

Interactive comment on “Optical sampling of the flux tower footprint” by J. A. Gamon

Anonymous Referee #1

Received and published: 26 April 2015

This is well written, useful and interesting review of methods for conducting optical remote sensing within the flux tower footprint. The approach is centered in the light-use efficiency (LUE) model, which seems very adequate. Although I suggest below some additions or changes at the better convenience of the author, I strongly recommend acceptance. -The review focuses especially on Photochemical Reflectance Index (PRI) and a little bit on Solar Induced Fluorescence (SIF). A better balance between them would be appreciated. The author could consider analyzing pros and cons of SIF with the same intensity than those of PRI, especially the part of SIF negatively related to LUE and how it is influenced by the direct relationship with PAR and PAR. -Multiscale analysis across temporal scales seems well treated, but the spatial scale could be treated more in-depth, especially for the evaluation of the emergent properties and the extrapolation to larger scales that is discussed in the paper. The complementarity between NDVI and PRI patterns across ecosystems is a good example with this aim. If

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the author could advance on that, he would allow the community to make a step forward in the effort assessing ecosystem functioning in general and productivity in particular and finally in the effort to quantify biospheric carbon uptake.

Interactive comment on Biogeosciences Discuss., 12, 4973, 2015.

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