

## ***Interactive comment on “A multilayer approach and its application in modeling QGNSea V1.0: a local gravimetric quasi-geoid model over the North Sea” by Yihao Wu et al.***

### **Anonymous Referee #2**

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I have read the interesting manuscript "A multi-layer approach and its application in modeling QGNSea V1.0: a local gravimetric quasi-geoid model over the North Sea" by Yihao Wu, Zhicai Luo, Bo Zhong, and Chuang Xu. The manuscript focuses on a multi-layer approach compared to a single layer approach in the computation of the local gravity geoid.

I have the following comments: 1. Multi layer approach gives (according to Table 5 and Fig 7 and page 16-17) a better fit than single layer approach. The fit would naturally increase with increasing level of parameters, but it is statistical significant. A statistical test such as AIC (Akaike information criterion) or BIC would give valuable information.

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2. For a better comparison with EGG08 the same or similar global geopotential model should be used.

3. Figure 2: A comment related to the different patterns observed in Figure 2 would be of interest.

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C2