

Global distribution of ozone isotope in the stratosphere

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The global distribution of isotopic composition of atmospheric ozone has been studied by SubMillimeter Radiometer (SMR) onboard the Odin satellite with retrievals being performed by the Optimal Estimation Method. Odin/SMR launched in February 2001, employs 4 tunable single-sideband Schottky-diode heterodyne receivers in the 485-580GHz spectral range. Vertical profiles for the main isotopomer ($^{16}\text{O}^{16}\text{O}^{16}\text{O}$) as well as the profiles of the minor isotopomers ($^{16}\text{O}^{16}\text{O}^{18}\text{O}$, $^{16}\text{O}^{18}\text{O}^{16}\text{O}$) were then retrieved for day and night. The results should therefore provide useful data for validating proposed mechanisms for the isotopic enrichments in atmospheric ozone in the middle atmosphere.