



NOAA's climate and weather supercomputers

After a full year of operation, NOAA's newest IBM weather and climate supercomputers are set to increase the computational power behind the Nation's climate and weather forecasts by 320 percent. The "supers" process 14 trillion calculations per second at peak performance and ingest more than 240 million global observations daily.

Ranked 36th and 37th on the Top 500 list of the world's fastest computers, the supercomputers enable the NOAA National Weather Service to deliver more products with greater accuracy, at shorter lead times. Their potential to analyze more data at faster speed than could their predecessors is expected to improve significantly the modeling of hurricane intensity, thus allowing better forecasting of such events.

NOAA's super IBMs will also process data from six COSMIC (Constellation Observing System for Meteorology, Ionosphere and Climate) satellites launched in 2006 to provide NOAA National Weather Service forecasters with better understanding of jet streams and related storm systems—both of which are key for the early prediction of storms such as those that affected Denver and the Pacific Northwest in December 2006 and January 2007.

"Better physics, better models, better data, and faster and more powerful supercomputing are the foundation for making better weather and climate forecasts," said retired Navy Vice Adm. Conrad C. Lautenbacher, Ph.D., Undersecretary of Com-

merce for Oceans and Atmosphere and NOAA administrator. NOAA's partnership with IBM is a great case study of the public and private sectors working together to save lives with better science.

"Charged with the vital mission of weather forecasting, NOAA approaches the task with skill, dedication and creativity," said David Turek, vice president of deep computing for IBM. "The IBM systems will serve as a powerful tool in NOAA's arsenal, helping meteorologists and scientists improve forecasts for the protection of life and property and the enhancement of our national economy." [Based on www.noaa.gov; source of images: NOAA]

