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## ***Interactive comment on “Variability of water mass properties in the Strait of Sicily in summer period of 1998–2013” by A. Bonanno et al.***

### **Anonymous Referee #1**

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Apart from obvious generalities, I do not see any new sound result. Furthermore, focusing only on LIW in the subsurface layer cannot be accepted. This is mainly due to the fact that the main feature of theta-S diagrams in the study area is an absolute S max that is said, by the authors, to define the LIW core, which is an unacceptable oversimplification. And even if this could be true, how are defined then the upper and lower limits of such a saline layer? Even if other water masses such as EMDW are not clearly signed, they are formed every year in the Aegean and the Adriatic so that they must permanently outflow, i.e. not only during the EMT. They could even form a percentage of the outflow much larger than the LIW one. In the same way, saying that CIW only outflows occasionally is strange since it is regularly formed and thus must regularly outflow. Who is able to clearly differentiate, in the study area, CIW from LIW? Why not assuming that the outflow is formed, at the intermediate level, of both CIW

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and LIW in variable percentages and/or more or less mixed? Same remarks should apply to the relative percentages of the deep waters formed in the Aegean and the Adriatic! The abstract indicates that the topography appears to play an important role, which is quite obvious at least for the subsurface outflow, but nothing is said in the data analysis (not in the introduction!) about the topography role. For me this paper only evidences an interannual variability in the theta-S characteristics, which has been obvious for a while but, due to a too large sampling interval, any clear link can be established between data collected here and there. Several figures (4, 6, 7) present results without any analysis.

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Interactive comment on Ocean Sci. Discuss., 11, 811, 2014.

**OSD**

11, C104–C105, 2014

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