Optimization of the GOSAT/TANSO Observation Plan for $X_{CO2}$ and $P_{surf}$ Accuracy Improvement

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TANSO (Thermal And Near-infrared Sensor for carbon Observation) onboard GOSAT (Greenhouse gases Observing Satellite) has been acquiring mainly carbon dioxide (CO$_2$) and methane (CH$_4$) absorption spectra globally since 2009.

Using GOSAT ACOS Level 2 standard products, we consider the accuracy of $X_{CO2}$ (CO$_2$ column density) and $P_{surf}$ (surface pressure) as the differences between the apriori and the retrieval results, and investigate the relationships between these accuracy and the observation conditions (SNR, surface albedo, observation geometry, aerosols, etc.).

This investigation will contribute to revising the GOSAT operation plan and to improving the accuracy of the $X_{CO2}$ and $P_{surf}$.

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