ON CONNECTION BETWEEN VARIATIONS OF OZONE AND POLAR STRATOSPHERIC CLOUDS OVER THE KOLA PENINSULA (THE RESULTS OF MICROWAVE MEASUREMENTS)

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The results of microwave observations of an ozone at altitudes more than 20 km in polar (Apatity) and middle (Nizhny Novgorod) latitude in the winter 1999/2000 under the program SOLVE are presented. The significant variations of an ozone in the middle and upper stratosphere are detected. The variations of the ozone content are compared to the PQAM III satellite data of polar stratospheric clouds (PSC). The device POAM has registered occurrence of widespread PSC on the 25, 26 and January 27 at altitudes more than 20 km above Apatity (http: // opt.nlr.navy.mil/POAM /) [1]. From the results of microwave measurements it is followed that the ozone mean density at altitude about of 25 km for the same time has made $(2.27 \pm 0.20)\cdot 10^{12}$ cm^{-3}. The ozone density at this level from reference model (at 68N) for January is equal to $3.30\cdot 10^{12}$ cm^{-3} [2]. On modern view point the presence of this clouds can be additional source of chlorine, which is very strong catalyst in reactions of the ozone destruction on the levels of the formation of PSC from 15 km up to 30 km.

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