10 years of ocean data assimilation and prediction at ECCC

The advances and refinement of numerical weather prediction systems requires a better description of interactions across the air-ice-ocean interface. The need of a fully integrated environmental systems composed of atmosphere, ice, ocean and wave modeling and analysis has been addressed in part through a government initiative called the Canadian Operational Network of Coupled Environmental PredicTion Systems (CONCEPTS), among Environment and Climate Change Canada, Fisheries and Ocean Canada and the Department of National Defence. In 2014 the first Global Ice Ocean Prediction System (GIOPS) has been implemented in the operational cycle at ECCC as part of CONCEPTS. The development was made through a partnership with Mercator Ocean International who provided the ocean data assimilation code and assistance with the system implementation. Three years later the first coupled atmosphere-ocean-ice forecasting system was providing 10-day forecasts with improved representation of air–sea interactions especially in tro

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