**Biogeosciences
Discussions**

Interactive
Comment

Interactive comment on "Remote sensing-based estimation of gross primary production in a subalpine grassland" *by* M. Rossini et al.

M. Rossini et al.

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Dear Reviewer, Thank you for the positive evaluation of the manuscript. The manuscript has been revised, according to the Reviewer's comments and suggestions. We have carefully considered each of them and have implemented the corresponding changes in order to improve the manuscript. The Reviewer will find below the responses to the specific comments. We are confident to have fully answered all questions and incorporated all the recommendations in the revised paper.

Page 1718, line 5: "non-photosynthetic material" means brown leaf material? In this ecosystem "non-photosynthetic material" is mainly represented by yellow and dry leaves. The presence of non-photosynthetic components is higher at beginning and at the end of the growing season. The text was modified as "non-photosynthetic (yellow

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and dry leaves) components".

Page 1718, line 12: I assume the canopy height was high enough, so that the placement of the sensor below the canopy did not influence the structure of the canopy itself? The placement of the sensors below the canopy occurred in spring 2008 (one year before the collection of the data presented in this manuscript) to avoid disturbances to the canopy structure. During the studied periods, the canopy height was high enough so that the presence of the sensors on the ground did not influence the structure of the canopy itself.

Page 1722, line 15: "constant LUE" which values were taken? Measured LUEg? daily mean values and resampled data? In model 3, ε is not explicitly introduced in model formulation but it is included in the model coefficients a1 and b1 as follows: GPP = $\varepsilon \times$ (aVIg + b) $\times$ PAR = (a1VIg + b1) $\times$ PAR

Page 1728, line 24: should it be (LUEg)m instead of LUEg, because the whole paragraph refers to Fig. 4? The expression was corrected as suggested.

Page 1750, header of Table 6: should be GPPm and PARm. The table caption was corrected as the Reviewer indicated.

Best regards, Micol Rossini & co-authors

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