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Mini cold pool off the southern tip of India in a Hybrid Coordinate Ocean Model

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The formation of mini cold pool (MCP) off the southern tip of India during southwest monsoon period and its intrusion into the southern Bay of Bengal is simulated using a Hybrid Coordinated Ocean Model (HYCOM). The model has been validated using in situ and satellite data and simulates the surface currents, temperature and salinity patterns for the surface and subsurface realistically. The present study utilizes the model data from 1995- 2004 to study formation and dynamics of the MCP in detail. The intense cooling leading to the formation of MCP is a resultant of the wind driven upwelling. In consistence with the existing observational studies, model also shows the intrusion of the MCP into the southern Bay of Bengal along the with the summer monsoon current. The spatial and temporal evolution of the MCP for the ten years shows considerable intra-seasonal and inter annual variability.