

Optimization of the GOSAT/TANSO Observation Plan for X_{CO_2} and P_{surf} Accuracy Improvement

Optimization of the GOSAT/TANSO Observation Plan for X_{CO_2} and P_{surf} Accuracy Improvement

吉田 純^{1*}; 本橋 洋介¹; 谷本 啓¹; 井口 守¹; 相馬 知也¹; 須藤 雅彦¹; 溝口 毅彦¹; 落合 勝博¹; 菊池 忠彦¹; 久世 暁彦²; 須藤 洋志²; 塩見 慶²; 川上 修司²; 上田 陽子²; 田中 誠²
YOSHIDA, Jun^{1*}; MOTOHASHI, Yousuke¹; TANIMOTO, Akira¹; IGUCHI, Mamoru¹; SOMA, Tomoya¹; SUTO, Masahiko¹; MIZOGUCHI, Takehiko¹; OCHIAI, Katsuhiko¹; KIKUCHI, Tadahiko¹; KUZE, Akihiko²; SUTO, Hiroshi²; SHIOMI, Kei²; KAWAKAMI, Shuji²; UEDA, Yoko²; TANAKA, Makoto²

¹ 日本電気株式会社, ² 宇宙航空研究開発機構

¹ NEC Corporation, ² Japan Aerospace Exploration Agency

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_{CO_2} (CO_2 column density) and P_{surf} (surface pressure) as the differences between the a priori 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_{CO_2} and P_{surf} .

キーワード: 温室効果ガス, ビッグデータ, 精度向上, 衛星リモートセンシング, 最適化

Keywords: greenhouse gas, big data, accuracy improvement, satellite remote sensing, optimization