

Interactive comment on “Drift simulation of MH370 debris using supersensembles techniques” by E. Jansen et al.

Anonymous Referee #1

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REVIEW OF Drift simulation of MH370 debris using superensemble techniques Author(s): E. Jansen, G. Coppini and N. Pinardi

This manuscript is a very important contribution to Natural-Hazards-And-Earth-System-Sciences and is entirely suitable for publication. The paper adds new knowledge to the overall body of scientific understanding regarding particle tracking in the environment. The authors, especially the second and third ones, are very well recognized and highly regarded researchers in the subject area of this manuscript. The authors build on their previous work with lagrangian modeling and employ well established meteorological (ecmwf) and oceanographic (European Copernicus Marine Environment Monitoring Service) data sets in their analysis. The use of drift simulations will take on especial importance as air and sea travel continues to rise and world events become more dangerous putting more of our population at risk. The research results

presented are highly original. The approach taken in the conduct of this research will set a standard for future drift modeling.

I believe the paper is free of errors in logic; their case is very well presented and made.

Some comments: 1. I think that the appendix should be moved into the main body of the manuscript. It is possible that the Mozambique debris may not be related to MH370. But the method of including it in the analysis is important for the readers. In fact there are other announcements of possible debris. It would be so good to include them all.

<http://www.ibtimes.com/flight-mh370-update-chinese-vessel-resume-search-recover-lost-towfish-amid-suspected-2350977> <http://www.livescience.com/54158-debris-found-from-mh370-malaysia-plane.html> <http://www.inquisitr.com/2941135/malaysia-airlines-flight-mh370-new-debris/> <http://www.inquisitr.com/2968872/malaysia-airlines-flight-mh370-inside-plane-debris/> <http://www.inquisitr.com/2957754/malaysia-airlines-flight-mh370-planes-interior-debris/>

2. It would be interesting if the authors could discuss a backtracking approach. Release particles from Reunion Island and see where they came from. Play the currents back in time.

3. Why is the approach called a “superensemble” as opposed to an ensemble? What makes it super?

4. It seems to me that there has been much published about the debris field. Has all the literature been reviewed for this manuscript?

5. I like the figures. I think Figure 1 should contain labels for Mozambique and Madagascar. Others?

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