climateprediction.net

Large Ensemble Probabilistic Climate Forecasting Through Volunteer Computing

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The experiments have had over 300,000 participants; typically 100,000 running at any one time for approximately 100 TeraFLOPS CPU power.

Software runs under the BOINC (Berkeley Open Infrastructure for Network Computing) framework as used by SETI@home and many others. See http://boinc.berkeley.edu for more information.

The most recent experiment, done with the cooperation of the BBC and featured in their "Meltdown" documentary, uses the HadCM3L atmosphere-ocean coupled model to run a 160-year simulation (1920-2080).

The experiment is at 3.75x2.5 degree resolution (atmos & ocean), and has thousands of parameter perturbations based on a wide range of sensitivities from the previous "slab" and sulphur-cycle experiments, as well as a range of solar, volcanic, and greenhouse gas forcings (e.g. A1B & B1 scenarios).
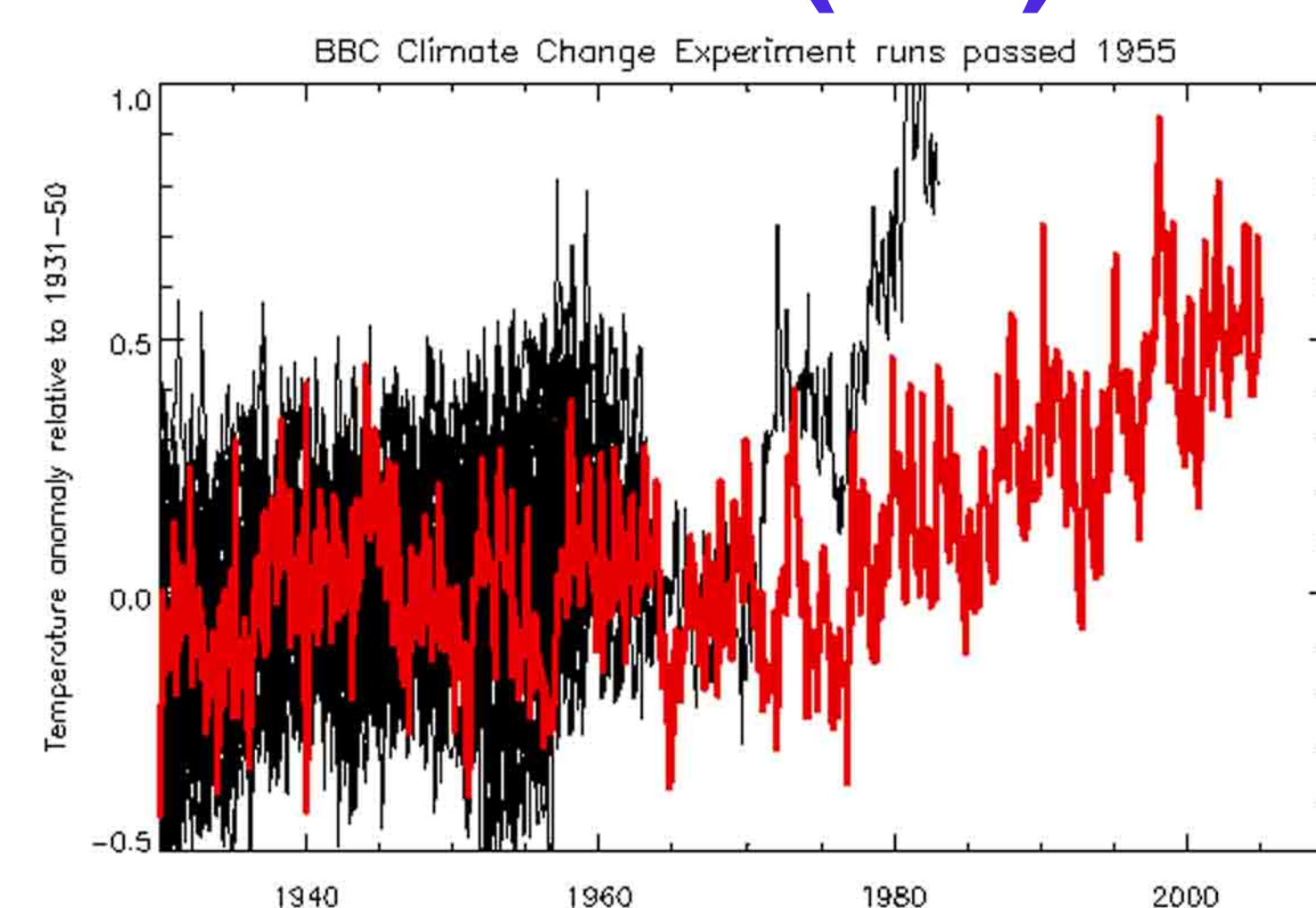
Future development will include embedding the PRECIS regional model within the HadCM3L distribution.

