

The Mode Water formation in the South Indian Ocean

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The low PV waters can induce Counter Currents through the baroclinic adjustment to Mode water intrusion in the subsurface. Mode Waters push up the upper thermocline and result in the density front. Since Counter Currents anchor SST fronts, they have great impacts on the air-sea interactions. Therefore, the spatial distribution of low PV pool is essential to understand the climate systems in the mid-latitude. In this presentation, we show the 3D distributions of Mode Waters in the South Indian Ocean and its T-S properties using Argo data. Also, the formation sites of Mode Waters are investigated from virtual particle tracking.

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