



Greenhouse Gases Observation from the Thermal And Near infrared Sensor for carbon Observation (TANSO) on the Greenhouse gases Observing SATellite (GOSAT)

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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 orbit. GOSAT will be placed in a 666 km sun-synchronous orbit of 13:00 local time, with an inclination angle of 98 deg. 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, specifically, three narrow bands (0.76, 1.6, and 2 micron) and a wide band (5.5-14.3 micron) with 0.24 wavenumber 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 calibration and onboard calibration schemes; as well as, some test results using the Bread Board Model (BBM).