Geophysical Research Abstracts, Vol. 8, 06731, 2006
SRef-ID: 1607-7962/gra/EGU06-A-06731

Transferability Study With An Ensemble Of RCMs

B. Rockel (1) and THE ICTS TEAM (1,2,3,4,5,6,7)

1) GKSS Research Centre, Germany, (2) Scripps Intitution of Oceanography USCD, USA, (3) Iowa State University, USA, (4) Universite du Quebec, Canada, (5) Ouranos, Canada, (6) CSIRO, Australia, (7) SMHI, Sweden

Within GEWEX the CEOP (Coordinated Enhanced Observing Period) initiative has been started). A major goal of CEOP is to bring together data sets from satellite measurements, synoptic observations (at reference sites) and analyses of numerical weather prediction centers. In he Inter-CSE Transferability Study (ICTS) data from the CEOP data archives are applied to validate transferability simulations by RCMs. ICTS contributes to the transferability working group (TWG) within the GEWEX Hydrological Panel (GHP). In the ICTS regional models from different Continental Scale Experiments (CSEs) are transferred from their “home” CSE to other CSEs involved in GEWEX.

In the last EGU meeting the basic idea behind ICTS was presented. First results were shown for the CEOP phase 1 EOP-1 period (July – September 2001) for a few CSEs. At that time three institutions with four RCMs participated in the study. During the last year four additional institutions joined the ICTS group. Most of the models have already finished their simulations for most CSE regions. The time period for the RCM simulations is 2000 – 2004.

The main focus of the presentation is on the CEOP phase 1 EOP-3 and EOP-4 (October 2002 – December 2004). For this period continuous measurements from about 40 reference sites over the globe are available in high temporal resolution. Additionally the MOLTS (Model Output Location Time Series) of global analyses from most of the important weather centres round the world are used which are stored in the CEOP model data base for use of the scientific community.

The results from the RCM simulations in ICTS are compared to these data sets to assess the ability of each RCM for its application to different climate regimes on

the globe. In this presentation main emphasis is on the comparison of components of the atmospheric and surface water budget. Reference site measurements, MOLTS from global analyses, and MOLTS from RCMs are compared regarding the diurnal and annual cycle. For comparison of spatial distributions freely available global data sets from other GEWEX projects are used (e.g. precipitation from GPCP and GPCC analysis).