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Variations of the 557.7 and 630 nm airglow (emitting layers height is 85-115 and 180 - 250 km accordingly) in the 23-rd solar cycle are analyzed. The experimental data of the 557.7 and 630 nm atomic oxygen emission obtained at ISTP Geophysical observatory near Irkutsk (52°N, 103°E) are used. The 557.7 nm and 630 nm emissions observational data are compared with atmospheric, solar and geophysical parameters. Generally, the 630 nm emission intensity in 23-rd solar cycle changed in a phase with a solar cycle, increasing from the period of low solar activity by the period of high solar activity. As for 557.7 nm emission, the difference of correlation coefficient between its intensity and F10.7 solar radio flux in various phases of 23-d solar cycle was marked. During the increasing and maximum phases the negative correlation between monthly mean 557.7 nm emission intensity and the F10.7 was revealed. Broken phase synchronism of 557.7 nm emission behaviour and F10.7 during the growth and maximum phase of solar cycle is preliminary interpreted by the atmospheric dynamics of the lower atmospheric layers or by upward propagating long-term disturbances from below.

Also the results received in the 18th-22d solar cycles at the other mid-latitude stations are analyzed. It is revealed, that the features of long-term variations of 557.7 nm intensity in the 23-rd and 20-th solar cycles are the most similar.