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Interactive comment on "Mitigation of ionospheric signatures in Swarm GPS gravity field estimation using weighting strategies" *by* Lucas Schreiter et al.

Anonymous Referee #2

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General comments The core of the paper is the justification that ionospheric disturbances impact both on orbit of satellites derived from Swarm mission as well as their propagation into gravity fields. The authors have investigated selected biases taking advantage of geometry-free linear combination of GPS signals. This was used for determination of observables weighting schemes and their impact on gravity field modelling. The novelty of the paper was well clarified. The authors have made reference to recent and appropriate work in the field. Both the topic and nice results are of high importance; hence, in my opinion this paper will have noticeable impact in the subjects of both gravity field modeling and ionospheric sounding in some extent.

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Discussion paper

Specific comment: The conclusions section could be extended in order to better reflect the content of the paper (methodology & results). Moreover the authors should include some results and conclusion in the abstract, since now it resembles more short introduction than abstract.

Technical comments Some editorial/language corrections are required (eg. often the commas, hyphens and parentheses are placed or used incorrectly, please clarify abbreviations when are mentioned for the first time in manuscript). The size of font in the figures is quite low, which sometimes makes it difficult to read. The size of figures font should be in general unified in paper.

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Discussion paper