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13. Abstract (Maximum 200 words). Numerical models of the North Pacific with 2 or more layers are used to investigate the dynamics of the Kuroshio/Oyashio current system east of Japan. The models have .25 degree (Lat) by .35 degree (Long) resolution for each variable and cover the Pacific north of 20 degree S. All of the models include the Sea of Japan, vertical mixing and a free surface. There are four models, reduced gravity and finite depth with realistic topography and versions with and without thermodynamics. The different models are spun up 30 or more years to statistical equilibrium and are used to illuminate the differences in the dynamics. All of the models successfully simulate the basic features of the North Pacific including the subtropical and subpolar gyres, the major current systems (Kuroshio, Oyashio, North Equatorial, Mindanao, North Equatorial Countercurrent) and associated fronts, including the subarctic and the subtropical. The models also depict the bifurcation of the Kuroshio, exhibit mesoscale flow instabilities and show differences between results when barotropic and baroclinic instability are most important,*					
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*show the role of wind forcing and the impact of seasonally varying winds on the mesoscale flow instabilities, and demonstrate a significant role for the sea of Japan in Kuroshio/Oyashio dynamics. In addition deep currents and effects of topography are demonstrated.

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