

Interactive comment on “A long-term Northern Hemisphere snow cover extent data record for climate studies and monitoring” by T. W. Estilow et al.

Anonymous Referee #3

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The data presented in this paper are clearly extremely valuable to the whole cryosphere and climate scientific community. It is presented concisely and clearly. Given its potential use for a wide community, this paper should of course be published. However, data reliability must be checked with the utmost care. In particular, I am concerned by the comment of Brown and Derksen (2013) that the decrease in snow cover extent in autumn may be due to an artefact such as improved mapping. I recommend that the authors elaborate on this and address, possibly even in anticipation, all possible issues regarding potential artefact in time series. There has been changes in methods since 1966, and although the authors mention consistency checks, I am not sure all aspects

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have been addressed. It would also be useful if the authors mentioned the other SCE records and discussed any significant difference with their record.

Minor points

The reference Bates and Privette (2012) is not easily accessible, as for example it does not show up in web of science. If possible, either give another reference or elaborate.

Page 672, lines 10-15, please elaborate or give a reference on the impact of time sequence satellite imagery in discriminating snow from clouds. Could such improvements have led to an artefact in trends in time series?

Page 676, line 13, please mention that SD is standard deviation. Sure, it is mostly obvious, but one should keep to the sound practice of explaining all abbreviations.

Interactive comment on Earth Syst. Sci. Data Discuss., 7, 669, 2014.

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