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Ozone Variations during the development of a tropical cyclone

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The relationship between the variations of total ozone column (TOC) with the development of a tropical cyclone that occurred in the period 14 to 25 October 2008 over Indian Ocean has been studied. Synoptic analysis of the tropical cyclone throughout its live cycle is present. A simple procedure is used to illustrate the behavior of the vertical axis tilt with the development of our case study. The daily total ozone anomalies have been calculated and found related to the intensification of the cyclonic system. It was found that the steady decrease TOC before and during the growth period of the cyclone followed by a more or less increase after the dissipation of the cyclone. The obvious fall in TOC by more than 12 DU is shown at the peak intensity of the cyclone characterized by maximum high relative humidity over those regions where the cyclone has intensified. The observed variation of TOC is in accordance with the existing chemical and dynamical theories of ozone depletion also there is was observed negative correlation between ozone variation and relative humidity during injection of water vapor in tropical cyclone aloft.