

Manuscript tc-2019-120 Kern, S., et al.

Reply to suggestions for technical corrections by the editor.

Line 69: change to “The other kind of algorithm inter-comparison study deals with...”
Changes as suggested.

Line 77: remove the phrase “is relatively old”
Removed.

Line 85: remove “manual”
We kept “manual” to under-line that we are not talking about video-based sea-ice cover observations.

Lines 104-110: please ensure all acronyms are defined
We defined the acronyms as much as possible.

Line 109/110: not clear what is meant by “model atmospheres”
We changed the wording to “modeled atmospheric profiles”

Line 157: I understand clearly the importance of 15% SIC for SIE calculations, but perhaps explain briefly how a SIC threshold affects SIA calculations?
We removed the statement pointing to the usage of the 15% SIC threshold for computing SIA because the impact of the weather filter SIC threshold for SIA computation is considerably smaller than the impact for SIE computation.

Table 2: it makes more sense logically if the datasets are ordered sequentially by Group number (all of Group I followed by all of Group II etc.)
Changed as suggested.

Figures 1 and 2/Figures 6 and 7: can the legend be grouped more clearly and logically around the 4 algorithm groups? At present, group I is clear (the 4 products on the right of the legend) but it would assist the reader if this was more obvious for all 4 groups.
Changed as suggested. Legends are now given for group I (left), group II (middle), and group III + IV (right).

Line 177: I presume the cumulative distribution functions are similar for all years, and 2004 is illustrative? Perhaps note this explicitly?
We changed the wording to: “In the plots showing the daily cumulative fraction for year 2004, which exemplifies the typical cumulative fraction, we find ...”

Line 194: capitalize acronym “Sic”
Changed as suggested.

Line 221-224: define acronyms
Defined acronyms where required.

Line 241: is the word “own” needed here?
We changed the wording as follows: “Andersen et al. (2007) reported a sea-ice concentration standard deviation of ~1% for cold-season high-resolution high-quality SAR image classification and an accuracy of 2% for ice-water SAR image classification from ice analysts without additional drift / convergence information.”

Line 308: change to “Both values are confirmed by Kern (2018)” and include link.
Changed as suggested.

Line 353: change “have been highly unstable since launch” to “were highly unstable from launch”
Changed as suggested.

Figures 8, 10, 11: I suggest ordering the panels by group, so that all group I panels are in sequence, followed by group II, etc.
Changed as suggested. Groups I through IV are now given in order of reading from left to right from top to bottom. We accordingly changed references from the text to the figures.

Figure 8: why is there no summer season SIC difference maps shown for the Arctic as there are for the Antarctic?
The actual sea-ice area shown would have been quite small AND if we would have shown the summer SIC difference maps in this paper we would not be able to show it in the forthcoming paper about the Arctic summer sea-ice inter-comparison study.

Line 365: I think a comma is missing before “...differences can exceed 20%”.
Changed as suggested.

Figures 9 and 12: very helpful to include the algorithm group labels on the y-axis, but why are they ordered I, III, II, IV?
We agree that the order (now) is not in line with the other figures; on the other hand we think that – in contrast to the figures where we changed the order – the order is less confusing and sufficiently clear. Therefore, we did not change the order here.

Line 402: “partly substantial” is very vague and unsatisfying wording...
We removed “partly substantial”.

Figure 13 and 14: same comment as for many previous figures – why not order the results sequentially by group?
Figures were changed as suggested with group I through IV going from left to right.

Line 504: type “fFor”
Changed as suggested.

Figures 15 and 16: I suggest ordering the panels by group, so that all group I panels are in sequence, followed by group II, etc.
Changed as suggested. Groups I through IV are now given in order of reading from left to right from top to bottom. We accordingly changed references from the text to the figures.

Line 701: change to “...just one hemisphere year-round or for an individual season.”
Changed as suggested.

Line 738: change to “...introduces the question and opens the discussion...”
Changed as suggested.

Line 774: change ‘extent’ to ‘extend’
Changed as suggested.