

W07a

Current Status of the Development of SPICA/FPC

Woong-Seob Jeong, Jeonghyun Pyo (Korea Astronomy and Space Science Institute), Toshio Matsumoto (Academia Sinica Institute of Astronomy and Astrophysics, ISAS/JAXA), Dae-Hee Lee, Bongkon Moon, Kwijong Park, Youngsik Park, Wonyoung Han (Korea Astronomy and Space Science Institute), Tsumura Kohji (ISAS/JAXA), Hyung Mok Lee, Myungshin Im (Seoul National University)

The Focal Plane Camera (FPC), one of the focal plane instruments of SPICA (Space Infrared Telescope for Cosmology and Astrophysics), is the Korea-led near-infrared instrument as an international collaboration. The FPC is composed of two parts: (1) FPC-G for fine guiding to stabilize and improve the attitude with a pointing accuracy of $0.05''$ (3σ), (2) FPC-S for the back-up system of FPC-G and for scientific observation with the capability of imaging and spectroscopy covering from $0.7\ \mu\text{m}$ to $5\ \mu\text{m}$. The FPC-G will significantly reduce the alignment and random pointing error through the observation of guiding stars in the focal plane. Although the FPC-S is primarily designed to use as the back-up system for FPC-G, unique scientific observations of the FPC-S can help to achieve the scientific objectives of SPICA. Owing to the capability of both low-resolution imaging spectroscopy and wide-band imaging with a field of view of $5' \times 5'$, it has large throughput as well as high sensitivity for diffuse light compared with the James Webb Space Telescope (JWST). Here, we present the current status of FPC.