

Geostrophy assessment and momentum balance of the global oceans in a tide- and eddy-resolving model

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Movie S1. The movie shows the global distributions of the sea surface height (top panel), the surface zonal velocity (second panel), the zonal component of geostrophically computed velocity (third panel) and the zonal component of ageostrophic velocity (bottom panel) over 10 days (23 November-03 December 2011) from the LLC4320 simulation. Time is shown on the top panel. The ice-covered region is excluded.

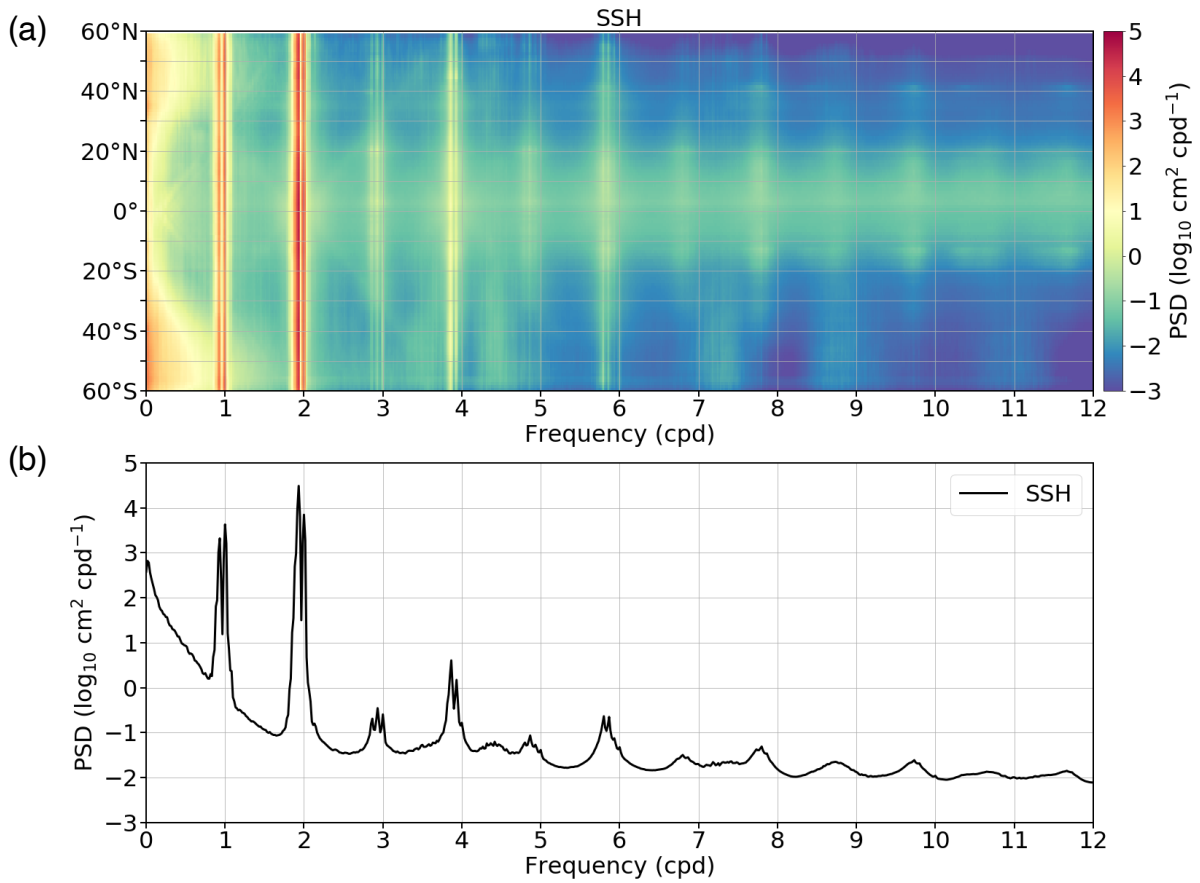


Figure S1. (a) Zonally averaged frequency spectra in 1° latitude bins from the SSH field of the LLC4320 simulation. (b) Globally averaged SSH spectra of the LLC4320 simulation.

