A20c Multi-wavelength follow-up observations in the AKARI Deep Field South

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We have carried out a far-infrared galaxy survey with the AKARI satellite to investigate the evolution of infrared galaxies on the basis of their spectral energy distribution and spatial distribution. In order to carry out the largest ever survey by minimizing the contribution of the galactic cirrus emissions, the lowest density region with an area of ∼12 square degrees near the south ecliptic pole was chosen as the survey field (AKARI Deep Field South: ADF-S). As a result of this survey, about 1700 galaxies in a wide flux range from a few Jy down to 20 mJy have been detected (Shirahata et al., in this session).

In order to investigate the detected galaxies by measuring their SEDs and redshifts, we have started follow-up observations at various wavelengths. Until now, the multi-wavelength observations in FUV/NUV (GALEX), optical (U,B,V,R and I), NIR/MIR (AKARI/IRC), Sub-mm/mm (AzTEC/ASTE, LABOCA/APEX) and radio (ATCA) have been carried out, and many sources in the central region of ∼1 square degree have already been identified and classified. Optical spectra for some of the identified sources have been measured, and their redshifts have been determined.

We will continue the multi-wavelength observations and make a cross-matched catalog for all the detected sources, eventually. In this paper, we present current progress of these observations by showing some real data.