Hindcast experiment of the 50-day forecast of low frequency rainfall in the lower reaches of the Yangtze River valley from January 4-February 22, 2014

(Scientific research, for reference only)

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Hindcast experiment of the 50-day forecast of 30－50-day low-frequency rainfalls the lower reaches of the Yangtze River valley

Fig. 1 shows the 1–50-days forecast (dashed line) and observation (solid line) of the 30–50-day low-frequency rainfall of the LYRV with initial time January 3, 2014 by using the MLR/PC-CAR model (Yang, 2014), in which the forecast skill *r* (correlation coefficients between the forecast and observed low-frequency rainfall) reaches 0.95. In this prediction, MLR/PC-CAR is established with first four low-frequency principal components (PC1-PC4) of the meridional wind anomaly of 850 hPain in East Asia (90E-180°, 0 -45° E) as the factor , and based on the data from October 18,2013 to January 3,2014. It is predicted that the low frequency rainfall over LYRV on the time scale of 30-50 days is from negative into positive phase associated with a rainy periods on February 15, 2014.

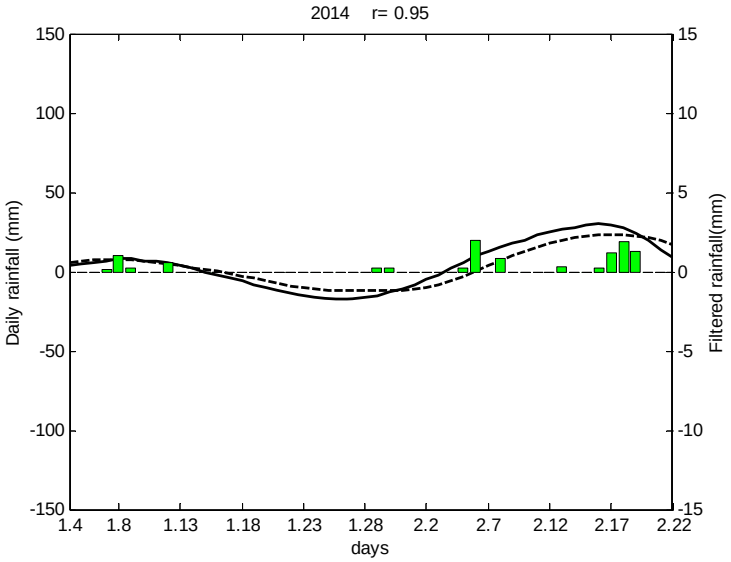

Fig. 1 Prediction (dashed line) and observation (solid line) of the 30—50-day rainfall over LYRV for the period from 1 into 50 days in the winter of 2013/2014 based on the principal components of the low frequency the meridional wind anomaly of 850 hPa of the region : 90E-180°, 0 -45° E; (unit: mm),the bar represents the time series of the daily precipitation over the lower reaches of the Yangtze River valley(unit: mm) , initial date: January 3,2014.

References

Yang Qiuming, 2014: A study on the method of the extended-range forecast for the low frequency rainfall over the lower reaches of Yangtze river valley in summer based on the 20—30-day oscillation. *Acta Meteor. Sinic*, doi：10.11676/qxxb2014.028 (in press) (in Chinese).

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