



Evaluating CMEMS forecast model products in the Alborán Sea using altimetry, an eddy tracker, and multiplatform in situ data

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Improvements in forecast modelling products require ongoing feedback from users to providers. Here, using gridded altimetric sea surface height as a reference, we assess three such products from CMEMS that cover the western Mediterranean for the period 2013-2016. We report on the mesoscale content of these operational models using standard statistical analysis and a robust eddy tracking tool that uses sea surface height as input. Properties including eddy position, polarity, radius and amplitude are produced for each product. The models that include data assimilation approximate most closely the eddy distributions observed with altimetry. Knowledge of eddy location enables construction of 2D and 3D eddy composites of model prognostic variables such as temperature and salinity. 3D eddy composites in the anticyclonic gyres of the Alboran Sea illustrate the strong fronts that are characteristic of this region. They also give clues about the impacts of inclusion of data assimilation and tides in the model configurations. This study is a contribution to the MedSUB project, funded by the Copernicus Marine Service within the Service Evolution 21-SE-CALL1.