

***Interactive comment on* “Statistical trend analysis and extreme distribution of significant wave height from 1958 to 1999 – an application to the Italian Seas” by G. Martucci et al.**

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First of all, we thank the Reviewer for bringing up questions that can contribute to make the MS clearer.

We agree that the ERA-40 wind fields are known to have some limitations (namely, underestimated for medium to large values) especially in enclosed areas. On the other hand, ERA-40 dataset constitutes one of the most advanced product when dealing with long-term series, and anyway even LAM have their own limitations. Consequently, we tried to overcome this comparing -for the overlapping years- the ERA-40 results with time-series calibrated by satellite data, as described in Cavaleri and Sclavo (2006). The

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procedure to make the time and space scales of model data and satellite observations compatible is similar to that followed by Caires and Sterl (2005).

Coming to the break-point issue, we believe the feature showing a change in the derived trends at about 1989 can not be related to the introduction of satellite data, which dates back to early '80s. A working hypothesis, also benefiting from long-term simulations of colleagues dealing with climate dynamics in the ocean and atmosphere, could relate this feature to the Eastern Mediterranean Transient (EMT), which effects on the Adriatic sea have not yet been thoroughly investigated by the scientific community. Since this hypothesis needs of course more robust confirmations, we preferred to avoid speculations on this theme in the current version of the MS. Nevertheless, should the reviewers agree, these considerations could be included, after a short appropriate introduction to the problem, and including some extra references, e.g.

<http://www.agu.org/pubs/crossref/2003/2002JC001403.shtml>

Roether, W., Manca, B., Klein, B., Bregant, D., Georgopoulos, D., Beitzel, V., Kovacevic, V. and Lucchetta, A., 1996. Recent changes in Eastern Mediterranean deep waters. *Science* 271, pp. 333-335
<http://www.sciencemag.org/cgi/content/abstract/271/5247/333>

http://www.geo.uni-augsburg.de/de/lehrstuehle/phygeo/medien_verzeichnis_2/forschung/emulate/publications/udlufffestscjacobbeit-duenkeloh.pdf

Interactive comment on Ocean Sci. Discuss., 6, 2005, 2009.

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