

## ***Interactive comment on “Detection of ship tracks in ATSR2 satellite imagery” by E. Campmany et al.***

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I noticed this study on the detection of ship tracks in ATSR2 images with great interest. However, the resulting global distribution of tracks detected was not exactly what I would have expected.

To illustrate global ship traffic, the authors use a low-res figure (Fig. 6) taken from Eyring et al., 2005. Due to the low resolution, one striking feature of global ship traffic density is lost, i.e. the ship track between India and Indonesia. For better illustration, I recommend to use (alternatively or in addition) Fig. 2 from Endresen et al., Emission from international sea transportation and environmental impact, JOURNAL OF GEOPHYSICAL RESEARCH, VOL. 108, NO. D17, 4560, doi:10.1029/2002JD002898, 2003. This figure has also the advantage that ship counts are shown directly (instead of NO<sub>x</sub> emissions). The ship track connecting India and Indonesia shows highest

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ship traffic density (of the ships included in AMVER) globally. Since all ships from the Suez channel or the Persian Gulf towards East Asia follow the same route, emissions are that high for this particular track that they can even be detected in satellite measurements of NO<sub>2</sub> (see Beirle, S., U. Platt, R. von Glasow, M. Wenig, and T. Wagner (2004), Estimate of nitrogen oxide emissions from shipping by satellite remote sensing, *Geophys. Res. Lett.*, 31, L18102, doi:10.1029/2004GL020312.). Using satellite data with higher spatial resolution, Richter et al. (Richter, A., V. Eyring, J. P. Burrows, H. Bovensmann, A. Lauer, B. Sierk, and P. J. Crutzen (2004), Satellite measurements of NO<sub>2</sub> from international shipping emissions, *Geophys. Res. Lett.*, 31, L23110, doi:10.1029/2004GL020822) could also follow this track eastwards towards Taiwan and westwards towards the Suez channel. It is quite astonishing that the ATSR2-algorithm presented in this study did not find a single track for this high-frequented ship track. I think this needs to be mentioned and to some extent discussed (meteorology? aerosol properties?) in this study.

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