

Dear Editors:

We would like to resubmit the enclosed manuscript entitled “Study on Retrieval and Validation of XCO<sub>2</sub> from TanSat Target Mode Observations in Beijing” (ID: remotesensing-766502), which we wish to be considered for publication in “Remote Sensing”. No conflict of interest exists in the submission of this manuscript, and manuscript is approved by all authors for publication. I would like to declare on behalf of my co-authors that the work described was original research that has not been published previously, and not under consideration for publication elsewhere, in whole or in part. All the authors listed have approved the manuscript that is enclosed.

In this work, we retrieved XCO<sub>2</sub> from TanSat target mode observation by the Department for Eco-Environmental Informatics (DEEI) algorithm, validated against the coincident observations from Beijing ground-based FTS station. The preliminary bias correction was performed, and corrected XCO<sub>2</sub> were compared with L2 products from GOSAT and OCO-2. As the first validation for TanSat target mode observation, TanSat has been proved to be capable of measuring XCO<sub>2</sub> effectively, and XCO<sub>2</sub> results retrieved by the DEEI algorithm agreed well with measurements from GOSAT, OCO-2 and Beijing ground-based FTS. I hope this paper is suitable for “Remote Sensing”.

We deeply appreciate your consideration of our manuscript, and we look forward to receiving comments from the reviewers. If you have any queries, please don't hesitate to contact me at the address below.

Thank you and best regards.

Yours sincerely,



Zhengyi Bao

Corresponding author:

Name: Xingying Zhang

E-mail: zxy@cma.gov.cn;

Name: Tiangxiang Yue

E-mail: [yue@lreis.ac.cn](mailto:yue@lreis.ac.cn)