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Discussions

Interactive comment on "Preliminary verification for application of a support vector machine based cloud detection method to GOSAT-2 CAI-2" *by* Yu Oishi et al.

Yu Oishi et al.

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Dear Dr. T. E. Taylor,

We are very grateful for your polite comments and suggestion to our manuscript. We have carefully revised the original submission of this manuscript in accordance with your suggestion.

It is right that CLAUDIA1 needs to set various algorithm thresholds by radiative transfer calculation results and fine tuning in some method. In this study we used thresholds in ATBD of the GOSAT CAI L1 cloud flag product. Thus, it is also right that visual

inspection results can optimize thresholds of CLAUDIA1 to apply for locally cloud discrimination. On the other hand, CLAUDIA3 uses machine learning method, and so CLAUDIA3 needs only obvious clear-sky training data on various land cover types. Furthermore CLAUDIA3 has a multiplicity of uses; actually, Support Vectors and thresholds for CLAUDIA3 used in this study were generated from MODIS data. In this time we want to check accuracy improvement of cloud discrimination results by CLAUDIA3 in comparison with CLAUDIA1 in tropical rainforest areas. To realize this, we have made validation dataset from 2014 like USGS Landsat 8 cloud cover assessment validation data (https://landsat.usgs.gov/landsat-8-cloud-cover-assessment-validation-data) with visual inspection. Then, we used our dataset in tropical rainforest areas not to optimize thresholds but only to evaluate CLAUDIA1 and 3.

Meanwhile, you suggested very useful additional analysis to compare directly CLAUDIA1 and 3 for various land cover types. Then, we performed the analysis and added its results.

We corrected our manuscript according to your minor and technical comments. We are deeply grateful to you.

Yours sincerely,

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