

Analyzed Report 3

The 20th solar cycle maximum was accompanied by decreases of stratospheric planetary wave amplitudes, the 21st cycle was accompanied by increases of amplitudes. The intensity and variability of planetary waves and vortices associated with the waves determine the conditions of low-to-high latitudes ozone transport in the winter hemisphere. The planetary wave dynamics are affected by solar activity variations during solar cycles. The principal features of the thermodynamic regime of the stratosphere are governed by the development of the winter stratospheric low and the Aleutian and Atlantic heights. These are fed by the influx of the eddy energy transported into the stratosphere by the planetary waves. The ozone distributions are zonally inhomogeneous.

