

## ***Interactive comment on* “Transformation of Levantine Intermediate Water tracked by MedArgo floats in Western Mediterranean” by M. Emelianov et al.**

**M. Emelianov et al.**

Received and published: 29 June 2006

We would like to express our gratitude for the positive review of our manuscript by Dr. Claude Millot. His comments seem to us very constructive and important, and will allow us to improve considerably the manuscript. We agree that using "density range" as criterion to determine the LIW layer can include in the analysis the waters that are situated above and below LIW. We have already re-calculated the clusters according to Dr. Millot recommendations. In this new approach, and previous to the clustering, the program analyzes all the information, profile by profile, to determine the layer of LIW. The pressure of the LIW core is determined as the average pressure between that of the absolute maximum of salinity and that of the closest relative maximum of potential temperature. Once this core pressure is located, we extract the data included

Full Screen / Esc

Printer-friendly Version

Interactive Discussion

Discussion Paper

in the range from -200 db to +200 db around this point. This is done in a profile by profile basis, so for each profile its LIW, and only that, is taken into account for further processing, independently of at which depth LIW happens. The general results of clustering are the same as before, with differences only significant at the level of details. For example, LIW from cluster 7 is situated not only in the area close to the Sicily channel, but also in the central part between Sardinia and Menorca marking more clear the transition between less transformed LIW from the eastern part of the analysed area and more transformed LIW from the western part. Results confirm the hypothesis about LIW structure proposed in the paper, and now we are sure to have avoided the influence of deep and another "no Levantine water" in the clustering analysis. The sub-clustering results (only on the biggest cluster #1) also have now more clear spatial distribution with less transformed LIW in the east and more transformed in the west, all embedded in a warmer, saltier background. We are reviewing the paper to take account of these significant modifications on the processing and start modifying the text according to the new results and other recommendations from Dr. Millot

---

Interactive comment on Ocean Sci. Discuss., 3, 569, 2006.

Full Screen / Esc

Printer-friendly Version

Interactive Discussion

Discussion Paper