

Interactive comment on “An oceanographer’s guide to GOCE and the geoid” by C. W. Hughes and R. J. Bingham

Anonymous Referee #6

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This is a well-written summary of some basic ideas from physical geodesy. I am glad to have the paper for my own future uses. I especially liked the succinct descriptions of the curious ways of handling the permanent tide.

However..... In my opinion this paper is not really appropriate for a journal article. Much of the paper can be readily extracted from the 1967 book by Heiskanen & Moritz. Most of Section 3, on spherical harmonics, seems somewhat trivial and should be well-known to any reader, oceanographer or geodesist.

So this is really a question for the Editors of this journal. What kind of journal do they want? If they want material that readers may find “useful” even though the material is definitely not “new,” then they should publish this paper. If this journal were, say, the

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Journal of Physical Oceanography, however, I would argue strongly against publication. So publication of this paper is really a matter for the Editors to decide, based upon their ideas for the journal; this reviewer votes No, but only because of my own prejudices about what a journal should be.

Some minor technical items...

Page 1563, line 12. This confused me, because the reference ellipsoid is hardly ever within a metre of the sea surface. So what is meant?

Page 1559, line 3. "In practice,..." Could a reference for this statement be provided?

I checked many of the constants, etc., (e.g. the GRS80 constants), and I could find no typo, but I didn't check EVERY value throughout.

Interactive comment on Ocean Sci. Discuss., 3, 1543, 2006.

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