



## National Verification System of National Meteorological Center , China

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Abstract [U+FF1A] Product Quality Verification Division for official weather forecasting of China was founded in April, 2011. It is affiliated to Forecast System Laboratory (FSL), National Meteorological Center (NMC), China. There are three employees in this department. I'm one of the employees and I am in charge of Product Quality Verification Division in NMC, China. After five years of construction, an integrated realtime National Verification System of NMC, China has been established. At present, its primary roles include: 1) to verify official weather forecasting quality of NMC, China; 2) to verify the official city weather forecasting quality of Provincial Meteorological Bureau; 3) to evaluate forecasting quality for each forecasters in NMC, China.

To verify official weather forecasting quality of NMC, China, we have developed :

- Grid QPF Verification module ( including upscale )
- Grid temperature, humidity and wind forecast verification module
- Severe convective weather forecast verification module
- Typhoon forecast verification module
- Disaster forecast verification
- Disaster warning verification module
- Medium and extend period forecast verification module
- Objective elements forecast verification module
- Ensemble precipitation probabilistic forecast verification module

To verify the official city weather forecasting quality of Provincial Meteorological Bureau, we have developed :

- City elements forecast verification module
- Public heavy rain forecast verification module
- City air quality forecast verification module.

To evaluate forecasting quality for each forecasters in NMC, China, we have developed :

- Off-duty forecaster QPF practice evaluation module
- QPF evaluation module for forecasters
- Severe convective weather forecast evaluation module
- Typhoon track forecast evaluation module for forecasters
- Disaster warning evaluation module for forecasters
- Medium and extend period forecast evaluation module

The further detail and methods for verification System of NMC, China is present in this paper.

Keywords: verification, ensemble forecast, probabilistic forecast , heavy rain forecast verification, upscale, Grid QPF forecast verification