

Using spectral truncation to improve global model forecast

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ABSTRACT

It is realized that small waves (short wave length) incline to have short-lived, and the numerical energy cascading tends to accumulate cascading energy error to model resolvable small waves. From some experimental results show model has well performance with spectral truncation to small waves in any give time range. And ECMWF uses the same concept to truncate 2dx and 3dx waves at every time step, they show model improving forecast.

Although GSM is planned to be off duty from NCEP in 2-3 years, to test this idea of spectral truncation still requires GSM. We are testing Tq1534 to see the performance and possible for next implementation.