

Assessing ocean observation impacts through the SynObs multi-system observing system experiments

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Abstract

The UN Ocean Decade Project SynObs is currently implementing its flagship Observing System Experiments (OSEs), which are a coordinated set of observation withholding experiments using different ocean forecasting and seasonal prediction systems. The OSEs allow us to evaluate the impact and synergy of different observation types in ocean forecasting systems. By using a coordinated multi-system set of experiments, the impact of observations on different systems can be fairly compared and we are able to draw more robust conclusions on observation impacts. The results from the study will help to inform priorities for the future of the observing network but also highlight the deficiencies in our assimilation methods and drive improvements in the way observations are assimilated in our systems.

We will provide an overview of the SynObs OSEs and a description of the open access SynObs database. We will highlight some key results from the OSEs for both the Met Office system and from the multi-system ensemble. We will also summarise the outcomes of the recent SynObs and Ocean Observing Co-design (an UN Ocean Decade Program) joint workshop.