

# 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**

**12:00PM; Rm. 37-212**

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<http://mseas.mit.edu>

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