

Interactive comment on “Micro-topographic variation in soil respiration and its controlling factors vary with plant phenophases in a desert-shrub ecosystem” by B. Wang et al.

Anonymous Referee #1

Received and published: 4 August 2015

The manuscript of Wang et al., titled “Micro-topographic variation in soil respiration and its controlling factors vary with plant phenophases in desert-shrub ecosystems”: is an interesting observational study that investigated the spatial variability of R_s in desert ecosystem in relation to plants. While the sampling is limited, due to logistical constraints, the observations are still valuable. I agree with the other referee that the missing Phase I data should be excluded, it does not add much to your results and discussion, where you discuss only Phase II and III of the study. I would also suggest in the future to use portable IRGA system to sample and measure soil respiration in replicate dunes or increasing the sample points at this dune. The LI-8100 system is good for high frequency temporal data, but in this study you do not utilize that capacity

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- you focus on spatial variability and relating fluxes to explanatory variables (ex. LAI, root biomass) that were measured on biweekly or longer timescales. So you could've sampled Rs also on biweekly timescale using manual portable system to increase spatial area of study. It would've been nice to have a larger sample size in this study, not to take away from this one. The current study is still informative - a synthesis of multiple variables measured concurrently at the site, as the authors explore the causes of spacial variability in Rs.

Interactive comment on Biogeosciences Discuss., 12, 9465, 2015.

BGD

12, C4050–C4051, 2015

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