



OSSE impact analysis for the Hurricane Imaging Radiometer

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The Hurricane Imaging Radiometer (HIRAD) is a new airborne microwave remote sensor for hurricane observations that is currently under development by NASA Marshall Space Flight Center, NOAA Hurricane Research Division, the University of Central Florida and the University of Michigan. This paper will describe a set of Observing System Simulation Experiments (OSSEs) in which measurements from the new instrument as well as those from existing instruments (air, surface, and space-based) are simulated from the output of a detailed numerical model, and those results are used to construct H*Wind analyses. H*Winds, a product of the Hurricane Research Division of NOAA's Atlantic Oceanographic and Meteorological Laboratory, brings together a variety of relevant observations into an objective analysis of the distribution of wind speeds in a tropical cyclone. This product is designed to improve understanding of the extent and strength of the wind field, and to improve the assessment of hurricane intensity. HIRAD's impact on H*Wind analyses will be evaluated for two scenarios: (1) adding it to the full suite of current measurements; and (2) using it as a replacement for some of the instruments.