

## **On the Inter-annual variability of mixed Layer depth In the Arabian Sea during 1993 - 2010**

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The Arabian Sea experiences extremes in atmospheric forcing that lead to the considerable inter-annual variability in its physical processes. Since the climatic conditions over the Arabian Sea are highly variable, the mixed layer depth also changes annually. Hence the inter - annual variability of mixed layer depth in Arabian Sea have been examined using ARGO data and 3  $\Omega$  layer Indian Ocean model. Arabian Sea is divided into 4 regions namely southwest, southeast, central and northern Arabian Sea to study the inter - annual variations of mixed layer depth in detail. This study reveals that the inter-annual variability of the mixed layer depth is mainly forced by the fluctuations in the strength of monsoons. On the whole significant inter - annual variations are observed in southwestern, southeastern and central Arabian Sea, while northern Arabian Sea shown minimum variations.