Verification of Recent JMA Model Predictions

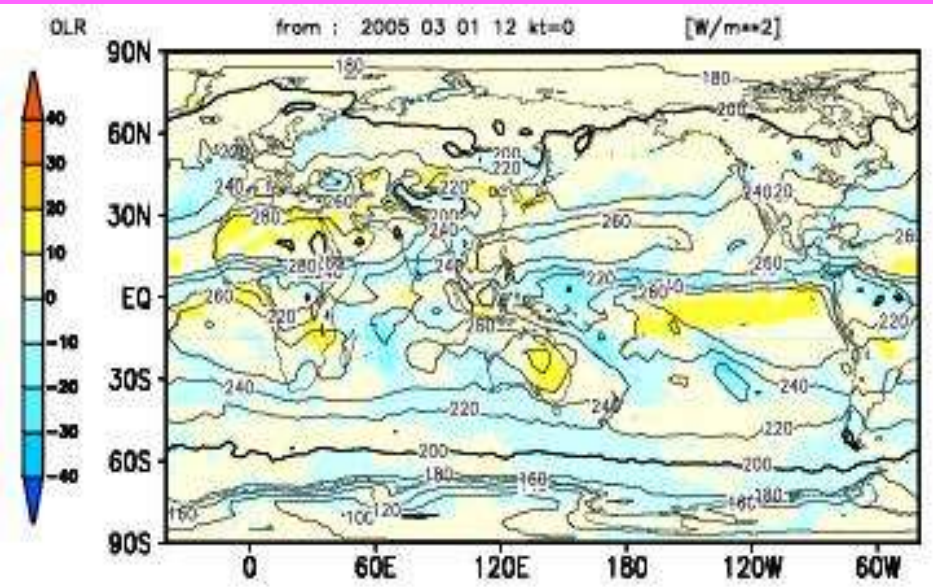
Verification target:

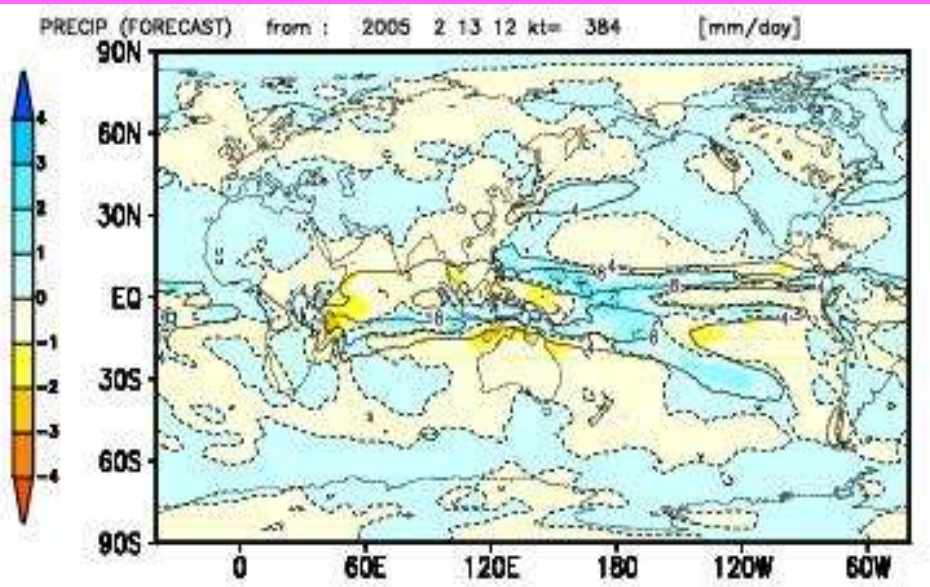
- Mar to May average with the initial at 13 Feb, 2005
- Jun to Aug average with the initial at 15 May, 2005

Circulation Diagnosis : GANAL (NPD/JMA)

Substitute of Precipitation data : OLR (NCEP)

Analysis and Prediction for MAM 2005
(Precipitation Anomaly)



