

[AT-15] Data Reduction Pipeline for the MIRIS Space Observation Camera

Jeonghyun Pyo¹, Il-Joong Kim¹, Won-Kee Park¹, Woong-Seob Jeong¹,
Dae-Hee Lee¹, Bongkon Moon¹, Youngsik Park¹, Sung-Joon Park¹,
Kwijong Park¹, Duk-Hang Lee^{1,2}, Uk-won Nam¹, Wonyong Han¹

¹*Korea Astronomy and Space Science Institute*, ²*University of Science and Technology*

Multi-purpose Infra-Red Imaging System (MIRIS) is the main payload of the Science and Technology Satellite-3 (STSAT-3) to be launched in the late half of this year. For the Space Observation Camera (SOC) of MIRIS, we developed the data reduction pipeline with Python powered by Astropy, a community Python library for astronomy. The pipeline features the following functionalities: i) to retrieve the raw observation data from database and convert it to a FITS format, ii) to mask bad pixels, iii) to correct the non-linearity, iv) to differentiate the frames, v) to correct the flat-field, vi) to correct focal-plane distortion, vii) to improve the world coordinate system (WCS) information using known point-source catalog, and viii) to combine the sequentially taken frames. The pipeline is well modularized and has flexibility for later update. In this poster, we introduce the details of the pipeline's features and the future maintenance plan.
