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## Ventilation of the oxygen minimum zone in the Arabian Sea

In the Arabian Sea, at intermediate depth an open ocean oxygen minimum zone (OMZ) is predominant throughout the year. However it is shifted eastward away from the region of high biological productivity. It is still under debate which physical and biogeochemical mechanisms are causing the maintenance of the Arabian Sea OMZ.

The presented analysis improves the understanding of oxygen supply into this region. The ventilation pathways of source waters from the marginal seas and their temporal as well as spatial variability are analyzed based on reanalysis velocity data from the dynamic ocean model Hycom (Hybrid Coordinate Ocean Model). A model based simplified backward trajectory analysis on isopycnals reveals that the eastern part of the Arabian Sea OMZ is ventilated by Red Sea Water as well as Persian Gulf Water that circle clockwise the perimeter of the basin.

It is notable that there is no evidence for a more direct pathway into the interior basin. Ventilation time scales into the east exceed those into the western basin. Beside seasonal variability in the mean current location and strength, also eddy mixing plays an important role in the ventilation.

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