Multi-Object Spectroscopy in the Next Decade: Big Questions, Large Surveys and Wide Fields
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The Science Cases for Near-infrared Imaging Spectrometer for Star formation history (NISS)

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Abstract

We present science cases for a small space telescope - Near-infrared Imaging Spectrometer for Star formation history (NISS) onboard NEXTSat-1 (Next generation of small Satellite) in Korea. The NISS is a near infrared (NIR) imaging spectrometer mounted to telescope with an aperture of 15 cm, that will be launched on 2017. It has a field of view of 2 by 2 deg and covers from 0.9 to 3.8μm with a spectral resolution of 20, which is high enough to estimate strength of various emission lines from star forming regions and active galactic nucleus. The dataset from NISS will allow us to study cosmic star formation history of galaxies in nearby and distant universe through physical properties of star forming region in our galaxy as well as nearby galaxies and the structure evolution of fluctuation from cosmic infrared background in distant time scale.