General Comment:

The work has improved from the last draft; however, several conclusions in this paper overstate the magnitude of improvement, terminology drifts into subjective language, and a few structural/citation issues need attention.

Major Comments:

I don't agree with the overall conclusion of the paper that DAvar provides substantial improvement over DAcons. The claimed performance gains of DAvar over DAconst are statistically significant but small in absolute terms (<10 cm and, in places, ~2 mm), and not uniform across sites. Please change the framing in the Result/Discussion/Conclusions to emphasize the limited magnitude and spatial inconsistency and to discuss whether the added complexity of DAvar is justified by these gains. Some results are currently summarized with site averages that can be skewed by a few poor sites; compare medians for DAconst vs. DAvar and, if feasible, repeat significance testing on medians. Avoid subjective terms such as "substantial" where differences are on the order of millimeters; replace with exact values. The statement in discussion line 435 that modest snow/SWE improvements translate to streamflow gains is out of context here; withdraw or support it with streamflow evidence. Abstract can also be one or two lines with clear results. Right now, the abstract is vague without stating a clear outcome of the study.

Specific clarifications. Where a "15 mm improvement" is cited (Lines 301–306), specify the metric (likely bias) and state the exact value and sign. Replace "standard WY 2016/2017" with an unambiguous convention (e.g., "Water Year 2017") to avoid seasonality confusion. Across Lines 295–314, report concrete numbers rather than qualitative characterizations. In the concluding sections (Lines 385–391), explicitly acknowledges that DAvar's advantage over DAconst is slight and not pervasive, and suggests that method choice should depend on study goals and acceptable complexity.

Line-by-line:

Line 73: add PBS downscaling citations (Bachand 2025; https://doi.org/10.1175/JHM-D-24-0131.1).

Lines 75, 100, 114: insert https://doi.org/10.5194/egusphere-2025-978 wherever relevant to substantiate recent usage and performance.

Section 2.1: Section 2.1 name is misleading: the title ("Noah-MP land surface") suggests a model description, but the text mixes model and forcing details. Rename to "Model setup and data" or similar, and keep model vs. forcing clearly separated

Line 260: compare medians (and re-test significance on medians if earlier tests used means).

Lines 295–300: replace “substantial” with exact mm values and note that benefits must be weighed against DAvar complexity.

Lines 301–314: report actual numbers; avoid “substantial.”