Features of TOC inter-seasonal fluctuations at Murmansk meridian profile

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Variations of total ozone content (TOC) with time duration of 5 – 40 days at stations Apatity, Murmansk and Barentsburg in 1999 – 2001 are examined. Comparison of time series of pressure on tropopause, altitude of the 200 gPa level and temperature at this level with TOC variations was done. Auto and cross-correlation functions of the data are demonstrated. Good correlation between of chosen meteorological parameters and TOC is found. It gives evidence of strong influence of near tropopause atmospheric layers dynamics on TOC. Most probably changes in TOC can be caused by sinking and raising of atmosphere. Ozone layer located above the tropopause either drains to a trough or flows away from a crest. Physical mechanism of this situation is under discussion. Some periodical variations of TOC with about 27 days period at all stations are observed in 2000.