Interactive comment on “Glider Technology for Ocean Observations: A Review” by David Meyer

D. Meyer
david.meyer@io-warnemuende.de

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Dear anonymous reviewer,

Thank you for your fast response. Please find below my replies to your comments.

1: “All information that is presented has been published elsewhere (most of the papers are cited in the manuscript).”

1: This is true but no other review is bringing together the historical part, the technical part and the scientific part in only one review article and in such a comprehensive way. And as the reviewer stated the author included a paragraph dealing with the “use-of-glider in ocean research, based on publications addressing certain research topics”.

2: “I think the title is a bit misleading, although it claims to be “a review” the manuscript is not comprehensive - the author did not use the word “comprehensive” but given the existing, published reviews I would expect that yet another review would be more
comprehensive or is topical e.g. glider use in ocean acoustics – both is not the case.”

2: From the authors point of view the title is anything but misleading. The manuscript covers a wide range of topics - from the history and the development of glider technology to its application in a variety of field studies regarding marine sciences. In the manuscript the author clearly pointed out that the manuscript is “a comprehensive review” (Line 17/ Page 3) and actually it is. For instance, Rudnick (2016) cited 146 references. The author cited 183 references. Furthermore, as mentioned before no other review is bringing together the historical part, the technical part AND the scientific part in only one review article and in such a comprehensive way.

3: “In fact it has been mentioned by the author (page 3, line 15) that nothing new is presented in the text and I am somewhat surprised that the manuscript has been sent out for review.”

3: Maybe this is a misunderstanding. The author did not write “that nothing new is presented”. The author wrote that “This article makes no claim to completeness but is instead intended to describe the main functional systems of these vehicles and to provide a comprehensive review of the studies that have been done to date with the participation of glider technology.” Furthermore, in the authors opinion a review article not necessarily needs to present new results.

4: “However, a similar strategy has been published as a report some years ago (GROOM deliverable 2.01, see link below). Moreover, a recent paper in press (Liblik et al. 2016, see below) include a review of glider-use in scientific research based on investigating 140 peer-reviewed publications […]”

4: In the authors opinion there is a difference between a report and a peer-reviewed article with regard to visibility for the scientific community. Moreover, as the reviewer correctly mentioned the report was published some years ago and thus does not include the latest studies. Furthermore, the fact that another review paper (Liblik) is in press highlights the relevance of glider technology and the need to bring more at-
tention to this oceanographic tool. And as the reviewer stated “the author of this OS submission could not know about the Liblik et al. paper in press”.

5: “In summary I am afraid to say that this manuscript has to me no (using OS review criteria 4: poor) scientific significance as no new results are presented.”

5: In the authors opinion it is not necessary to present new results in a review paper. A review article surveys and summarizes previously published studies, rather than reporting new facts or analysis.

6: “Here my critics are on why exactly this set of publications were selected and other are omitted - more information had to be provided.”

6: As mentioned in the table caption the manuscript provides an “Overview of the 5 main application areas of glider technology in ocean sciences and corresponding relevant publications”. Relevant in this case means for example visible for the scientific community (citations, availability and so on). Furthermore, this article “makes no claim to completeness but is instead intended to describe the main functional systems of these vehicles and to provide a comprehensive review of the studies that have been done to date with the participation of glider technology”. The author is quite willing to include other relevant publications if they correspond to one of the main application areas identified in the article. At this point, the reviewer is encouraged to make suggestions.

7: “And the success story of floats should be continued!” – it is unclear to me why this has been written. Is there a risk in float technology to be discontinued? and: What do you mean by "success story of floats"? and finally: why is it relevant in an article on glider technology?”

7: This sentence is maybe a bit too emotional but the author intended not only to write a review but also to tell a story. It can be omitted in the next version of the manuscript.