X13a   Panchromatic Analysis for Nature of HIgh-z galaxies Tool (PANHIT)

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We have developed a new SED fitting tool which are specialized for frontier redshift galaxies. It is a common case for high-z galaxies that the available data are restricted to rich optical to near-infrared photometry and few far-infrared (FIR) data deep enough to detect the faint object (e.g., HST/WFC3 + Spitzer/IRAC + ALMA). In such situation, one cannot perform a complicated modeling of dust emission in FIR regime unlike low-z cases (e.g., da Cunha et al. 2008). We then adopt simple treatment for the dust emission using empirical LIRG templates (Rieke et al. 2009). Instead, we adopt a sophisticated and physically motivated modeling for stellar and nebular emission parts in rest-frame UV-to- optical regime. Our new code fits not only broad band photometry but also spectral emission line flux. There is an option of two-components-fit, where we can fit observed SED with two templates with different physical properties. The new code, PANHIT, is now in public. In this presentation, we show details of our modeling and its application to the high-z frontier galaxies (Hashimoto et al. 2018a,b, Tamura et al. 2018, Mawatari et al. in prep).