Work will shortly be underway for development of "grid services" for worldwide access to our database and datasets by scientists.

Participant Map (200K)
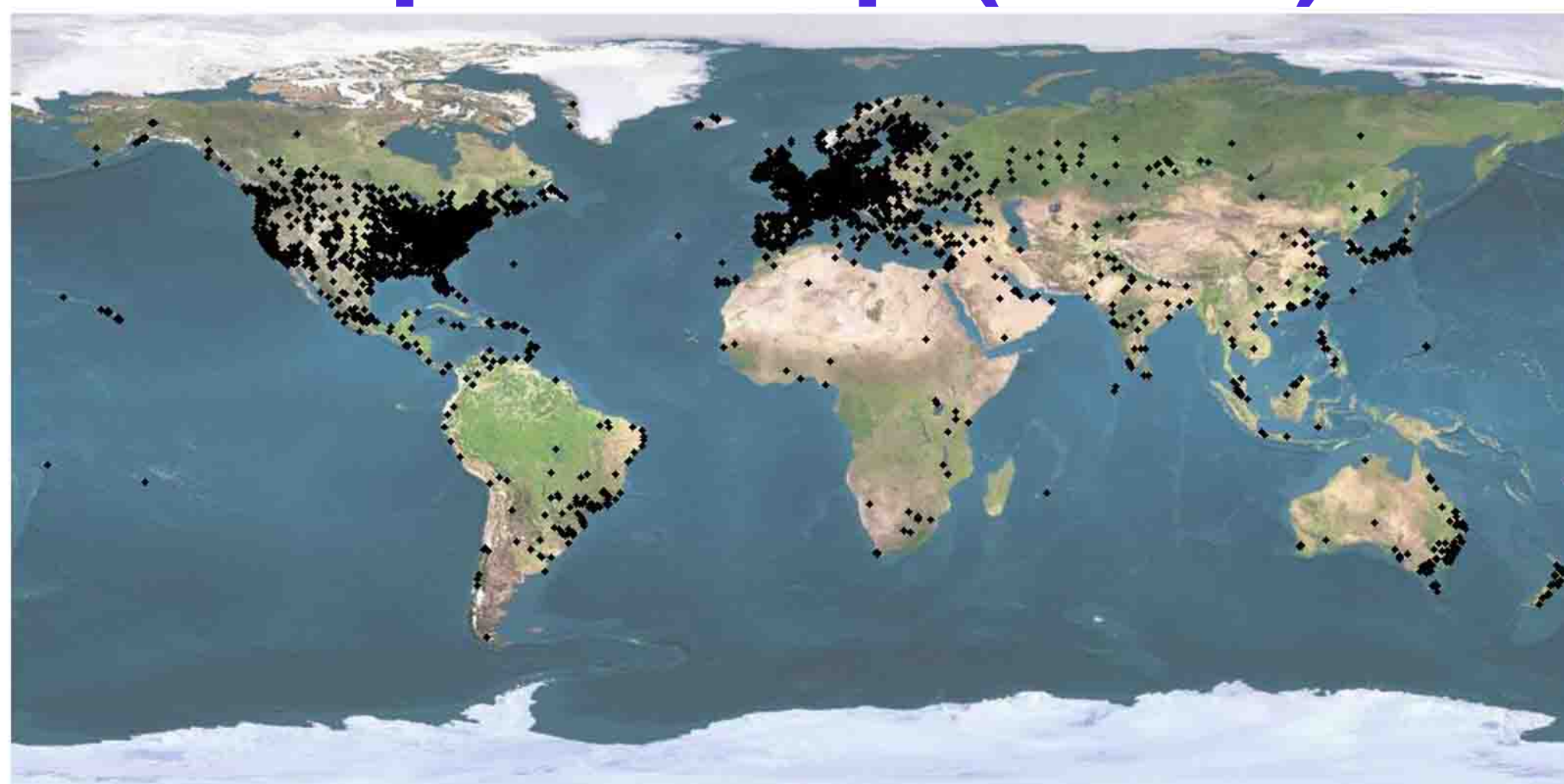
Preliminary Ensemble (3K)

Some Examples of Client Graphics and Screensavers

3D Clouds

3D Surface Temp

2D Ocean Temp

2D Pressure