



Nesting and coupling methods for atmospheric and oceanic models

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The use of high resolution regional models has become widespread in atmospheric and oceanic modelling. An important point, having a strong influence on the quality of the results, is the way a local model is forced at its open boundaries. Several methods are presently used in actual applications, which precise contents, theoretical justification, and practical performances are often somewhat difficult to compare precisely. In this context, our aim is to provide a tentative classification of these methods and to discuss their theoretical foundations and practical use. This will be illustrated with numerical experiments coupling a regional ocean model and a basin-scale ocean model.