



Consistency between the output of climate version of the ETA regional model and global HadAMP model which output used as a boundary condition for the ETA model in dynamical downscaling experiment.

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The regional climate model prepared from Eta WS (workstation) forecast model has been integrated over South America with the horizontal resolution of 40 km for the period of 1961-1977. The model was forced at its lateral boundaries by the outputs of HadAMP. The data of HadAMP represent the simulation of modern climate with the resolution of about 150 km. In order to prepare a climate regional model from the Eta forecast model new blocks were added and multiple modifications and corrections were made in the original model. The running of the climate Eta model was made on the supercomputer SX-6. The detailed analysis of the results of dynamical downscaling experiment includes an investigation of a consistency between the regional and AGCM models as well as of ability of the regional model to resolve important features of climate fields on the finer scale, than that resolved by AGCM. In this work we show some results of our investigation of the consistency of the output fields of the Eta model and HadAMP. We have analysed geopotential, temperature and wind fields. The integral characteristics (average over specific regions) as well as time mean fields were compared. For the evaluation of the consistency of these two models output we used Fourier analysis of time series, similarity index constituted from linear regression coefficients, time mean, and space mean bias, square error, dispersion analysis and some others characteristics. The analysis of their magnitudes demonstrates that the regional model characteristics do not have any positive or negative significant trend in relation to the global model data. Nevertheless, various regions have different degree of resemblance. The same we can say about various meteorological fields. The

systematic difference between the average values of the characteristics of global and regional models is probably related to different physical parametrisations used by the Eta and HadAMP models. From the total analysis we can affirm that in the description of climate behaviour these two models are consistent.