CCE Distinguished Seminar Series in Computational Science and Engineering

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Impact of horizontal resolution (1/12 to 1/50 degree) on Gulf Stream separation and penetration in a series of North Atlantic HYCOM numerical simulations

Abstract: The impact of horizontal resolution (1/12 to 1/50 degree) on Gulf Stream separation and penetration is analyzed in a series of identical North Atlantic HYCOM configurations. The specific questions that will be addressed are as follows: When does a solution converge or is "good enough"? Are the mesoscale and sub-mesoscale eddy activity representative of interior quasigeostrophic (QG) or surface quasigeostrophic (SQG) turbulence? How well do the simulations compare to observations? We will show that the increase in resolution (1/50 degree) does lead to a substantial improvement in the Gulf Stream representation (surface and interior) when compared to observations and the results will be discussed in terms of ageostrophic contributions and power spectra.

Thursday, Apr. 28, 2016

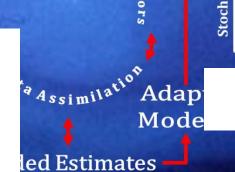
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Host: Pierre Lermusiaux

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