

Interactive comment on “Analyzing the major drivers of NEE in an alpine Mediterranean shrubland” by B. R. Reverter et al.

G. Wohlfahrt (Editor)

georg.wohlfahrt@uibk.ac.at

Received and published: 20 April 2010

The paper bg-2009-312 has been assessed by three anonymous reviewers, in addition one short comment has been contributed by Werner Eugster. The three reviewers call for major revisions of the paper, Werner Eugster suggests that major rewriting will be necessary to make the paper acceptable for publication in BG and I agree with these assessments.

Overall the objectives of and analysis presented in the paper are rather routine (we have seen similar analysis for lots of different sites before), however not for this type of high-elevation Mediterranean shrubland. While the objectives of the paper are thus hardly innovative, it is still a useful contribution, as was argued also by the reviewers (scientific significance 2x fair, 1x good).

C621

The three reviewers and Werner Eugster provide a number of useful comments on how to improve the paper and the authors should consider these carefully when revising their paper.

The authors argue in their reply that self-heating corrections for the open-path IRGA, an issue picked upon in all comments, have been computed correctly, their magnitude being due to the decreased air density at this high-elevation site. If that is the case (which the authors should show), this is an additional argument to present more details on the correction, in particular as concerns the influence of air density, which seemingly has not been widely realised up to now and is thus a novel contribution. I also agree with reviewer #3 in that given all the uncertainties involved in deriving annual CO₂ budgets, an uncertainty analysis is warranted in order to put brackets on the annual figures. As regards the terminology, I might suggest to replace “alpine” with “mountain” or “high elevation”. Data of two Mediterranean mountain grassland sites, which likely experience similar climate as the site studied by the authors, have been presented in Wohlfahrt et al. (2008; *Ecosystems* 11, 1338-).

Any revision should be line-numbered and accompanied by a point-by-point reply to the reviewer and short comments.

Interactive comment on Biogeosciences Discuss., 7, 671, 2010.