

## ***Interactive comment on “Sea ice cover in Isfjorden and Hornsund 2000–2014 by using remote sensing” by S. Muckenhuber et al.***

**Anonymous Referee #1**

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This is a short study which analyzes the spatial extent and time coverage of sea ice in two fjords in Svalbard. Overall, the study is sound and I do not have any major comments to make. In reading the paper I found the Discussion and Outlook section to be most interesting as this connects the small area studied to the larger sea ice system. I found this comment to be most interesting, "Ocean and atmosphere measurements from the Polish research station in Hornsund carried out by the ongoing Polish-Norwegian project AWAKE-2 (Arctic climate system study of ocean, sea ice and glaciers interactions in Svalbard area) will be utilized to explain the difference between average seasons and years with distinct less sea ice coverage, i.e. 2006, 2012 and 2014." I think the significance of the paper would be much greater if these could have been included in the present study, but I leave this up to the authors. A few minor comments are listed below.

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### Specific comments

4045, L9: Note that part of the Fram Strait is in fact covered with ice, so I would be careful about this statement.

Section 2, Data: It would be good to state what it is you actually measure from the remote sensing data set. It is stated that “sea ice conditions” are studied, would be better to state something like spatial ice extent and ice type.

Section 2, Error estimate: Again, here it would be better to state what specifically the error relates to such as spatial ice extent and ice type.

4050, L13: Should read “unmistakably”

4050, L25: Should read “parameters”

4052, L14: The correlation is between the DFI parameter for the short and total season?

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Interactive comment on The Cryosphere Discuss., 9, 4043, 2015.

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