The Cryosphere Discuss., 6, C420–C421, 2012
www.the-cryosphere-discuss.net/6/C420/2012/

The Cryosphere Discussions

Interactive comment on "Antarctic sea ice variability and trends, 1979–2010" *by* C. L. Parkinson and D. J. Cavalieri

Anonymous Referee #1

Received and published: 30 April 2012

This paper presents an update on passive microwave sea ice extent and area trends for the Antarctic through 2010. It provides hemispheric and regional estimates of extent, area, and trends based on the NASA Team algorithm. This follows previous papers that showed essentially the same results for earlier time periods.

The paper provides a useful update with the latest processed data, through 2010. The paper is well written and the information is useful for scientists to have the latest final, quality-controlled data from the data providers. There is also brief discussion of mechanisms influencing the Antarctic trends and variability, a review of relevant papers published over the past few years.

There is obvious value in such information. However, there is little that is new scientifically. The methods and processing have not been updated, so this is just presenting

new data using methods that have been long validated and peer-reviewed. I wonder if this really warrants a new paper, especially when updated data is available from a variety of sources, such as NSIDC, EUMETSAT Ocean and Sea Ice Satellite Application Facility, as well as other institutes. The data presented in the paper are of better quality and are considered by the community to be high-quality, authoritative data. Still it seems like a better venue in the future may be to simply post the statistics online and update.

I would also suggest that there may be improved methods, e.g. using the NASA Team 2 algorithm for periods available, more sophisticated gridding, data fusion, improved input data (i.e., brightness temperatures), that could lead to substantial updates in the estimates. There may also be new analysis methods (e.g., EOF, etc.), that could yield new insights from the data. This would definitely warrant a new peer-reviewed manuscript.

My final conclusion is that this paper is acceptable for publication, but perhaps thought could be given, by the editor, and the authors as to whether, such updates as this require a specific publication in the future.

Interactive comment on The Cryosphere Discuss., 6, 931, 2012.