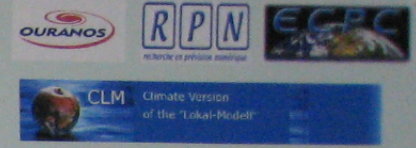


Evaluating the transferability of Regional Climate Models with CEOP data

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Overall Objectives

To understand the physical processes underpinning the global energy budget, the global water cycle, and their predictability through systematic inter-comparison of regional climate simulations on several continents and through comparison of these simulated climates with coordinated continental-scale observations and analyses.

To evaluate the performance of the physical parameterizations of Regional Climate Models (RCMs) in distinctly different climates in order to gain confidence in their performance under changed climate conditions in the future.

To contribute to the development of future (high-resolution) GCMs, we will evaluate the performance of present physical parameterisations at the probable resolution of the next generation of GCMs across a spectrum of climate conditions.

This effort will quantify the transferability of present-day RCMs.

Models

- CLM** Climate version of the "Lokalmodell", GKSS (Germany)
- RCA3** Rossby Centre (Sweden)
- RSM** Scripps Institution of Oceanography, (USA)
- GEM-LAM** RPN/MSC and UQAM, Montreal (Canada)
- MRCC** Ouranos Consortium and UQAM (Canada)

Types of Experiments

- Multiple models on multiple domains (Model choices held constant for all domains.)
- NOT
 - Single model on a single domain
 - Single model on multiple domains
 - Multiple models on a single domain

Output from RCM simulations

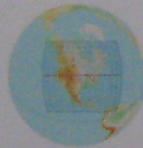
Data period: 2000/01/01 - 2004/12/31
 To be stored as: CEOP model data archive
 Entire domains:
 Area: Common geographical lat/lon grid of each region
 Output Interval: daily (mean, accumulated, min/max)
 Format: Time series in netCDF CF conventions
 Reference Sites:
 Area: Reference site grid box and adjacent ones
 Output Interval: 3h (1h, if available)

Outline

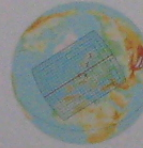
Frequency distributions of simulated and Coordinated Enhanced Observing Period (CEOP) observed screen temperature and precipitation for JAS 2001. Also shown is the mean diurnal cycle of screen temperature for JAS 2001, including estimates of: the mean (asterisk); median (center line); 25th to 75th percentile range (box); and, 5th to 95th percentile range (limits of the vertical line). Black dots indicate the 99th percentile value.



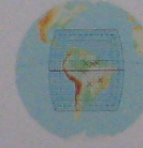
Barrow 71.3N 156.6W



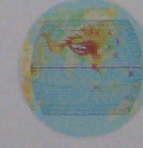
Bondville 40N 88.3W



Cabauw 51.9N 4.9E

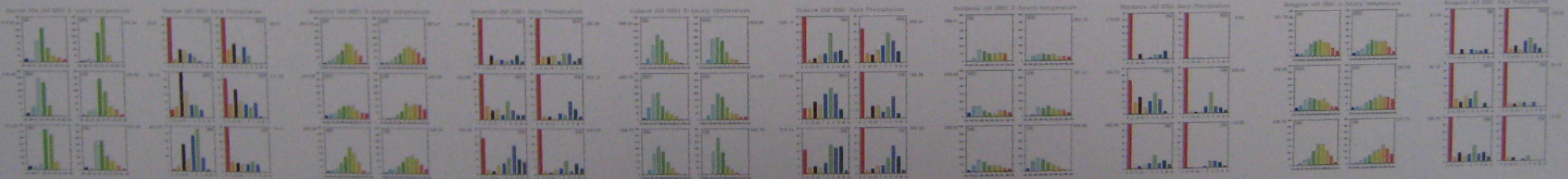


Rondonia 10.1S 61.9W



Mongolia 46.3N 107.3E

Frequency Distributions



Diurnal Cycle

