

Basin-scale eddy heat/salt transport pattern from Argo T/S profiles, SST, SSHA and drifters

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Using the eddy data set detected from the altimetry SSHA data and confirmed by SST and surface drifters data, we track all the Argo T/S vertical profiles falling in the eddies. The eddy-tracked T/S vertical profiles are used to estimate the eddy-induced heat and salt transport. The estimate leads to a spatial pattern of eddy heat/salt transport in the ocean. The magnitude of eddy transport shows it is comparable to the heat/salt transport by the mean flow. The study suggests the eddy resolving model is essential for the global climate model, especially in those regions with high eddy transport.