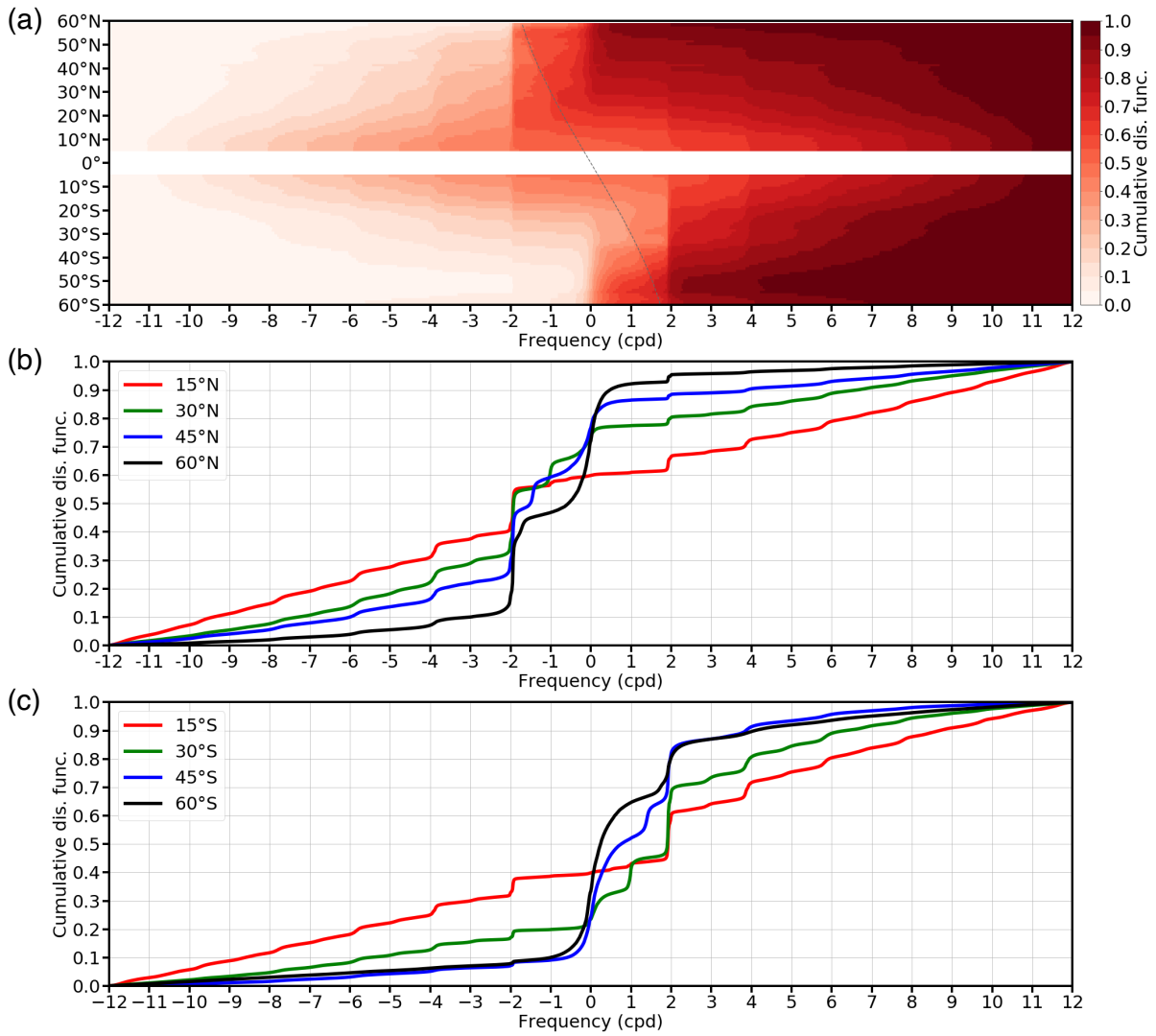


Figure S2. (a) The cumulative distribution function of the zonally averaged rotary frequency spectra of ageostrophic velocity field (Figure 4c). (b-c) The cumulative spectra in (a) are plotted every 15° between 60°S and 60°N.



Figure S3. Zonally averaged rotary frequency spectra in 1° latitude bins from (a) the linear Coriolis term, (b) the pressure gradient term, (c) the ageostrophic Coriolis term, (d) the time acceleration term, (e) the nonlinear advection term and (f) the residual term at the surface layer of the LLC4320 simulation.