

Reply to RC2 (Robert Schlegel) :

We have taken care of and applied all minor comments, technical comments and requests related to formatting or English language issues. We do not develop an answer for those requests.

Below we provide answers in case of disagreement or when some details were asked.

Replies are show in **Red font** below.

General comments

Summary

The authors document the design, deployment, and curation of an array of oceanographic motioning instruments and the various data streams that they generated. This was done specifically within and around the lagoons of Gambier Islands, French Polynesia for the purpose of better quantifying the processes that are likely having an (adverse) impact on oyster spat. Though as the authors point out, such a wide array of high temporal resolution data can be used for many different investigations. The authors quickly move through the background to the project, the deployment/retrieval, QC, and a description of each type of data. Providing insights into the importance of the findings as they go. The conclusion is rather short, but that is fine. As the authors also point out that more in-depth studies utilising these data have already been (or are in the process of being) published.

The effort needed to manage a project of this scope is commendable and the dataset (as a series of NetCDF files) is well packaged and openly accessible online. The data are easy to download, extract, and work with. Though I think it would have been better to package the data into one single NetCDF file. Or at least just one NetCDF file per instrument type. For example, it puts unnecessary encumbrance on the user to have to separately download, load, and combine files for L01_3m and L01_21m when the only difference between them is depth, which is already one of the attributes in the NetCDF file. By creating a spray of files like this it reduces the R of the data (i.e. Reusability; FAIR). That being said, the data are already published and I don't think it's necessary that they be recombined, even though it would be of some benefit to the community, and to the posterity of the data themselves.

We understand this reasonable suggestion, although by experience, some users have requested data from only one sensor, hence the choice to maximize the granularity and avoid multi-sensors files.

The authors are perhaps a bit heavy on their use of figures. And the contrast between colour palettes and aesthetic styles between figures is sometimes a bit jarring. I did however enjoy most of the figures and found some of the visualisations to be quite interesting. I assume that some of the figures were made with different software applications, which will prevent the authors from maintaining a consistent aesthetic throughout. So I would recommend trying to have at least a consistent font face, and/or develop a border for the figures in post-processing that looks the same in order to ensure a more contiguous visual experience for the reader. And please replace rainbow colour palettes whenever possible. The 'viridis' colour palettes being one easy choice.

Not sure why the rainbow palette is not adequate here. The first reviewer is not mentioning this as a problem. Since it was not a mandatory requirement to change it even from the reviewer (see below), we have left the initial color palette. We also confirm to you that all our figures

were created using Python software, except for Figure 10, which was generated using GIS software.

Other than that, my only recurring criticism is the quality of the writing. The text would benefit from being passed through a language correction software like deepL in order to bring it closer to a native English level. I was however able to progress through the manuscript and understand the authors meaning for every sentence on the first read (which I find is often not the case for physical oceanography papers). So I am not suggesting that any structural re-writing is necessary.

Thanks. English is not our first native language, so it will never be at the level of native English speaker. As far as the scientific message is perfectly clear, this is ok for us.

Overall I think the paper effectively communicates what data were collected, why they were collected, what they look like, and where to find them. Whereas I do have some minor points below, these are just comments on the grammar/syntax before I stopped editing the language too closely. I think the authors should re-consider how they visualise their data, but I don't think this is absolutely necessary for this manuscript to be published. Therefore there are only minor revisions to make.

Specific comments

Data availability

- Link to data works well. Data can be downloaded and are in a standard NetCDF format. Though I wasn't sure what the 'CORRELATION' values were meant to show in the ADCP files.

Although we can not enter such detail sin the paper itself, CORRELATION is the signal to noise ratio used as a measure of data quality, among 4 critical variables that are included in the NetCDF output (Correlation, Velocity, Percent Good and Echo Intensity), based on the parameterization used. More information can be provided in various documentations, a complete useful one from a user's perspective can be found here https://pubs.usgs.gov/of/2000/of00-458/pdf/ofr200-458toolboxmanualv4_508old.pdf

It would be preferable if the code used for the analyses / data QC were also made publicly available (e.g. GitHub etc.).

See reponse to Reviewer 1 on this code availability question. Line now 172 of the revised text.

Table 1

It's very impressive to see how much work this is when summarized into a table.

I recommend putting the rows of moored instruments only for Leg1 at the top of the table.

Ok, done.

