Interactive comment on "Eleven years of mountain weather, snow, soil moisture and stream flow data from the rain-snow transition zone – the Johnston Draw catchment, Reynolds Creek Experimental Watershed and Critical Zone Observatory, USA" *by* Sarah E. Godsey et al.

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This paper represents a very valuable data contribution to hydrometeorological as-sessemts of the rain-to-snow transition zone at the catchment scale. The presented data is unique, useful and complete in the sense of the ESSD review criteria. I recommend publication in ESSD after some minor improvements.

- p. 2, abstract, line 6: please provide a clickable doi (as in line 7 on p. 9)

- p. 2, abstract, line 10: better "air" temperature

- p. 2, abstract, line 12: better specifiy for which type of models the provided datasets are useful (e.g., "hydrological and boundary layer flux" models?)

- p. 2, introduction, line 26: take out ". . ., and varies in both time and space." (is repeated in next sentence)

- p. 2, introduction, line 30: better " important to be studied. . ."?

- p. 2, introduction, line 31: better ". . . frequently experience winter temperatures. . ."?

- p. 3, introduction, line 9: for the final version of the manuscript the keyword search should be updated

- p. 3, introduction, lines 8 to 21: Your web search may show how much the terms You searched for are used by the scientific community, but not how limited the transition zone datasets really are. No wonder that Your search only provides one result from the European Alps, the "transition zone" term being less prominent there than in the U.S. For sure there are several research catchments in the Alps with basin-wide measurements and stream discharge, they are published only with other than Your search terms. Nevertheless, this does not reduce the significance of Your data, and Your work! Maybe You better move this aspect to the end of the paper, to rise awareness for the importance of the transition zone catchments for future hydrometeorological research?

- p.3, introduction, line 27: better "air" temperature

- p.3, introduction, line 29: what do You mean with ". . . possibly representing what can be expected as regional climate warming advances."? Your data has been observed, hence it represents historical/current conditions, and nothing that "can be expected". Better specify.

- p. 13, Fig. 1: better take out the color scheme for elevation in the map; the colors are unusual for the purpose, ambiguous, and contour lines are hardly visible

- p. 17: Table 1: insert the missing "0" in the Start Date of station 124. Better provide full station names in the table as used by USDA ARS. Correct order of meteorological variables in the caption, according to the table. Provide correct assignment of abbreviation and explanation (for wind speed) in the caption.

- p. 4-5, site description, second paragraph: this paragraph probably better fits to the beginning of section 3 (Data Description)

- p. 14, Fig. 2: better take out legend from (b) and place it near the panels

- p. 6, radiation, line 10: indicate which type of model You mean

- p. 6, radiation, line 9-15: You mention the importance of longwave radiation for energy balance applications, but You do not consider it to be measured in JD in the future. Why?

- p. 6, precipitation, lines 25-30: You explain the different methods used for wind correction of precipitation. Are the raw rain gauge recording still available, too? This is a general question that I recommend to be considered: since the raw (logger) recordings are available, You could include a short note on this in the beginning of the data section of the paper

- p. 15, Fig. 3: replace "&" with "and". Consider to replace the tone scheme to indicate the station elevation with colors. The aspect to which the three panels for Snow Depth belong to can be better indicated with "south-facing" and "north-facing", instead of the colors. It seems that blowing snow is a major issue in JD, and should be investigated with its implications on snowmelt patterns and runoff generation. I recommend to add respective considerations in the paper

- p. 7, Snow Depths, line 16: better use singular: "Snow Depth"

- p. 8, Snow Depths, lines 3-9: methods to convert snow depth to swe require observations or estimates of snow density. It would be helpful to indicate this for both the LIDAR techniques, and snow modelling

- p. 16, Fig. 4: better take out legend from (b) and place it near the panels. Better indicate the WY directly in the panels

- p. 9, Data Availability, lines 7-13: You should mention here that original text files for (i) soil moisture, temperature and snow depth, (ii) precipitation and (iii) weather data are available as well

- p. 9, Conclusions, line 15: You claim this, but You cannot know. Better add something like "to the knowledge of the authors"

- p. 9, Conclusions, line 18: add "soil" to temperature

- p. 9, Conclusions, line 21: add what type of models You mean with "a variety of models"

- p. 9, Conclusions, line 22: explain what You mean with "basin-scale interactions and responses"

- p. 9, Conclusions, lines 23-27: these final sentences better fit into the introduction

- p. 9, Conclusions, line 27: eleven years of data not yet allow for the assessment of climate change impacts, better say "changes in meteorological conditions..."

Thank You for considering me as a reviewer, and good luck!