

Interactive comment on “Arctic Ocean circulation and variability – advection and external forcing encounter constraints and local processes” by B. Rudels

B. Rudels

bert.rudels@fmi.fi

Received and published: 9 February 2012

First I want to thank the reviewer for the summary and comments about the content in the article.

General: Reorganisation: My original approach was to proceed from published results to newer and not yet published work, not thinking too much about the logical connection between different sections. I will consider the suggestion of moving sections 4 & 5 ahead of sections 2 & 3 and see, if this improves the manuscript.

Specific comments

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p.2320: The reference will be added.

p.2322: “and ice export” will be added.

P 2322: Rossby radius will be corrected

p. 2322: “and ice export” will be added.

p. 2322: “export” will replace “input”

p. 2324: Proshutinsky et al. (2009) will be added.

p. 2325: Rudels (2011) Fig 8 suggests about 0.04 Sv through the Canadian Arctic Archipelago.

p.2328: Sentence will be added.

p. 2332: Kikuchi et al. (2005) will be added.

p. 2342: I shall consider this. I do not know the best way yet.

Figures 22 & 23. The transports are taken from different scenarios. In Figure 22 50% are transformed on the shelves in Figure 23 75% are transformed on the shelves. I have not yet decided, if to make the figures consistent or add a comment in the captions.

Technical corrections: All these points will be attended to.

Interactive comment on Ocean Sci. Discuss., 8, 2313, 2011.

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