

Very happy to see ice core data products shared via ESSD, thank you.

Access remains unclear. Authors said “We can add instructions to assist users of the data” but have not done so. We need these very clear instructions (if short, at end of abstract as well as in data availability section) on how to bypass registration (email) requirements in order to move forward.

Authors have three options. Doing nothing not an option. Barrier-free access desired.

- 1) Definitely not true that AADC can not change policy. To my direct knowledge, they have changed policies at least four times since 2006, three times since ESSD started. We do not want to burden authors with changes to institutional policies, but neither can we accept glib author contention that institutions won't change. Change AADC policy impractical, but not impossible.
- 2) Put the data at Zenodo. A mirror site will help backup policies, Zenodo remains quick and free, many other ESSD data providers use Zenodo, authors could send a clear message to AADC by using Zenodo.
- 3) Authors can publish clear instructions about how to use the registration-free back door. Bypassing the registration step renders the registration step moot, of course, but authors have little choice. If authors chose this option, they need to provide prominent clearer than clear instructions.

So long as authors will need to make data access changes, they might as well address other deficiencies. Copernicus staff apply excellent typesetting and proofreading skills but authors should save those staff substantial work by making corrections now.

Line 3 “covering over the data period”? Please correct.

Line 6 “region where few records exist, especially at high temporal resolution” Tense wrong, text awkward, please correct.

Lines 11, 12 “exceptionally high temporal resolution” comes from precip (snow) accumulation rates (mentioned later in this paragraph) not from geographic position. Please correct.

Line 21 Rather than “in particular” I think you mean ‘by extension’. Please correct.

Line 23 Why does proximity to Casey station provide benefit? Please clarify.

Line 27 “measurements” “has” tense problem, please correct.

Line 32 annually dated should read as annually-dated, please correct.

Line 32 and following: term “proxies used twice in this sentence, please correct.

Line 37 this sentence is only partially true, depends on whether one addresses ice, ocean, precip, etc. Jones et al. 2016 a very weak and sadly dated (almost obsolete?) reference. Much better list starting from line 40. Needs substantial correction and re-writing.

Line 45 this sentence represents the prime motivation and best justification for the entire effort. Move it forward to a more prominent position?

Line 53 “two levels” of what? Quality control? Temporal resolution? Reader needs to read subsequent sentences? Please change.

Line 54 “quality controlled” should be ‘quality-controlled’. Please correct.

Line 55 punctuation error, use sentence break rather than comma. Please correct.

Lines 57-58 confusing run-on sentence. Please correct.

At this point this reader has gone through only 60 of nearly 280 lines of descriptive text, with result that I have found 13 deficiencies / errors. No editor wants to take on such an extensive corrective workload. Please ensure careful reading and multiple corrections of next version by several co-authors, including by at least one native English speaker. We will drive Copernicus proofreaders crazy if we send manuscript forward in such a dismal state. I will read carefully once again, hopefully without stumbling over so many deficiencies.