[Sample Abstract]

**Global Concentrations of CO2 and CH4 Retrieved from GOSAT:**

**First Preliminary Results**

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The Greenhouse Gases Observing Satellite (GOSAT) was launched on January 23, 2009, to monitor global atmospheric concentration and flux of CO2 and CH4 from space. GOSAT started initial operation of its instruments after an initial satellite system check. Although the radiance data obtained by the GOSAT instruments are currently in the preliminary stages of calibration and validation, the spectral absorption features of CO2 and CH4 are clearly identifiable.

An initial retrieval of these gas concentrations was performed for measurement of the scans of cloud-free conditions over land. These results showed that column-averaged dry air mole fractions of both CO2 and CH4 in the northern hemisphere were higher than those in the southern hemisphere. These latitudinal differences agree with results obtained from ground-based sources and other satellite observations; however, the absolute values of the gas concentrations from GOSAT data seem to have been underestimated.

Calibrations as well as validation should be conducted to improve the quality of GOSAT retrievals.

*Keywords:* GOSAT, carbon dioxide, methane, retrieval, validation

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