Biogeosciences Discuss.,
https://doi.org/10.5194/bg-2020-360-RC2, 2021

Biogeosciences Discussions

Interactive comment on "Retrieval and validation of forest background reflectivity from daily MODIS bidirectional reflectance distribution function (BRDF) data across European forests" *by* Jan Pisek et al.

Alexei Lyapustin (Referee)

alexei.i.lyapustin@nasa.gov

Received and published: 2 January 2021

The paper by Pisek et al evaluates possibility of assessing the understory NDVI using site-level ground characterization and MODIS BRDF data (MCD43). Overall, it's a large work, the results are reasonable and deserve publication.

My main comments are following (details are provided in the file attached): 1) Please explain the method in more detail. For instance, I've got an impression that the reflectances of understory and trees in the retrieval model are assumed Lambertian. If

that's true then it should be explained, as well as the limitations of such assumption.

2) Presently, you are just saying that the method works well for open canopies. Since certain statistics is accumulated, please provide an assessment of the accuracy for derived NDVI of understory. More importantly, provide the same the for the Red and NIR and reflectances which is much more valuable as the NDVI is a non-linear function. Also, for paper to be of any value, please provide an assessment of threshold for the canopy fraction below which the method you think should work to the specified accuracy.

Alexei.

Please also note the supplement to this comment:
https://bg.copernicus.org/preprints/bg-2020-360/bg-2020-360-RC2-supplement.pdf

Interactive comment on Biogeosciences Discuss., https://doi.org/10.5194/bg-2020-360, 2020.