

## ***Interactive comment on “The Microphysics of Clouds over the Antarctic Peninsula – Part 1: Observations” by Tom Lachlan-Cope et al.***

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1) We will correct this. 2) Of course we cannot be sure that the peak ice production around  $-5^{\circ}\text{C}$  is due to the Hallett-Mossop process as we do not have the resolution (both temporal and spatial) to observe process in detail, we are only observing the result after the many small crystals formed in the H-M process have grown rapidly to a size that can be observed by the CIP. For this reason we said that the peak was probably due to H-M and did not definitely attribute the peak to any one process. The other mechanisms suggested in the comment all operate around  $-15^{\circ}\text{C}$  (although the Bacon et al process could occur at warmer temperatures the process is a strong function of shape and is likely to be strongest with the dendrites that form at around  $-15^{\circ}\text{C}$ ) and so are unlikely to be responsible for the peak we see at  $-5^{\circ}\text{C}$ . We do not know of any other mechanisms that have been reported to work at these warm temperatures. We

will add a sentence to the paper to make this clear.

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