



Large Ensemble Probabilistic Climate Forecasting Through Volunteer Computing

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Climateprediction.net (CPDN) is the world's largest climate modelling experiment, with 100,000 users distributed around the world. The current focus of the project is on a coupled-model experiment using HadCM3L, which was done to coincide with a BBC documentary on climate change called "Meltdown." Previous experiments by CPDN have used a slab ocean, results of which can be seen in the 27 January '05 Nature.

The coupled-model experiment will be 160 model-years (1920 through 2080), and will explore the parameter space of the model, as well as introduce various volcanic, solar, and greenhouse gas forcings, in addition to the dynamic ocean and sulphur cycle. Diagnostics will be sent from each user throughout the run and at model-decadal intervals; consisting of global, regional, and gridded monthly, seasonal, yearly, and decadal means. In this manner a rich data set of an ensemble of order 100,000 will be collected. Preliminary data from the large coupled-model ensemble will be shown.