

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

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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 R_s 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 R_s .

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