

Interactive comment on “River ice flux and water velocities along a 600 km long reach of Lena River, Siberia, from satellite stereo” by A. Kääb et al.

Anonymous Referee #1

Received and published: 13 August 2013

The authors present an interesting study on surface current retrievals from the displacement of visible ice floes in the Lena river within the 55-second time lag between two Terra-ASTER stereo images. This is a well-written manuscript; the analysis is quite comprehensive and shows that the authors know very well what they are doing. I suggest to accept the manuscript for publication subject to the following minor revisions:

- Page 9969, line 25-26: The two papers by Romeiser et al. are based on spaceborne (SRTM and TerraSAR-X), not airborne, along-track InSAR data. Furthermore, I suggest to cite our peer-reviewed TGARS paper on early Elbe river results instead of the IGARSS paper. The reference is as follows:

Romeiser, R., S. Suchandt, H. Runge, U. Steinbrecher, and S. Grünler, First analysis

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of TerraSAR-X along-track InSAR-derived current fields, IEEE Trans. Geosci. and Remote Sensing, 48, 820-829, 2010.

- Page 9972, line 11: "than" should be "as".
- Page 9973, line 4: I think "on the 21 August 2011" should be "on 21 August 2011".
- Page 9977, lines 10-11: "but the 34 km (5 m) peak also strong" - something is not right with this part of the sentence.
- Page 9981, line 21: "used else for Fig. 5" doesn't look like correct English.
- Fig. 1 is extremely small. It would be good to find a way to make it bigger.
- Fig. 6 and 7 are similarly small. For my taste, each row (a,b,c of Fig. 6 and d,e,f of Fig 7) should be shown on a single page, as large as possible.
- I would like to see additional figures at the beginning that show examples of the moving ice floes in a few analysis windows at full resolution (i.e. pattern in image 1 and in image 2 and derived displacement vectors). This should be shown before the complete resulting velocity field of Fig. 1.

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 10, 9967, 2013.

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