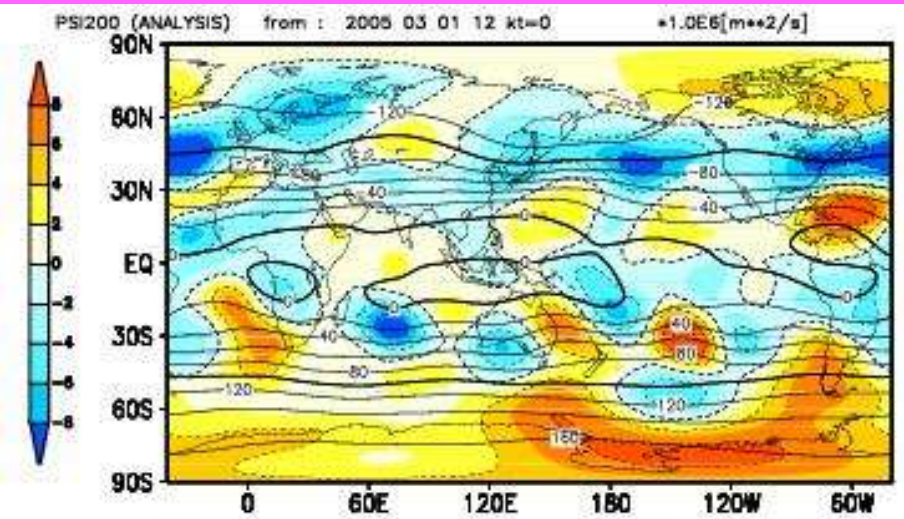


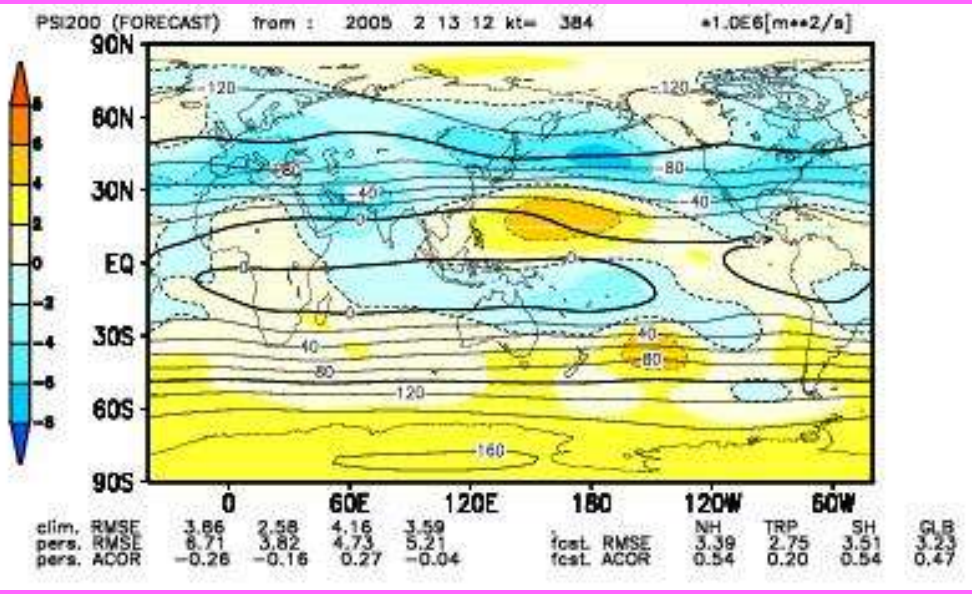
Analysis (OLR)

Prediction(ensemble mean)

Above normal precipitation over the tropical western Pacific is indicated from OLR. Those were predicted as the response to warmer SST anomalies around the equatorial dateline.

