

COMPARISON OF TOTAL OZONE DISTRIBUTION IN THE HIGH LATITUDES OF BOTH HEMISPHERES

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The characteristics of quasi-stationary ozone distribution in the high latitudes of Northern and Southern hemispheres are investigated.

The 8th version of TOMS satellite data are used. A visualization of the longitudinal ozone distribution variations was made using the five-month time–longitude plots for the 1979–2004 period. Then the five-month average longitudinal profiles were analyzed to determine the main characteristics of the quasi-stationary distribution of TOC at the 55-75 latitude bands. Monthly and seasonal averaging of total ozone content along latitude circle is carried out. The characteristics of obtained stationary distributions are calculated. The total ozone values wave and the first zonal wave numbers are studied. Seasonal variations of amplitude and phase values are compared for Arctic and Antarctic regions. Long-term changes of quasi-stationary wave characteristics are discussed. The values of existed trends are obtained. Similarities and differences in typical ozone distribution are considered. The influence of underlying Earth surface is considered as one of the possible causes of the differences existence.