

## ***Interactive comment on “Electromagnetic characteristics of ENSO” by Johannes Petereit et al.***

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We thank anonymous Referee 2 for his/her review and for providing helpful remarks on our manuscript which helped to improve and clarify our work greatly.

- *"By the way, authors did not specify in the paper an observation level at which these results are obtained ... "*

- *"I am very doubtful that one will be able to detect these signal from satellite data even in the far future. I think the paper..."*

- *" I think the paper could be published if the authors will moderate their claims, for example, stating that it is just "in silico" study which most probably is not of practical use."*

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We added the observation level, which actually is at sea level, where  $B_r$  exhibits a finer lateral structure. Also, we did not want to constrain the findings to satellite observations. Either way, it will be a challenging task to observe the presented signals. But, we believe that the unique selling point of the electromagnetic oceanic tidally-induced signals are their well known frequencies. We think that through signal processing even weak periodical signals can be extracted from noisy observations, provided that the time series of observations is sufficiently long. We agree, however, that detecting these signals with satellites, the currently used technique to detect the radial magnetic field component of oceanic tidally-induced magnetic fields, in the intermediate future will be very challenging and have moderated our claims accordingly.

All technical notes and suggestions have been fully implemented.

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