Analysis and Prediction for MAM 2005
(Streamfunction Anomaly at 200hPa)



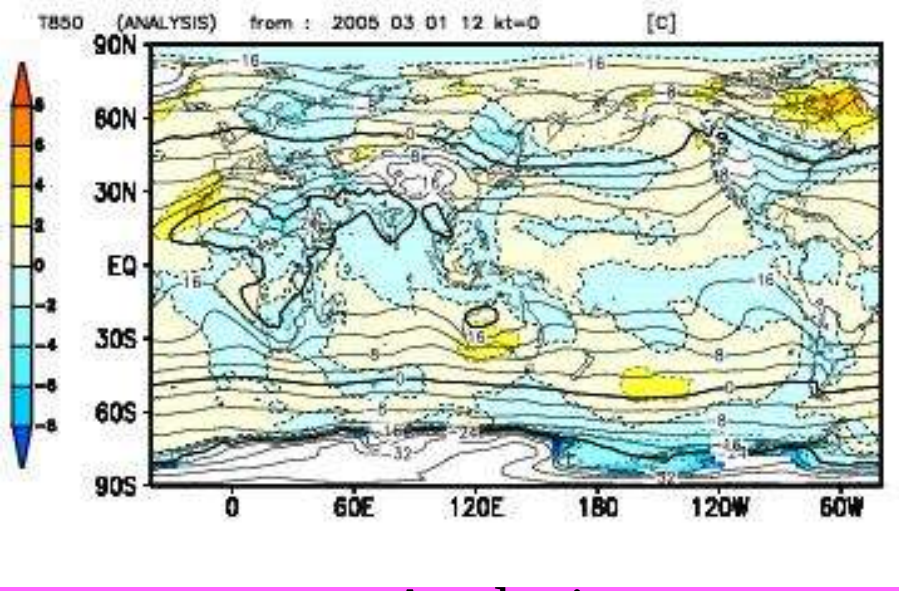


Analysis

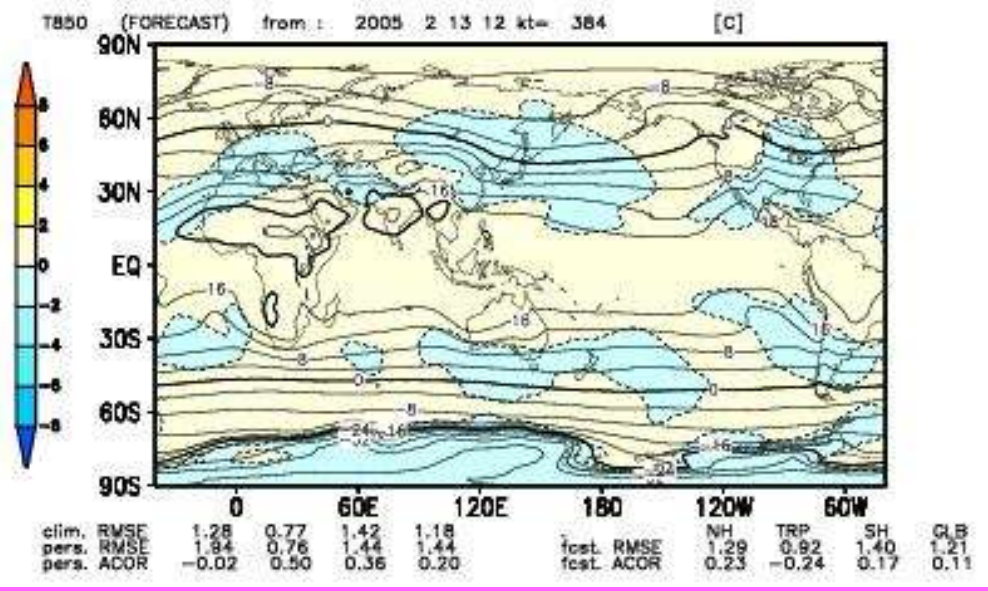
Prediction (ensemble mean)

From East Asia, the Pacific to the Atlantic, anticyclonic anomalies in the subtropics and cyclonic anomalies over the extratropics are observed at 200 hPa. Those were predicted well except for their small structures.

