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Ocean Science Discussions

Interactive comment on "Simulations of ARGO profilers and of surface floating objects: applications in MFSTEP" *by* C. Pizzigalli and V. Rupolo

Anonymous Referee #1

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First of all, I have to say that the review procesure adopted by this journal is very unusual, namely, it is not designed to obtain the best feedback from the reviewers to the authors.

The manuscript in question is pretty much a soup of a lot of things. First of all, it concerns ARGO drifters, which are primarily designed for sampling of hydrography, for which they are fine. But if one wants to know something about dispersion, their up and down sampling strategy (Fig. 1) can drive one crazy. Some scientists do not want to have anything to do with that (like myself) given other substanstial issues that needs to be understood about Lagrangian dynamics, but others are coragous to attack it straight

and play endless games with these.

Second, one can release a huge number of drifters in models and go about interpreting them. The accuracy of numerical simulations is then a function of the Eulerian model accuracy. Even in a super-well validated numerical model, Lagrangian paths are tough to get right. This is because all errors, namely errors due to forcing functions, missing model dynamics and model resolution, all gang up and accumulate as errors in dispersion prediction. Again, some people would hesitate with these doubts, and others will go right ahead.

Third, one can go ahead and do a huge number of statistics etc based on these results. The authors have even included things about wars in the Middle East (Fig. 8) and samething about fish larvae. Nobody knows if these results are right or wrong or even sensible. Obviously, the authors are not concerned.

This is all very interesting, light and probably of interest to those in operational programs. Personally, I do not find it very instructive. What have I learned after reading this manuascript? I can't tell...

In summary, I have a philosophical issue with such approaches. It could be a matter of taste. If this journal publishes such studies, I suggest to go ahead - I can provide no detailed comments. If this paper was submitted to the usual JPO, JGR, JTech, Ocean Modelling etc, I would have had pretty substantial criticism.

Interactive comment on Ocean Sci. Discuss., 3, 1747, 2006.

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