



GOSAT initial on-orbit results

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The Greenhouse gases Observing SATellite (GOSAT) is a satellite to monitor the carbon dioxide (CO₂) and the methane (CH₄) globally from space. It is a joint project of Japan Aerospace Exploration Agency (JAXA), Ministry of the Environment (MOE) and National Institute for Environmental Studies (NIES). GOSAT will be placed in a 666 km sun-synchronous orbit of 13:00 local time, with an inclination angle of 98 deg. It will be launched on January 21, 2009. Two instruments are accommodated on GOSAT. Thermal And Near infrared Sensor for carbon Observation Fourier-Transform Spectrometer (TANSO-FTS) detects the Short wave infrared (SWIR) reflected on the earth's surface as well as the thermal infrared (TIR) radiated from the ground and the atmosphere. TANSO-FTS is capable of detecting wide spectral coverage; three narrow bands (0.76, 1.6, and 2 micron) and a wide band (5.5-14.3 micron) with 0.27 cm⁻¹ spectral resolution. TANSO Cloud and Aerosol Imager (TANSO-CAI) is a radiometer of ultraviolet (UV), visible, and SWIR to correct cloud and aerosol interference. The presentation includes the instrument design, pre-launch test results and onboard calibration schemes; as well as, the initial on-orbit results.