

Total ozone depletion due to tropical cyclones over Indian Ocean

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We have analyzed the perturbations in the total ozone due to four severe Tropical Cyclones formed over Arabian Sea and Bay of Bengal. Total Ozone data derived from Total Ozone Mapping Spectrometer instrument aboard Earth Probe satellite was used for this study. The daily total ozone anomalies have been calculated for the life span of each tropical cyclone. These anomalies were observed local in character and moved with the tropical cyclone. Further, these anomalies have been found related to the intensification of the cyclonic system. In general, negative anomalies were observed to be more than 20 Dobson units at the time of maximum intensity of cyclones. The variations in daily total ozone anomalies, from development to intensification stage and then to decaying stage of each cyclone have brought out clearly the impact of tropical cyclone on the total ozone, which got depleted, considerably over the affected region.

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