

Response to the Editor

October 11, 2017

Dear Editor,

We addressed the two points raised in your report:

1) you should explain the derivation of Eq. 6 and in particular the meaning of the surface loading deformation (for which there is no reference).

We added the following explanation (in bold in the manuscript) and references:

“the mass term is evaluated using the inverted barometer assumption (Jeffreys, 1916) to account for the quasi-static response of the oceans to atmospheric pressure loading, and the factor of 0.7 accounts for the compensating changes in the moment of inertia arising from the elastic deformation of the solid Earth in response to the surface loading (Munk and MacDonald, 1960; Barnes et al., 1983).”

2) you should include figure S1 in the main manuscript and not as supplementary material.

Figure S1 is now inserted in the manuscript as Fig. 5 and the relevant modifications have been made in the text.

Best regards,

S. B. Lambert, S. L. Marcus, O. de Viron