EMS Annual Meeting Abstracts
Vol. 12, EMS2015-154-2, 2015
15th EMS / 12th ECAM

On the spatial verification of FROST-2014 precipitation forecast fields

Anatoly Muraviev (1), Anastasia Bundel (1), Dmitri Kiktev (1), Nikolay Bocharnikov (2), and Tatiana Bazlova (2)
(1) Hydrometcentre of Russia/Roshydromet, Moscow, (2) Institute of Radar Meteorology, Saint-Petersburg, Russia

The Sochi-2014 Olympic Games provided a tremendous opportunity to involve up-to-date domestic and international mesoscale hydrodynamic models for forecasting weather parameters in a highly complex terrain.

Mesoscale modeling and forecasting in short and very short time intervals ahead need appropriate verification techniques that may strongly differ from standard approaches of spatial point-to-point data matching, especially in cases of highly irregular fields such as that of the precipitation intensity.

Various kinds of verification techniques were implemented for the FROST-2014 precipitation forecasts including spatial verifications against radar data.

To provide verification results relevant to the temporal and spatial resolutions of the given scales, the hourly precipitation intensity interpretation performed on the reflectivity data from several radars was used over the Games region in the 2014.01.15 - 2014.03.15 period.

Comparative precipitation forecast quality assessments on the basis of R SpatialVx functions (E. Gilleland) similar to the functions of B. Eberts's CRA and FUZZY packages are presented.