



Stochastic sub grid eddy parametrisation in a mid-latitude double-gyre ocean model.

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By comparing a high resolution, idealised but eddy resolving, double-gyre ocean model and a low resolution equivalent, we analyse a hierarchy of sub grid scale stochastic models. Specifically we look at the short range predictability, predictability error growth, climatology and response to forcing of the parametrised system. We find that as found in fast/slow Lorenz 95 toy models, significant improvements to the statistics of the low resolution system may be obtained using simple, easy to implement, stochastic parametrisations. We consider both spatially varying and globally uniform parametrisation. The effects of temporal correlation in the stochastic term is examined and this approach is compared with other parametrisation methods.