Session: C27 Poster: W108B

Evaluation of WRF performance in West Asian region

Nauman Khurshid Awan[†]; Andreas Gobiet
[†] Wegener Center for Climate and Global Change, Austria
Leading author: nauman.awan@edu.uni-graz.at

In this study we have applied the National Center for Environmental Prediction /National Center for Atmospheric Research next generation Weather Research and Forecasting (WRF) mesoscale model to dynamically downscale the ERA-interim re-analysis dataset of European Center for Medium-Range Weather Forecasts. The region of interest is a complex topographic region i.e., CORDEX West Asian domain. Sixteen one year long sensitivity experiments are performed in order to investigate the effect of physical parameterizations on model performance. We present here a basic and an extensive analysis. Basic analysis is primarily focusing on two meter air--temperature and precipitation while the extensive analysis focuses on analysis of Monsoon which is an important physical processes significantly effecting the climate of this region. Temperature is compared with the gridded (0.5^{o} resolution) monthly data set provided by Climatic Research Unit (CRU). Precipitation is compared with different available observed datasets, i.e. the CRU, Tropical Rainfall Measuring Mission (TRMM) (~0.25^{o} resolution), APHRODITE (~0.25^{o} resolution) dataset. The results from this study will be used to carry out long term regional climate simulations with WRF over West-Asian region in the framework of the CORDEX initiative.