

Ocean Sci. Discuss., referee comment RC1
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Comment on os-2021-3

Anonymous Referee #1

Referee comment on "Long-period solar annual and semiannual tidal contributions to the lowest normal low water in seas surrounding China" by Yanguang Fu et al., Ocean Sci. Discuss., <https://doi.org/10.5194/os-2021-3-RC1>, 2021

This paper aims to assess the contributions of annual (Sa) and semi-annual (Ssa) tidal constituents to the LNLW in seas surrounding China by using tidal constituents estimated from tide-gauge records and satellite altimeter data. Their results show that the contribution of Sa and Ssa can be up to 34.2%, therefore the authors conclude that precise estimation of Sa and Ssa and evaluation of the corresponding accuracies should be research focus to improve tidal datum precision.

I found this paper difficult to read and understand. A significant effort in the English language is required to make this paper meet the journal's publication criteria. Additionally, the data used in the study is not clearly explained. The motivation and significance of this study are not properly described in the introduction.

A few comments are listed below:

Lines 87: "years with less than 85% of hourly values rejected".
Does it mean more than 15% of hourly values are not rejected? If yes, the valid data are too little.

Line 88 "the middle of the year had less than 80% of hourly values rejected",
not reasonable.

Line 233: "we have not carried out inverse barometric corrections on the tide gauge data"
Usually, dynamic atmospheric correction is applied to satellite altimetry products. To be comparable with tidal constituents estimated from satellite altimeter data, dynamic atmospheric correction (low-frequency inverse barometer response and high-frequency

wind and pressure effects) should also be removed from tide-gauge data.