

Dynamic Integration of Observation Data using Data Assimilation

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Data assimilation is a technique to produce the realistic data set with dynamical consistency by combining a numerical model and observation data. Data assimilation technique has been developed in the context of the initialization problem for the numerical weather prediction. To utilize the advantage of data assimilation, a reanalysis data set or an integrated data set are commonly used in the meteorology and physical oceanography. The reanalysis data are gridded data set by interpolation of several observational data on the numerical model, and suitable for physical analysis.

In this presentation, the advantage of the reanalysis data set are shown which is produced by the data assimilation system using ocean general circulation model. In addition, through the application of the reanalysis data for the ocean bio-geochemical process, the physical consistency of the reanalysis data set and data assimilation system is discussed.