

## ***Interactive comment on “Paleodepth variations on the Eratosthenes Seamount (EasternMediterranean): sea-level changes or subsidence?” by S. Spezzaferri and F. Tamburini***

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"Silvia Spezzaferri" and "Federica Tamburini" in response to the "Anonymous" referee N. 1.

The authors thank him/her very much for stating that the article is well organized, however we disagree with the statement that the work has fairly limited interest.

In the 1st comment the referee says that the statement .....this study suggests that marginal seas record global sea-level changes ..... was already established at the beginning of the sequence stratigraphic studies in the late seventies.

This comment is referred only to half of the sentence. In fact, the complete sentences

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is "Therefore, this study suggests that marginal seas record global sea-level changes, and they can be identified even in geological settings where tectonic events are dominant." He/she completely ignored the coupling of marginal seas and TECTONIC. This is the most important point of this work, where we were able to discriminate tectonic and sea level variations. This is a novelty and in our opinion it could have a major impact in basin analysis.

Our action will be to change the phrasing, but the content remains a very important achievement.

In his/her second comment, the referee states that the paper discusses issues that have been largely documented such as the mechanism triggering the basal Pliocene flooding and its tectonic (rather than eustatic) nature.

Again we disagree, there are many articles discussing the tectonic nature of this event, but also many (maybe more numerous than the first category) that suggest the eustatic nature of this flood. See reference list. Therefore the mechanisms are well far away to be definitively identified. We have suggested a coupling of tectonic and eustatism, with the quantification of the paleo water depth variations. This is another novelty. In our knowledge, in the existing literature only "shallow", .....not more than....meters", "deep", ".....not less than.....meters" are indicated with reference to the Late Messinian Flooding and to the response of the seamount to the Cyprus uplift. The quantification of these variations has never been proposed before.

With pleasure we will correct any eventual spelling mistake.

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Interactive comment on eEarth Discuss., 2, 115, 2007.

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