Adaptive mesh refinement in spectral wave modelling

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An adaptive spectral wave model has been developed that dynamically refines the spatial model grid to match the scale of variation of the wave field. The model has been applied in some test cases, including a moving tropical cyclone, and found to reproduce the results of standard Wavewatch running on a grid of uniformly high resolution, but with computation times over an order of magnitude faster.

Initial development of a model which applies adaptive mesh refinement to the spectral grid is also described.