The current status of GOSAT and GOSAT-2

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Greenhouse Gases Observing Satellite (GOSAT) and its successor, GOSAT-2, are Japanese earth observing satellites for greenhouse gases measurements from space. Both satellite projects are joint efforts among Ministry of the Environment (MOE), Japan Aerospace Exploration Agency (JAXA), and National Institute for Environmental Studies (NIES).
GOSAT was launched in January 2009, already finished its design lifetime (five years), and is currently in its extended operation period. Its data have been used to calculate whole-atmosphere monthly mean carbon dioxide concentration and to identify locations with large anthoropogenic emissions of CO2 and methane.
GOSAT-2 will be launched in FY2017. Both satellites have Fourier transform spectrometers for the measurements of columnar abundances of greenhouse and other gases and UV-VIS-NIR-SWIR imagers for cloud and aerosol detection. GOSAT-2 instruments (FTS-2 and CAI-2) will be modified or improved based on the experiences of GOSAT instruments (FTS and CAI). FTS-2 will have the extended spectral coverage for carbon monoxide measurement and the intelligent pointing capability to avoid cloud contamination. CAI-2 will have multiple UV bands for more precise land aerosol monitoring and forward/backward viewing capability to avoid sun glint over oceans. Most of critical design reviews of GOSAT-2 spacecraft, earth observing instruments, and ground systems have been completed.

