

Interactive comment on “Variational assimilation of Lagrangian trajectories in the Mediterranean ocean Forecasting System” by J. A. U. Nilsson et al.

Anonymous Referee #2

Received and published: 19 January 2012

I recommend this manuscript for publication with only some minor improvements, which are mainly how the paper is presented.

1) The OGCM is very shortly described with a view references instead. Could the authors write 5-10 sentences describing the basics. Now we do not know if it is a local home made OGCM or a part of the big model families such as MOM, NEMO, MITgcm, etc.

2) The same goes for the particle trajectory model. Are the drifter positions forecast run within the OGCM on-line or off-line?

3) In section 3.1 it says that the SVPs have a drogue centred at 15 meters. But the
C933

drogue is situated between 12 and 18 m. Would it not be more accurate for this reason to calculate the average velocity between 12 and 18 meters. If you have vertical levels that are 3 metre thick then you will have to use the average of layer 5 and 6.

4) P 2512. line 10: "suble" ?

5) For what reason have you applied different time filters on model data and observation data?

6) The use of the term Lagrangian should only be used for 3D. Here the flow is constricted to 2D and hence not free to advect in a Lagrangian sense. Semi-Lagrangian or quasi-lagrangian might be better but perhaps confusing do to numerical schemes with the same name.

Interactive comment on Ocean Sci. Discuss., 8, 2503, 2011.