situation, we are performing a submm mapping survey of the premier AKARI deep field in the North Ecliptic Pole using SCUBA2/JCMT. By combining SCUBA2 data with AKARI's mid-IR data, we can clearly separate infrared emissions from two powerful sources of IR emissions in the Universe, AGN and star-formation.