

I have carefully read the manuscript *The climatology of synoptic-scale ascent over western North America: A perspective on storm tracks* by Lareau and Horel. I find the paper to be very well written, well illustrated, and well argued. It presents a conceptually simple and physically appealing way to consider storm tracks and then applies that methodology to an otherwise difficult region of the globe to investigate storm tracks – mountainous western North America. Aside for a few points of clarification that need to be addressed along with some labeling issues, the paper will be a fine contribution to the literature. I am recommending it be accepted with minor revisions – a list of which follows.

Minor points

- 1) p. 15, l. 319 – 323 - The region of ascent labeled C over OK is not as nicely related, diagnostically, to the 500 hPa geopotential as others. Could you speculate as to why?
- 2) p. 16, l. 334 – 338 - The Canadian storm track may be a signal of the Alberta Clipper track discussed by Thomas and Martin (2007).
- 3) p. 18, l. 371 – 379 - Might the composite AZ storm be consistently associated with strong upper level fronts in northwesterly flow? Its elongation in the face of upstream ridging would be consistent with this interpretation.
- 4) p. 19, l. 401 – 403 - I don't really know what you mean in the last part of this sentence. Could you be more explicit?
- 5) p. 21, l. 447 – 450 - I don't understand this point – could you clarify this? The whole subsection (e) could use some clarification as is often the case with statistical analysis.
- 6) p. 24, l. 516 – I think you mean to be referencing Fig. 13 in this instance. There are about 6 other incorrect figure references from this point to the end of the paper. Please fix these errors.

FIGURE COMMENTS

- 7) Use of gray scale in Fig. 1 makes it difficult to differentiate between the various tracks suggested by the prior studies. Please try to make these different tracks more discernible for the reader.
- 8) Fig. 3 – Perhaps you could label the leftside column as ERA and the rightside column as AB. At a glance this would make the differences you describe in the text very easy to see.
- 9) Fig. 4 – It appeared that the contour interval was actually at 0.1 cPa s^{-1} , not 0.05 cPa s^{-1} as the caption suggests. Please examine this possible discrepancy.

10) Fig. 12 – Again, perhaps bold labels on the right side of the panels with EN for El Niño and LN for La Niña would be helpful.