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Title : “TROPOMI: The Next Big Thing in Atmospheric Trace Gas Measurements”

(Lecture on 19 March 2019 at IITM)

**Abstract:**

The Dutch Tropospheric Monitoring Instrument (TROPOMI) is the single instrument on board the ESA Copernicus Sentinel-5 Precursor satellite, which was launched in October 2017. TROPOMI is a nadir-viewing imaging spectrometer with bands in the ultraviolet, visible, the near and shortwave infrared (SWIR) bands. TROPOMI is designed to measure the atmospheric trace gases including tropospheric pollutants like CO, O<sub>3</sub>, NO<sub>2</sub>, HCHO and SO<sub>2</sub>, and two major greenhouse gases CH<sub>4</sub> and tropospheric O<sub>3</sub>, and parameters of aerosols (scattering, absorption, etc.).

TROPOMI is currently providing a wealth of observations with an unprecedented combination of accuracy, spatial resolution and coverage. In this talk, I will show some interesting results TROPOMI observations have already produced, with a focus on CH<sub>4</sub> and CO, the two major gases that are at the centre of TROPOMI activities at SRON Netherlands Institute for Space Research.