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Interactive comment on "Analysis of geostationary satellite derived cloud parameters associated with high ice water content environments" *by* Adrianus de Laat et al.

Anonymous Referee #1

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This paper represents an important contribution to our understanding of the capabilities to detect high ice water conditions that present a hazard to aviation operations. The authors demonstrate the use of SEVIRI satellite products combined to identify HIWC areas, and quantify the performance of their HIWC Mask product. Their methods are scientifically sound, and the paper explains their methods and results in a clear and logical way.

General comments are as follows: 1. What is the purpose of the MSG-CPP comparison with DARDAR described in Section 3.2? It is explained later in the paper that thresholds for the HIWC Mask product are optimized using DARDAR paper, but it isn't clear how the results of the comparison are used for this purpose. 2. The impact of the

height of the DARDAR high IWC maximum on the HIWC Mask is mentioned on p.19 (line 389-391) and again on p. 21 (line 436-439). These two statements appear to be somewhat contradictory. Can you clarify? 3. Regarding the HIWC Mask comparison with RDT, it is concluded that the larger the cell, the larger the fraction of pixels identified. On how many cases is this conclusion based? 4. It would be interesting to include some discussion of how the HIWC Mask product might be used in an operational environment. Could you comment on the types of users who might benefit, the timeliness of the product versus the time scale of the physical processes, and the impact of the current level of uncertainty, for example?

Specific comments: 1. It's rather difficult to distinguish the blue outlines and orange dots in Figure 10. 2. Line 40, replace "detection" with "detecting" 3. Line 42, replace "lack of detailed understanding what causes..." with "lack of detailed understanding of what causes..."

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