General comments:

Thank you again for the opportunity to review the revised version of this manuscript. The current version of the manuscript, in my opinion, represents a considerable improvement in terms of readability and the ease in which it allows the authors' work to be understood. I particularly appreciate the authors' efforts to expand the literature review in the introduction and more explicitly address previous work by Naito and Kabayashi in this version of the manuscript. Additionally, the inclusion of the notation section and the reworking of the results and discussion section – together with Figure 7 and the conceptual model for cornice formation – makes this version considerably more accessible to a broader audience.

This work utilizes repeatable, controlled laboratory experiments to improve our understanding of snow cornice processes. In particular, this work provides a solid theoretical and numerical foundation which can help inform and improve future field studies and serve as a basis for additional modeling efforts. Accordingly, I believe this work will appeal to a relatively broad scientific audience interested in snow processes and also potentially to practitioners working with snow avalanche and cornice hazards.

Certain sections of the work suffer from decreased readability due to language issues. In most cases these issues will be easily resolved with an additional editing session, but in a few cases I found language issues to impede understanding of the scientific concepts being described. I've included these minor issues in the specific comments and have also tried to include some of the more noticeable technical corrections.

Specific comments:

Line 8: I think you should define $\bar{u}$ here.

Line 14: Consider briefly specifying how this work can contribute to improved snow avalanche forecasting (maybe via improved understanding of cornice processes which can influence avalanche activity?).

Lines 43-44: I think "daily observations" better describes the temporal issues you allude to here rather than "average observations."

Lines 44: do you mean the compromises necessary to acquire these field observations?

Lines 51-52: The language in this sentence is a bit confusing and should be revised, but from a content perspective do they find fresh snow with an irregular dendritic shape needs to be available for wind transport for cornices to form? It would help the reader to be a bit more specific about "fresh snow with an irregular dendritic shape."

Line 53: mainly occurs through snow redistribution processes?

Line 54-55: Gauer (2001) could reproduce cornice formations numerically due to poorly understood physical formation mechanisms?

Line 85-86: the SSA provided here is for snow stored for a few days up to a week?

Figure 3: Nice!

Line 170-171: Here are you describing that collection efficiency refers to temporary storage of the snow particles under transport? I am struggling to understand this description as it is currently written.

Line 185: Cool! This is a super useful result.

Line 208: I am unsure what "sticking particles at the edge" refers to here?

Technical corrections:

Line 3-4: consider "This is particularly true with respect to the wind conditions which favor cornice formation" to make this a complete sentence

Line 23: infrastructure

Lines 28-29: Montagne et al. (1968)

Line 29: measured a wind speed range between 7 and 15 ms^{-1} for cornice formation

Line 30-31: consider "identified wind speeds between 4 to 8 ms^{-1} as suitable for cornice formation at 1 m above…"

Line 37: these discrepancies

Lines 38-39: under moderate to strong winds

Lines 48-50: This sentence should be rewritten as two sentences.

Lines 51-52: maybe "Their results show suitable conditions for cornice growth include air temperature between -20 deg C and 0 deg C, wind speeds between 4 and 8 ms-1, and"

Line 171: This value only reflects

Line 173: remove "the" before Section 3.3

Line 206: a snow cornice

Line 209: can be assumed to be a repeated process.

Line 265: Hancock :)

Line 313: do you mean field data here?

Line 316: remove of from before threshold wind speed

Line 316: field.

Line 320: observational data

Line 321: and measurements of other relevant parameters.