Figure 1

Very nice. I like the layout of the progressively zoomed in map panels. Nice attention to detail how there is more and more colour as the panels zoom in. I recommend removing it and just having the one land mass shown.

We are not sure what is recommended, and where, here in term of 'one land mass shown'? Is for Figure 1 or 2?

Note that we changed the reference to the Sentinel 2 image, in agreement with comments made on paper [essd-2023-198](#) (or [Bruyère et al. 2023b](#))

Figure 2

I don't think the inset is necessary. It's not much more zoomed in than the main image.

Ok, modified.

Figure 3

Rather use a non-rainbow colour palette to show wind direction. Such as one of the viridis colour palettes. "Wind directions follow meteorological convention" Meaning that the direction shown here indicates that is where the wind is coming from, or towards where it is going?

We have not modified the color palette as it was not mandatory, and also to keep the same palette as in other publications ([Andreofuet et al. 2023a](#), [Bruyère et al. 2023a](#)). However, we have tried (below), but we don't like it as much as the rainbow palette!

For wind, the direction is where the wind is coming from (hence 0° is a wind coming from the North).

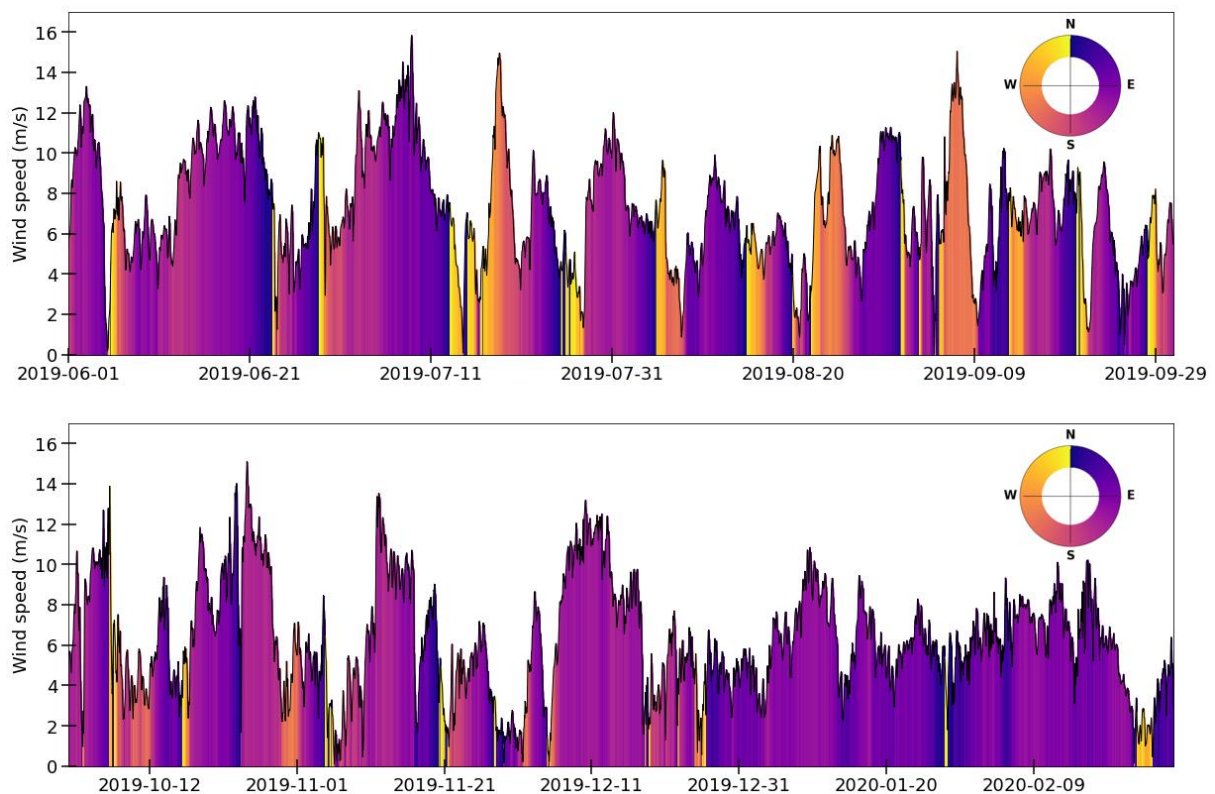


Figure 4

“.” -> “.”

Figure 8

Add names to y-axes, and panel labels (i.e. (A) (B))

Ok done.

END reply to RC2