

# Thermodynamic Parameter Variations in the Troposphere and Stratosphere in 1979-2016

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## Abstract

© Published under licence by IOP Publishing Ltd. Changes in the air temperature, ozone mass mixing ratio, and characteristics of wave activity on 26 levels in the tropo-stratosphere during 1979-2016 are discussed. Reanalysis data ERA-Interim and indices of atmospheric circulation are used as initial data. Vertical profiles of the coefficient of slope in a linear temperature trend are built. The vertical correlations between the levels are estimated. The differences in the thermal regime and ozone mass mixing ratio in three sectors of the Northern Hemisphere: Atlantic-European, Asia-Pacific, and American are shown. A credible correlation between the wave activity in the stratosphere and the atmospheric circulation indices (AO, QBO-50) has been obtained.

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