Ocean Sci. Discuss., 11, C1229–C1230, 2015
www.ocean-sci-discuss.net/11/C1229/2015/

Ocean Science Discussions
Open Access

Interactive comment on "Eddy characteristics in the South Indian Ocean as inferred from surface drifter" *by* Shaojun Zheng et al.

Anonymous Referee #1

Received and published: 8 January 2015

The authors analysed the surface drifter data to understand the eddy characteristics in the southern Indian Ocean. This is an interesting study that is within the scope of the Journal. The novelty of the paper is to provide analysis on sub mesoscale eddies, in addition to what can be derived from satellite altimeter data. It is a good amount of work, however, the paper can be improved by adding more analysis on the eddy characteristics, especially on the sub mesoscale eddies.

Questions could be answered by this study include:

Do the eddy numbers correspond to eddy energetics, in different parts of the southern Indian Ocean, the western boundary current system, the eastern boundary current system, and the interior ocean?

Full Screen / Esc
Printer-friendly Version
Interactive Discussion
Discussion Paper

How do the sub mesoscale eddies derive their energy? Either from the energy cascade from larger eddies, or from instability of the ocean current? Why do they have different seasonal cycle compare to larger eddies?

Why do cyclonic sub mesoscale eddies double the number of anticyclonic sub mesoscale eddies?

Can drifters be continuously trapped in eddies for a long time period?

In addition, some of the statements in the text have vague meanings, and a careful English editing is necessary.

When referring the seasons, the authors need to use austral summer/winter consistently to avoid confusion.

Interactive comment on Ocean Sci. Discuss., 11, 2879, 2014.