

## Recent Observing System Simulation Experiments at the NASA DAO

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**Abstract:**      Since the advent of meteorological satellites in the 1960's, numerous experiments have been conducted in order to evaluate the impact of these and other data on atmospheric analysis and prediction. Such studies have included both OSE's (Observing System Experiments) and OSSE's (Observing System Simulation Experiments). The OSE's were conducted to evaluate the impact of specific observations or classes of observations on analyses and forecasts. Such experiments have been performed for selected types of conventional data and for various satellite data sets as they became available. (See for example the 1989 ECMWF/EUMETSAT workshop proceedings on "The use of satellite data in operational numerical weather prediction" and the references contained therein.) The OSSE's were conducted to evaluate the potential for future observing systems to improve Numerical Weather Prediction (NWP) and to plan for the Global Weather Experiment and more recently for EOS. In addition, OSSE's have been run to evaluate trade-offs in the design of observing systems and observing networks, and to test new methodology for data assimilation.

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