Analysis and Prediction for MAM 2005
(Temperature Anomaly at 850hPa)



Analysis



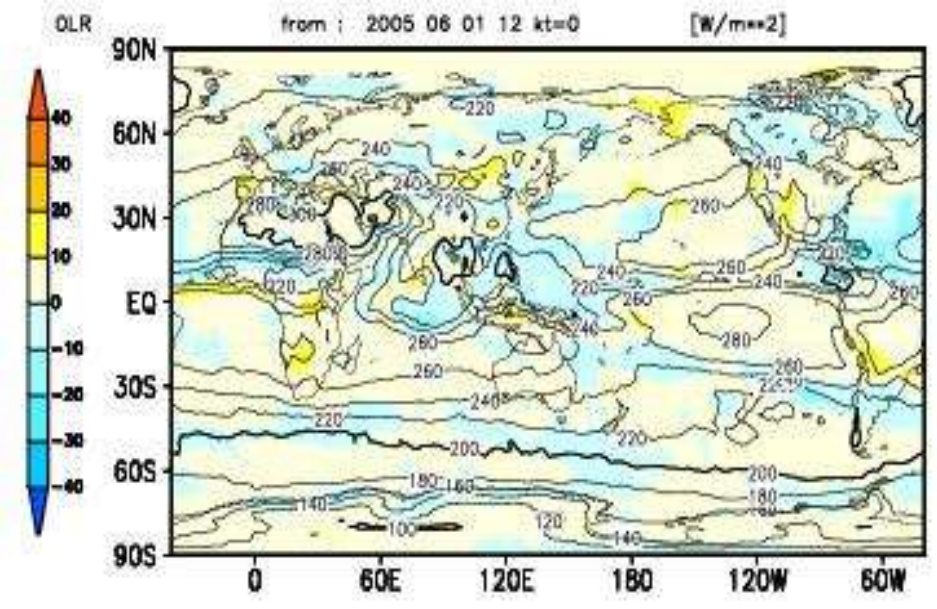
Prediction(ensemble mean)

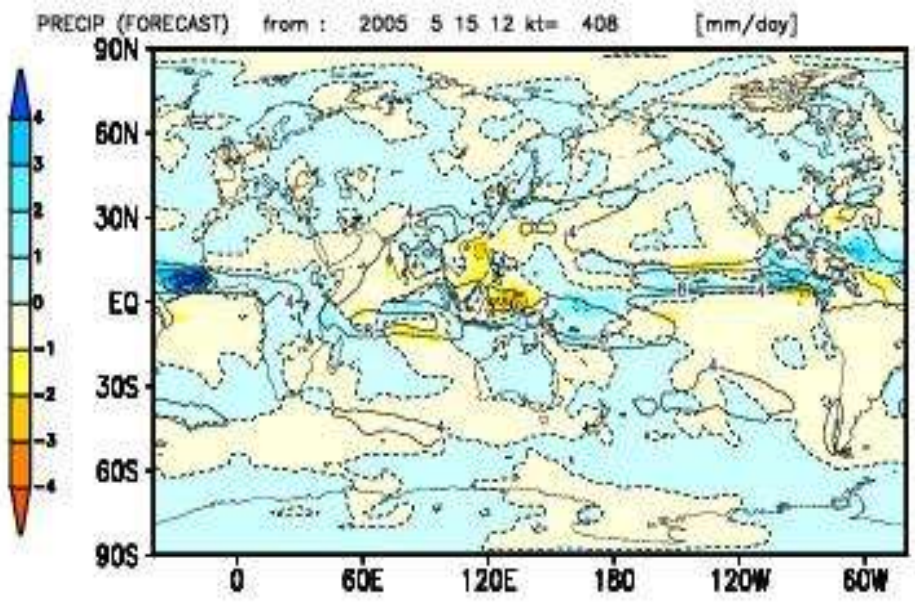
Lower temperature anomalies in East Asia and the eastern North America were predicted to some extent. Those areas correspond to the regions of northerly wind anomalies.

Model Performance of Spring 2005

- Wet anomalies over the tropical western Pacific were predicted as the response to warmer SST anomalies around the equatorial dateline.
- Cyclonic anomalies over the North Pacific and lower temperature anomalies in East Asia were also predicted.

