The dynamics of auroral absorption parameters in the 22nd solar activity cycle

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The analysis of change of the occurrence frequency of auroral absorption and parameters of its meridional distribution during 24 hours and from a year to year by data of riometer observations from 1985 to 1995 at the Yakutsk longitude has been carried out. The geomagnetic latitude of maximum occurrence zone of auroral absorption changes in the solar activity cycle from 66.5^o to 64.4^o. The maximum shift of zone to the low latitude is observed during the years of maximum solar activity. The half-width of zone is near 8^o in the solar activity minimum and 10^o in maximum.

During all years of solar activity cycle a zone of maximum frequency of the appearance absorption shifts to the high latitudes at day hours (1000-1400LT), and to the low altitudes at evening (1800-2000LT) hours. The shift of this zone from the mean value during 24 hours is about 1^o in the years of maximum and about 3^o in the years of minimum. In all years at evening (2000-2100LT) hours the short-term extensions of a zone by $1\text{-}4^o$ is observed. The reasons of the observed experimental results are discussed.