The ICTS transferability Experiment; Evaluating the transferability of Regional Climate Models using CEOP data.

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As part of the ongoing effort within GEWEX to better understand and simulate regional scale water and energy cycles, the Transferability Working Group developed the Inter-CSE Transferability Study. In this study several Regional Climate Models (RCMs) have been integrated using common geographical domains centred on numerous CEOP observation sites around the globe. The RCMs used a common resolution (~0.5°), analysed lateral boundary conditions and were integrated for the period September 1999 to December 2004.

5 RCMs have submitted their results to the CEOP archive, covering 7 domains across the globe. In this presentation we directly compare results from these runs against observations from the CEOP project. We present results from a wide variety of climatic regimes across the globe to make a first estimate at the global transferability of the contributing RCMs.

For the period July-September 2001 we plot frequency histograms of daily mean near-surface temperature and precipitation in order to determine if the models accurately simulate the observed higher time frequency variability. We further present seasonal means of the diurnal cycle of near-surface temperature as a first estimate of the sub-daily representation of near surface processes in the respective RCMs.

Some conclusions regarding the transferability of the RCMs are made and directions for future work will be discussed.