38) POSTER

EVALUATION OF SIMULATIONS OF Eta REGIONAL MODEL DURING WETAMC/LBA 1999: APPLICATION OF CPTEC's RPSAS

Julio Tóta 1, jtota@cptec.inpe.br
Dirceu Luiz Herdies 1, dirceu@cptec.inpe.br
Rosângela Cintra 1, rcintra@cptec.inpe.br
José Antônio Aravéquia 1, araveq@cptec.inpe.br
José Paulo Bonatti 1, bonatti@cptec.inpe.br
Clemente A. S. Tanajura 2, tanajura@cptec.inpe.br
1 Centro de Previsão de Tempo e Estudos Climáticos (CPTEC), Cach. Paulista, SP, Brazil.
2 Laboratório de Computação Científica -LNCC/CNPG, RJ, Brazil.
Words Key: Modeling, Amazon, Tropical Forest, and Precipitation
Suggested Thematic group: Measurement and modeling of precipitation

The objective of this study is to evaluate the performance of the seasonal simulation of two versions of CPTEC's Eta model using data from the WET-AMC/LBA campaign in 1999 assimilated by CPTEC RPSAS (Regional Physical-space Statitical Analysis System). As part of the investigations of the LBA experiment, upper air and surface data were measured continually during the WET-AMC/LBA campaign from January to February 1999 over part of Amazon region. Those data were used to evaluate and validate variables simulated by two versions of the CPTEC regional Eta model at a seasonal time scale. Two versions of the CPTEC regional Eta model were used. One version of the Eta Model was coupled to the OSU (Oregon State University) surface scheme, and another version was coupled with the SSiB (Simplified Simple Biosphere Model) surface scheme. The models were configured with a horizontal resolution of 40 km and 38 vertical levels over South America. A control simulation was accomplished using analyses and forecasts of the CPTEC global model. Another experimental simulation was accomplished using initial conditions and analyses generated by CPTEC's RPSAS, which assimilated the data from the WET-AMC/LBA campaign during 1999 and the Global Telecomunication data (GTS). The spatial distribution and daily variability of meteorological variables, for both simulations, were assessed against observed data. The performance and the peculiarities of the surface schemes, as well as its limitations over Amazon region were evaluated. The initialization of the model and its respective characteristics are discussed. Heterogeneity of the surface and its influence in the precipitation regimes were assessed. The data generated by the LBA Project has been extremely important in the validation and improvement of several models in Amazônia. This work mainly evaluates the use of the data available from LBA campaigns in Amazônia to improve CPTEC's regional Eta model at seasonal time scale.