Problems # 8

Due Monday, December 1, 2019

1. **Frequency-wavenumber spectra.** Download the monthly NOAA Optimum Interpolation monthly mean sea surface temperature data (available from Canvas). Compute frequency/wavenumber spectra for two slabs of data in the Pacific.

    a Along the equator: -0.5°S, from 219.5 to 269.5°E.

    b In the subtropics: -29.5°S, from 189.5 to 249.5°E.

   For both slabs, plot a time/longitude plot (known as a Hovmoller diagram) and compute frequency/wavenumber spectra using at least some amount of averaging/segmenting. Is there a difference in energy propagation between the tropics and subtropics? What evidence do your figures provide?