Interactive comment on "Glider data collected during the Algerian Basin Circulation Unmanned Survey from 2014 to 2016" *by* Y. Cotroneo et al.

Anonymous Referee #1

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In this manuscript, the authors present glider datasets collected during fall 2014, 2015 and 2016. The trajectories passed along altimetry tracks (SARAL and Sentinel-3) which is very useful to perform altimetry data validation and/or to study structures with a multi-platform strategy. The campaigns took place in the Algerian Basin, which is quite under sampled and are thus an interesting contribution to study this region of the Mediterranean Sea. A complete description of the instruments as well as the quality control and data validation steps is given. Then a comparison with historical data is made and finally the authors focused on the representation of water masses characteristics by the glider. The paper is easy to read, well-structured and provide detailed description of the methods and data which are of full interest for the community. Datasets are easy to access via the given identifier and seem of high quality. I consider that this

paper must be published after minor revision. Here are some comments or questions and a few technical remarks about typographical and grammatical errors that need to be corrected.

Specific comments :

p3, lines 111-113: here you mention a change in the sampling strategy in 2014 and 2016 but in p4 line 142 it is in 2014 and 2015. Regarding Figure 2, I think that the introduction must be changed.

p4 line 133: in the introduction you write that gliders collect data in the first 975 m but here you mention that they can reach a depth of 1000 m. Why this difference?

p5 line 151: I don't understand how many glider you use. Is this a single glider which has been reused for the different missions or three distinct gliders from the same constructor and with the same characteristics ?

p5 line 162: I understood from p2 line 92 that gliders have a horizontal velocity of 0.25 m/s.

p5 line 161-162: do you have a reference or a technical sheet for the velocities?

p7 lines 241-259: I think you can add a table with the dates of the campaigns because the reader don't know exactly when they start and end. Moreover are there two campaigns during fall 2014 ? Because table 2 is split in two cases for this year.

p8 line 290: how did you filter the data?

p8 line 291: how do you average data vertically? Did you assume that one dive represent one vertical profile and one corresponding latitude or longitude ?

p8 lines 295-298: I understood from p5, line 163 that there was no data acquisition between the surface and the 20m-depth layer.

Figure 4: I understood from the text that in 2014, the glider don't reach the surface.

However, on the figure, you seem to have measurement from the surface down to 20 m.

Figure 5: maybe you can add as a legend the start and end dates of the profiles.

p10 line 331: I see a larger maximum mean standard deviation value on Figure 5.

p12 line 351: could you rapidly mention these standard quality control procedures?

Figure 6: Why don't you consider the saw-tooth green track in Figure 1?

p12 line 353: How many ABACUS and historical observations profiles did you get? Maybe you can indicate the number here as you did in the conclusions.

p14 line 405: is this transect representative of the others?

Technical corrections :

p2 line 66: no capital letter to "Km"

p2 line 87: no capital letter to "Km"

p2 line 92; p5 lines 161, 162: please be consistent through the whole text between cm/s or m/s

p3 line 107: please put a space between the point and "These"

p4 line 138: please replace "JERCIO" by "JERICO"

p4 line 149: please put a capital letter to "altiKa"

p5 lines 151: please remove capital letters from "Temperature, Salinity, . . ."

p5 line 159: please put a space between the point and "ABACUS"

p7 line 222: no capital letter to "Kg/m^3"

p19 line 492: please remove the capital letter from "We"