

Review of the revised manuscript ‘Near real-time atmospheric and oceanic science products of Himawari-8/9 geostationary satellites over the South China Sea’

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Dear editor and authors,

I would like to thank the authors for addressing my comments. I am mostly satisfied with the revision. I only have a few remaining minor and technical comments left. After addressing these small issues, I recommend the manuscript for publication.

Kind regards, Dr. Peter Kuma

Comments

AQ:1 = According to Hersbach et al. (2020), ERA5 assimilates at least infrared radiances and wind (through AMV) from Himawari. I think this should be at least briefly mentioned in the text.

[Answer: Thank you for your suggestion. We have revised the manuscript to include the statement that ERA5 assimilates infrared radiances and wind data \(via AMV\) from the Himawari satellite in the Data Production section in Line 196.](#)

AQ:2 = When asking for the use of consistent units for temperature (K or °C), I only meant in Table 1 and in the data files. In the manuscript text, I think it still makes sense to use °C (or K) freely, as commonly used for the given quantity. I apologise for the misunderstanding. In Table 1 it is probably better to keep °C in the Units column for LI_Index, Showalter_Index and TT_Index, rather than changing it to K and adding a note ‘Stored in Celsius’. The main reason why I commented on this issue in the previous round is because it can be confusing when some quantities are stored in data files in multiple alternative units, such as K and °C. It would make sense if this were changed in the data files, rather than just the manuscript. In any case, this is a minor technical issue, and I mention this merely as a suggestion.

[Answer: Thank you for your suggestion. We have changed these variables back.](#)

AQ:3 = L561–562: The citations should be in one set of parentheses.

Answer: Thank you for your suggestion. We have corrected the citations in lines 561–562 to ensure they are in a single set of parentheses.

AQ:4 = L575: The Data availability section is ordinarily placed after the main text and is unnumbered.

Answer: Thank you for your suggestion. We have relocated the Data Availability section to the end of the manuscript and removed the section numbering, in accordance with standard formatting conventions.

AQ:5 = Table 1: 1=Spare: In my previous comment, I meant that the authors should at least briefly explain to the readers what this category means.

Answer: Thank you for your suggestion. We have added the explanation in Note Column (1=Spare: pixel with spare cloud cover).

AQ:6 = L585: download: downloaded.

Answer: Thank you for your suggestion. We have corrected "download" to "downloaded" in line 585.

AQ:7 = L586: FTP://www.hellosea.org.cn:10021: This should be 'ftp://www.hellosea.org.cn:10021'. The scheme name is typically lowercase in URLs (RFC 3986).

Answer: Thanks you for your suggestion. We have corrected the URL to "ftp://www.hellosea.org.cn:10021" to reflect the appropriate lowercase scheme name, as specified in RFC 3986.

AQ:8 = Figure 6f: The cloud effective radius now shows a much greater discrepancy relative to MODIS. This is something that should be at least briefly mentioned or discussed in the text.

Answer: Thanks you for your suggestion. Earlier studies (Letu et al., 2019) have found similar problems. It is difficult to unify the effective particle radius of various cloud

optical and microphysical properties products, mainly due to the large differences in ice particle scattering models and retrieval algorithm. We have added a sentence of *“Specifically, in Figure 6f, the CER comparisons reveal more pronounced discrepancies, primarily due to the different ice cloud particle scattering models used in the two retrieval algorithms (Letu et al., 2019).”* to further explain this issue.