

Author reply to the CEC2 to ‘egusphere-2022-510’ (Zhang et al., 2022)

Dear Professor Juan Añel,

Thank you very much for your second comment. Regarding your comment on the status of JASMIN, we have consulted officially with IAPCM. We compile the overall response of OMARE and JASMIN as follows. First, the user of JASMIN (i.e., the authors of this paper) retains all the original rights of the ported code (i.e., OMARE), which we have already published online with our submission. Second, according to the current policy of IAPCM, the current software release of JASMIN is limited to the binary form, and it is licensed through the aforementioned process (in the reply to CEC1).

Regarding your suggestion on the version of JASMIN, we hereby confirm that we have explicit records of the various versions that we used during the development of OMARE. Internally, IAPCM keeps full record of versioning of JASMIN. To produce the results of the study, the version 4.5.0 of JASMIN is used. As stated in our previous reply, it can be applied by emails to: yang_zhang@iapcm.qc.cn or through the online portal at: <http://www.caep-scns.ac.cn/JASMIN.php>. Detailed guide to the application process is at: <https://egusphere.copernicus.org/#AC1>.

As a summary of our reply, we want to further emphasize: for our work on OMARE, we did face the dilemma of developing a fully-fledged software infrastructure for GFD (i.e., geophysical fluid dynamics) models (hence adopting a silo-type practice), or utilizing existing, more well-maintained and sophisticated software like JASMIN. In order to suite the various design purpose of OMARE (AMR, parallelization etc.), we chose JASMIN in spite of certain limitations such as its software release status quo. One key factor we weighed in for the decision was that, currently there exists the practice of developing GFD models with commercial (or closed-source) software in GMD journal, or even cases with non-disclosed model code. As pointed out by the CE, this is not an ideal scenario, and we totally agree. Our consideration is that it may be worthy for the modelers (of ocean science or other fields) to explore the possibilities of using third-party middleware software, with JASMIN as the example here. Actually the results we attained provide us (or maybe other model developers as well) the further motivation of seeking for or even developing better infrastructure and tools for GFD in the future. Regarding the CE’s suggestion on avoiding the use of this type of software for further study, we will definitely consider it seriously in our future work.

Kind regards,

Shiming Xu and Hengbin An, on behalf of all authors