

Interactive comment on “Optimal Inverse Estimation of Ecosystem Parameters from Observations of Carbon and Energy Fluxes” by Debsunder Dutta et al.

Anonymous Referee #2

Received and published: 9 September 2018

The present study attempts to develop an optimal inversion framework to use SCOPE for estimating V_{cmax} , m , and LAI by against measurements of carbon and energy flux from EC towers. They demonstrated the applicability of their approach in terms of capturing the seasonal variability of these key ecosystem parameters.

The current work may provide additional information on estimating key ecosystem parameters from field data. Compared to the literatures, however, the novelty of the current study is not clear. There are so many papers which estimates the key ecosystem parameters from models and EC flux tower data (e.g., Mackay et al 2012, Xu et al 2006; Wu et al 2009; Wolf et al 2006; Wang et al., 2010). What is the main novelty

C1

for this work? If it is the technical approach of an optimal inversion framework, then it may go some other technical journal. Even for the inversion framework, I didn't see too much improvements compared to previous work.

My general impression is that this work is a rather technical description on the inversion framework of using SCOPE. I understood the rather detailed information by the authors, but the manuscript is really too long and some parts are too lengthy. I think some parts could be simplified.

Interactive comment on Biogeosciences Discuss., <https://doi.org/10.5194/bg-2018-303>, 2018.

C2