

Interactive comment on “A long-term and reproducible passive microwave sea ice concentration data record for climate studies and monitoring” by G. Peng et al.

Anonymous Referee #2

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In “a long-term and reproducible passive microwave sea ice concentration data record for climate studies and monitoring”, Peng et al. presented a documentation of the climate data record (CDR). The brief comparison suggests that the CDR, having advantage in documentation, traceability, and reproducibility, provides similar results as the GSFC. The data presented is of great importance for climate related studies and the presentation is overall well written. However, it would have been a lot more useful if some additional information on the uncertainty of the estimates and the spatial variability were provided.

Details:

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Page 96, Line 17, “doi: 10.7265/N5B56GN3” not found in references

Page 104, Line 14 “shading area of each month in Figure 4” should be Figure 5? (or dash lines in Figure 6?).

Page 106, Line 6 “. . . CDR provides similar spatial and temporal variability as the GSFC fields . . .” some documentation on the consistency of spatial variability, which is not evaluated, would be a great improvement of the presentation. For simple example, how is the spatial pattern in GSFC compared to Figure 2?

Page 110, Table 1. All three rows have the same “Sensor” and “Swath Width”, by mentioning them in the caption or note would make the table a bit simpler.

Page 112, Figure 2. Daily snapshots likely contain high frequency variability and may bias the decadal variability, which can be checked via adding these three daily snapshot results to Figure 6. Also, it would be useful to show the area over the North Pole that is not measured by satellite sensor.

Page 116, Figures 5 and 6, some information on the uncertainty of the monthly and annual mean values would be very useful.

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