Computer Simulations Illustrate Scope of Japanese Disaster

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HPC Wire (03/16/11) Michael Feldman

Computer simulation technology has aided in the tracking and analysis of the devastation wrought by the March 11 earthquake off Japan's east coast. For example, the Method of Splitting Tsunami model for tsunami forecasting employed by the U.S. National Oceanic and Atmospheric Administration's Center for Tsunami Research and others was used to produce an animation of the quake, and the resulting tsunami's propagation across the Pacific Ocean in real time. The models projected the timing and intensity of the waves as they spread to North and South America's western coastlines. Another consequence of the quake is the emission of radioactive clouds from a Japanese nuclear power plant damaged in the catastrophe. These clouds are being tracked by the Viennese Central Institute for Meteorology and Geodynamics, which has simulated the dispersal of radioactive Iodine and Cesium as it drifts across the Pacific. Japan is unable to execute much of the disaster modeling by itself due to damage to its power plants as a result of the quake. After the stabilization of the power situation, Japanese supercomputers will likely be employed to run aftermath simulations of the tsunami and nuclear plant disasters.

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