

Atmos. Chem. Phys. Discuss., referee comment RC2  
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## Comment on acp-2021-128

Anonymous Referee #2

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Referee comment on "Impact of wind pattern and complex topography on snow microphysics during International Collaborative Experiment for PyeongChang 2018 Olympic and Paralympic winter games (ICE-POP 2018)" by Kwonil Kim et al., Atmos. Chem. Phys. Discuss., <https://doi.org/10.5194/acp-2021-128-RC2>, 2021

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Title: Impact of wind pattern and complex topography on snow microphysics during ICE-POP 2018

The manuscript documents the microphysical characteristics of snow by analyzing the PARSIVEL and MRR data collected from ICE-POP 2017-2018. The snow events were classified by three different synoptic systems. The three type of synoptic systems are air-sea, cold low and warm low patterns. The results show distinct characteristics of snow. The aggregation process increases the size of the snow. The riming process has higher values of fall velocity of snow particle. Most of the conclusions are reasonable, but further detailed analysis is missing. However, the manuscript did a good job summarizing 20 snow events from ICE-POP 2017-2018.

Minor comments:

Line 55: "showed that the mean precipitation amount increased by about 45% in the presence of both Kaema high and low pressure. " Any reference?

Line 419: "the size of the snow does not greatly enlarge." Why? Evidence?

Line 422: Where is the second peak of reflectivity?