

**Dear Dr. Viviroli,**

**Please find our technical corrections following re-review by Reviewer #2 below for Lynn et al. (2020): “Technical Note: Precipitation phase partitioning at landscape-to-regional scales”.**

**Thank you for your assistance with this manuscript.**

**Cheers,**

**Benjamin Hatchett**

Author comments provided in blue. Changes are given in *italics with bold for emphasis*.

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Re-review of “Technical Note: Precipitation phase partitioning at landscape-to-regional scales”  
By Lynn et al. (2020)

The authors have done an outstanding job responding to my reviewer comments and the comments of the other reviewer. They have substantially improved this technical note and I feel it is ready for publication following some very minor technical fixes.

My primary concerns were regarding ambiguity in their description of the method and their use of NCEP/NCAR Reanalysis 1. The work they have done to explore precipitation phasing in ERA5, their addition of a visual schematic of their methods (Figure 2) and overall improved clarity of the writing of the methodology section has more than satisfied my concerns.

We greatly appreciate your kind words! We again thank the reviewer for their constructive comments from which the paper benefitted greatly.

Here are some very minor technical problems I found while reading the paper:

Page 3 Line 18: there needs to be a comma between isotherm and across.

Comma has been added.

Page 3 lines 22-24: these are very important characteristics of the role the freezing level play s- are they from the Diaz paper? This is unclear and I think this needs a reference.

Thank you for the suggestion. Yes, these are from the Diaz paper but we also added the White et al., 2010 paper and the following two references to the sentence to provide a more complete list:

Contosta, A. R., Casson, N. J., Garlick, S., Nelson, S. J., Ayres, M. P., Burakowski, E. A., Campbell, J., Creed, I., Eimers, C., Evans, C., Fernandez, I., Fuss, C., Huntington, T., Patel, K., Sanders-DeMott, R., Son, K., Templer, P., and Thornbrugh, C.: Northern forest winters have lost cold, snowy conditions that are important for ecosystems and human communities, *Ecol. Appl.*, 29(7):e01974, doi:[10.1002/eap.1974](https://doi.org/10.1002/eap.1974), 2019.

Sospedra-Alfonso, R., Melton, J. R., and Merryfield, W. J.: Effects of temperature and precipitation on snowpack variability in the Central Rocky Mountains as a function of elevation. *Geophys. Res. Lett.*, 42, 4429–4438. doi: [10.1002/2015GL063898](https://doi.org/10.1002/2015GL063898), 2015.

Page 3 line 29: I think this sentence would read better if flipped: “For cases in which the vertical temperature profile includes inversion conditions with multiple incursions of the 0° isotherm, the uppermost atmospheric level below which the 0°C isotherm occurs is used.

We agree this reads more intuitively in the manner suggested by the reviewer. We have revised the sentence following the reviewer’s suggestion:

*“For cases in which the vertical temperature profile includes inversion conditions with multiple incursions of the 0°C isotherm, the uppermost atmospheric level below which the 0°C isotherm occurs is used.”*

Page 7 Line 5: Clarify “observational data” with station or insitu observational data, as satellite observations and other methods of measuring precipitation are not included in the development of PRISM.

Good point, this change has been made:

“...method based on *in situ* observational data...”