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Open Access Earth System Science Data Discussions

Interactive comment on "Spatially distributed water-balance and meteorological data from the rain-snow transition, southern Sierra Nevada, California" *by* Roger Bales et al.

Roger Bales et al.

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Major comments:

Add some explanation of the 2012-2015 drought and its novelty in terms of observations as the site. I would like to see this added to section 3.

Response: Sentence added to introduction, where drought is mentioned.

The online dataset was 2 GB, which presented challenges for downloading. I suggest breaking into smaller parts.

Response: We agree that splitting the files could make the data more accessible to

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Discussion paper

some users, and are doing that. The data host has updated their structure, which allows us to remove the single zip file and split it into files for Level 0, Level 1, and Level 2 data, and data graphs. We are working with the managers of UC Dash, the archive host, to split the dataset into more manageable pieces.

Add a bit more detail about the quality control and gap filling techniques. Instead of referencing other papers solely, add enough context for the reader. See page 5, line 25 as an example. There is a lot of subjective choices needed to perform gap filling (e.g. what is the minimum correlation necessary, when were gaps deemed too long to fill, etc.).

Response: Paragraph added, section 7.

Could the authors also create a shapefile or similar spatial dataset, rather than requiring transcribing the UTM coordinates out of the table.

Response: Done. We have compiled the spatial data into a geodatabase, which will be available for download with the data and metadata. (To be uploaded in late September, 2018)

Consider changing section 8 summary to a section about possible applications of the data. Things that come to mind are drought response and streamflow generation under a changing mix of rain and snow. Response: Statements re possible uses of data added, end of introduction and 2nd sentence of abstract. Also suggestion in discussion of drought.

Minor comments:

Figure 1: Background images would look better as lidar tree heights than orthophotos of different quality Response: Current figure conveys the main point. No change

Figure 2: Please add arrows to describe locations (open, drip edge, etc) and the sensor locations (snow depth, temp/rh, etc) Response: Done.

Figure 3b: Is the moisture storage data released? It is not explained how this is calculated Response: Sentences and equation on calculation added.

Page 2, line 3: add citation Response: Done.

Page 2, line 6, add citation Response: Done.

Make a note that multiple lidar and hyperspectral datasets have been collected over the site Response: Added to data availability section.

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