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# Tests of hybrid EnKF-Variational Data Assimilation capabilities using JEDI with NOAA's Next Generation Regional High Resolution NWP System

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## Abstract

The JEDI (Joint Effort for Data assimilation Integration) system is the next generation data assimilation framework planned to underpin the NCEP production suite and is developed following the principles of object-oriented design. At NCEP's Environmental Modeling Center, the hybrid EnKF and Variational Applications of JEDI on regional domains has been tested and evaluated using various configurations in comparison with the current operational data assimilation framework (Gridpoint Statistical Interpolation; GSI) to prepare for its future role in NOAA's Next Generation Regional High Resolution NWP System - the Rapid Refresh Forecast System. The evaluation of JEDI in comparison to GSI will focus on the performance and analysis characteristics of the hybrid EnVar algorithms of both systems and provide helpful insight toward the ongoing JEDI agile development process.

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