[P-121/GC-9] AKARI 11/15 micron observation of z~1 Lyman break galaxies

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We investigate the infrared properties of 0.7<z<1.3 star-forming galaxies selected in rest-frame UV, using AKARI 11/15 micron MIR imaging observation. The "UV-dropouts", defined as galaxies showing Lyman break in between GALEX FUV and NUV filters, are the low-redshift analogs of Lyman break galaxies at higher redshifts. The unique 11 and 15 micron photometry points of AKARI reduce the uncertainties in the determination of total IR luminosities for UV-dropouts, compared to the usage of single 24 micron flux. With the help of Spitzer MIPS 24/70 micron observation, we construct the average infrared SED of UV-dropouts. By comparing the derived total IR luminosity and UV luminosity, we notice that there is a significant evolution of dust attenuation in Lyman break populations as a function of redshifts.

This work was supported by the Korea Science and Engineering Foundation (KOSEF) grant No. 2009-0063616, funded by the Korea government (MEST).

[P-122/GC-10] AKARI Lightens the 15μm Universe at 1 < z < 1.5 : 15μm Observation of the Extended Groth Strip

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We present AKARI 15μm imaging observation of the Extended Groth Strip (EGS). EGS is one of the most well-studied extragalactic survey fields with the wealth of deep multi-wavelength datasets, HST morphologies, as well as spectroscopic redshifts. However, EGS has lacked a crucial coverage in the wavelength between the Spitzer 8μm and 24μm. This is troublesome in the study of cosmic star formation history at $1 < z < 1.5$, since SEDs of IR luminous galaxies have a great complexity at the rest-frame ~10μm most likely due to varying amount of silicate absorption, and at the above redshift range, the feature falls into 24μm. In order to better understand star formation activities at this very important epoch where IR star formation is near its peak, we carried out the AKARI 15μm observation in the EGS with the Infrared Camera onboard AKARI over a total of area of 711 arcmin2 area with the 50% completeness limit of 19.2 AB mag. We constructed the 15μm selected sample at $1 < z < 1.5$ with optical-NIR-MIR imaging and spectroscopic redshift data, and through SED fitting for these 56 galaxies, we find the previous IR luminosity estimation based on the local templates has underestimated the LIR. We also investigate the evolution of mid-infrared SEDs of IR luminous galaxies with redshift, and confirm that it starts at $z \leq 1$.

This work was supported by the Korea Science and Engineering Foundation (KOSEF) grant No. 2009-0063616, funded by the Korea government (MEST).