

**Hindcast experiment of the 50-day forecast of low frequency rainfall
in the lower reaches of the Yangtze River valley from March 12-April
30, 2014**

(Scientific research, for reference only)

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Hindcast experiment of the 50-day forecast of 20—30-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 20–30-day low-frequency rainfall of the lower reaches of the Yangtze River valley (LYRV) with initial time March 11, 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 0.91. In this prediction, MLR/PC-CAR is established with first four low-frequency principal components (PC1-PC4) of the meridional wind anomaly of 850 hPa in middle latitude of the Southern Hemisphere (10° — 65° S, 0° — 360°) as the factor , and based on the data from December 24,2013 to March 11,2014. It is predicted that the low frequency rainfalls over LYRV on the time scale of 20-30 days are the positive phases associated with the rainy periods on March 16-30 and April 10-22,2014.

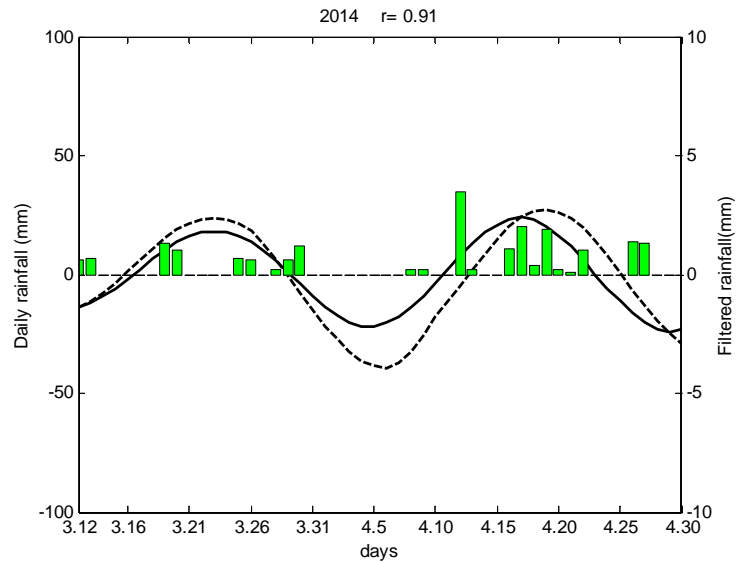


Fig. 1 Prediction (dashed line) and observation (solid line) of the 20—30-day rainfall over LYRV for the period from 1 into 50 days in the spring of 2014 based on the principal components of the low frequency the meridional wind anomaly of 850 hPa of the region : 10°—65°S, 0°—360°; (unit: mm),the bar represents the time series of the daily precipitation over LYRV(unit: mm) , initial date: March 11, 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).

http://www.cmsjournal.net/qxxb_cn/ch/reader/view_abstract.aspx?flag=1&file_no=20200274&journal_id=qxxn_cn