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Modeling the seasonal changing trends of sea water in the Ras Al Hadd

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Oceanic fronts are water regions having different characteristics compared with their surrounding waters. This tangible difference in temperature, salinity, nutrients, planktons and other physical features can be observable as well as measureable. In this research, in order to study the seasonal changing trends of physical parameters of Water Sea in the Ras Al Hadd front, the ROMS numerical model was rendered. In fronts, high speeds occur and changing these speeds is inevitable. Although fronts are usually observed like narrow strips, a wide range of turbulence happens in them. These turbulences are one of the main biological factors for aquatic animals and plants, since their effects and vertical movements make the vertical movements of particles and nutrients easier. The preliminary results revealed that the Indian Ocean's seasonal currents and winds (Manson), dependent on special atmospheric conditions, mostly happens in the Northern parts of Indian Ocean. This causes some climatic changes in Arabian and Oman Sea that produces two quite different phases. The first is seasonal summer winds or west-south seasonal currents and the second is seasonal winter winds or north-east seasonal currents. In the former, a strong northern current in Arabian Sea is apparent. This current, in east most parts in Oman, i.e. Ras Al Hadd, changes direction into Arabian Sea and makes Ras Al Hadd front.

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