

Interactive comment on “New estimates of Arctic and Antarctic sea ice extent during September 1964 from recovered Nimbus I satellite imagery” by W. N. Meier et al.

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In this study, Walt Meier and his co-authors present data on 1964 Arctic and Antarctic sea-ice extent that is valuable for putting more recent observations into context.

I recommend publication subject to the following points being addressed:

p.36: In the introduction, it should be more clearly stated that for the Antarctic, this work is to some degree a repetition of the earlier work by Predoehl (1966). Throughout the paper, some more comparison to this earlier work would be helpful. I also think that the availability of IR scenes from Nimbus I should be mentioned.

C64

p.39: Please add some more information on spatial and temporal resolution, coverage, color range etc. of the Nimbus I images

p.39, l.14ff: You could add that the polynya did not prominently show up in 1973 satellite imagery (c.f., Martinson et al., 1981)

p.40., l.6: I'm a bit confused why film would only have a 4-bit color range. Or is this the color range of the AVCS?

p.41, l.4f.: In the light of the preceding statements, some additional motivation for the statement of "good representation" would be desirable.

p.41, l.12: Given that you talk about the Antarctic here, maybe a figure from there should be used instead of the Arctic scene currently shown in fig. 2

p.42: How do the estimates for Sep 1964 Antarctic sea ice compare against HadISST estimates?

p.42, l.13: You can't really say much about "the 1960s" from a snapshot of the state in 1964

p.43, l.8ff: It'd be helpful to add HadISST estimates for Sep 1964 to fig.6, given its widespread use in published literature. You might also want to refer to fig.6 already here in l. 9 after "ice charts", instead of only in l.16.

Technical corrections:

p.36 l.3/4: Add "sea ice" after "Arctic" and after "Antarctic" l.5: Change to "Images from a three-week period were analyzed..." (since otherwise those "three weeks" refer to the duration of the analysis) l.13: the recently observed ++record++ l.17: source ++of++ these

p.37: l.5: Maybe change to "In the Antarctic, the situation is more complicated with..." (since the Antarctic itself is not a situation)

C65

p.38: l.25: due ++to++

p.39: l.12: contrast –and– between

p.42 l.27: One reason is –because of– ++the++ limited coverage

Interactive comment on The Cryosphere Discuss., 7, 35, 2013.