Analysis and Prediction for JJA 2005
(Precipitation Anomaly)



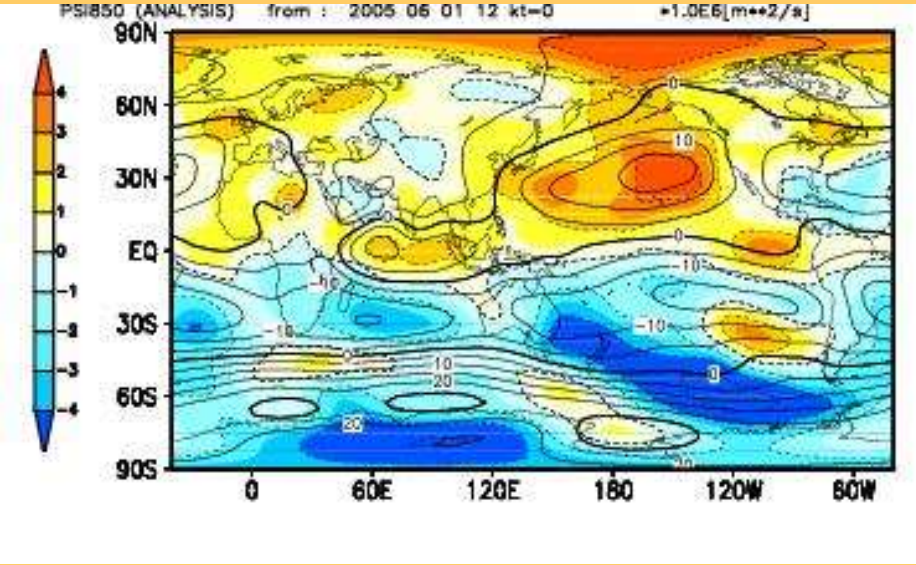


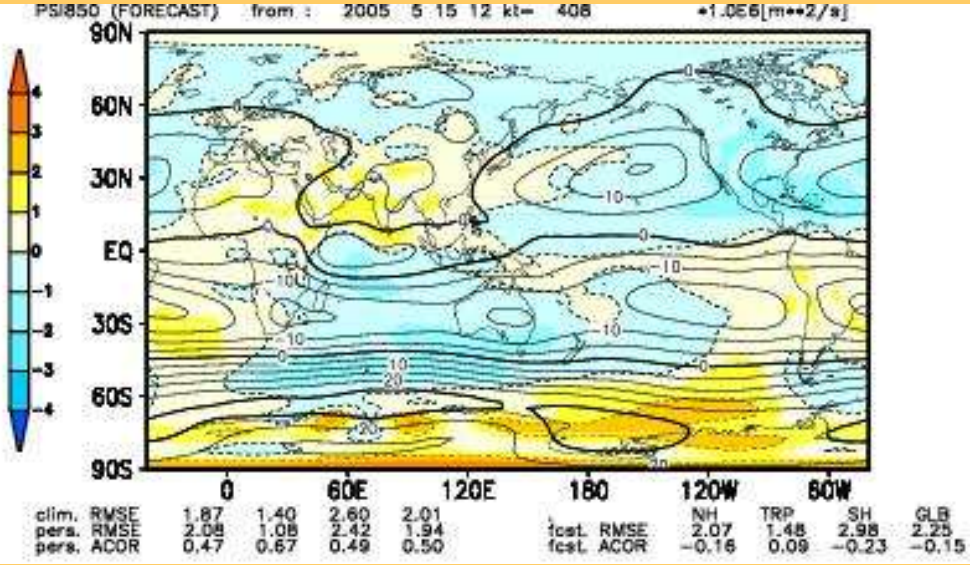
Analysis (OLR)

Prediction(ensemble mean)

Although dry anomalies were predicted over South China Sea and the maritime continents, observed OLR indicates that real precipitation over the western Pacific is above normal. Positive precipitation anomalies were predicted well in the northern tropical Atlantic.

