Comparison of MeteoGroup MMMOS performance with the NOAA GFS-MOS

M.B.J. Berghege and R. Mureau

MeteoGroup, Netherlands (Marco.Berghege@meteogroup.com)

Model Output Statistics (MOS) is a technique used to objectively interpret numerical model output and produce site-specific guidance. MeteoGroup developed its own Multi Model (MMMOS) which is based on 4 model inputs and made for more than 20.000 meteorological stations worldwide.

The MMMOS depends on models such as EC-0.25º, EPS 0.5º, GFS 0.5º short term and GFS-2.5º long term. Based on two years of historical observations and historical model data the multi-model approach computes regression parameters for (all) weather stations and meteorological variables. The regression parameters correct for local characteristics such as seasonal climatological patterns, orography and known BIAS.

For a verification study, the accuracy of MMMOS is scrutinized for Tmin and Tmax. Also the performance is compared to the accuracy of the NOAA GFS-MOS. The study is based on data over the period of July 2011 to June 2012 and is performed for roughly 40 locations in the US. The study focused primarily on monthly average BIAS and Mean Absolute Error.