Skill Assessments of the Navy Coastal Ocean Model (NCOM) at the Naval Oceanographic Office

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The U.S. Naval Oceanographic Office (NAVOCEANO) maintains a wealth of oceanographic models that spans global to riverine domains. Herein, we will discuss the Navy Coastal Ocean Model (NCOM), which was developed at the Naval Research Laboratory (NRL) and is operational in global and regional scales. Currently, NAVOCEANO is establishing a series of regional NCOM domains that produce 72-hour forecasts. NCOM assimilates near-real-time observational data from multiple sources including satellites (temperature and elevation), ships, profiling floats, and gliders to provide corrections to the model's initial field, thus improving the NCOM's nowcast capability. Our objectives are to ensure that the models are properly using this assimilated data to depict a realistic forecasted ocean before being declared operational for U.S. Navy applications and to guide our ocean forecasters with indications of the model's overall skills and tendencies as they perform daily evaluations of the model forecast. In particular, NAVOCEANO is implementing a 3-km resolution U.S. East Coast NCOM in early 2009. This presentation will discuss the process to becoming operational and reveal our findings on the strengths and weaknesses for this region.