

The PFT results of the mission instruments of GOSAT-2

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The GOSAT-2 is the successor satellite to the GOSAT which is the satellite dedicated to the measurements of the greenhouse gases such as carbon dioxide and methane. GOSAT was launched in January of 2009 and has been operated for about nine years.

The development of the GOSAT-2 has been continued for four years, and in early 2018, the manufacturing and the proto-flight test (PFT) of the mission instruments, TANSO-FTS-2 and TANSO-CAI-2, were completed. TANSO-FTS-2 is the Fourier Transform Spectrometer observing greenhouse gases such as Carbon Dioxide and Methane and TANSO-CAI-2 is the imager observing the aerosols and clouds to compensate the TANSO-FTS-2 data and to grasp the movements of the aerosols such as PM2.5.

The results of the PFT had shown the excellent performances, and these results will promise that the observation from space will become more useful means than GOSAT. The large part of the specifications of the TANSO-FTS-2 have exceeded the requirement, especially the signal to noise ration of the thermal infrared region bands have large margin to the requirement.

On the other hand, the development of the TANSO-CAI-2 had faced a lot of anomalies such as the polarization sensitivities, stray light and so on.

Unfortunately, it was difficult to get settled the stray light issue with the modification of the hardware, so we decided to resolve this issue by the processing the data on the ground.

In this presentation, the results of the PFT of the TANSO-FTS-2 and the TANSO-CAI-2, and the how to resolve the stray light issue.