Analysis and Prediction for JJA 2005
(Streamfunction Anomaly at 850hPa)



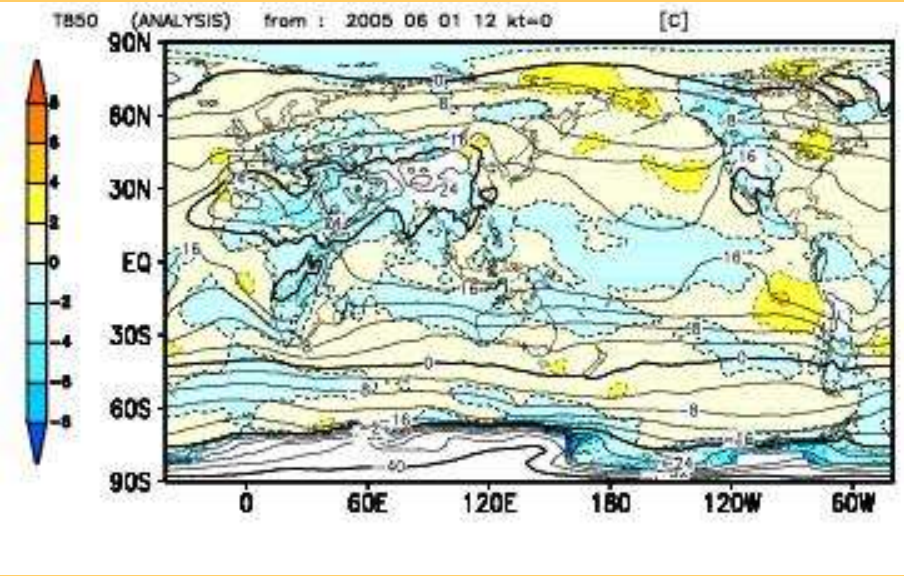


Analysis

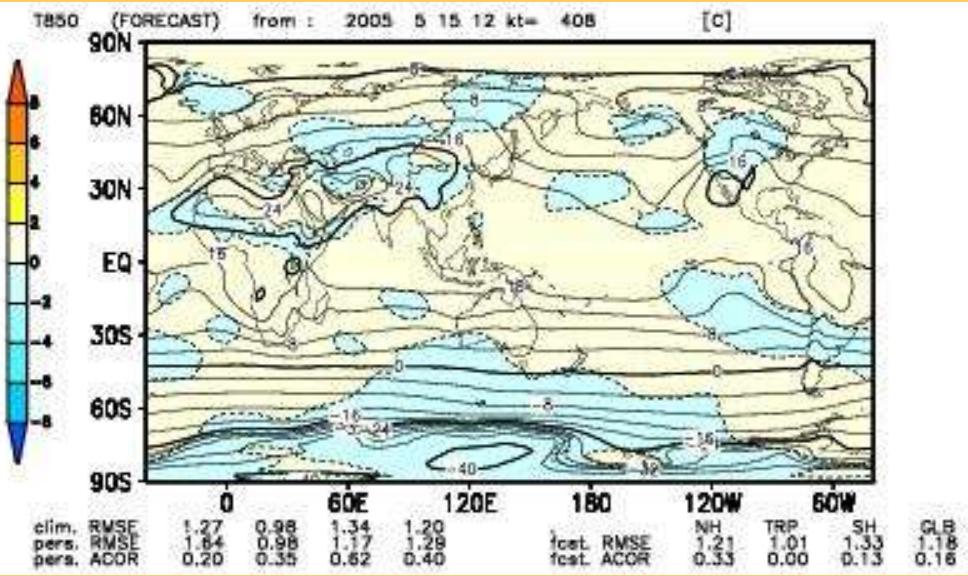
Prediction(ensemble mean)

Asian summer monsoon was not totally predicted (clear in the 200 hPa circulation) maybe due to the poor prediction for the western Pacific precipitation. Anticyclonic anomalies in South Asia and East Asia were partly captured though.

Prediction and Analysis for JJA 2005
(Temperature Anomaly at 850hPa)



Analysis



Prediction(ensemble mean)

Low anomalies over the western North America, Siberia and the central Asia can be found in the prediction. Warm anomalies were predicted over Japan and Korea regions as observed.

Model Performance of Summer 2005

- Although dry anomalies were predicted over South China Sea and the maritime continents, real precipitation over the western Pacific are above normal.

- Anticyclonic anomalies in South Asia and East Asia were partly captured. Warm anomalies were predicted over Japan and Korea regions as observed.