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Ozone apparent abundances as seen by the OMEGA/MEX

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Although ozone is one of the minor constituents of the Martian atmosphere, its study is crucial to understand the photochemistry of the planet. In this work we report about the O_3 apparent abundances as derived from the O_2emission observed at 1.27 micron in the OMEGA data. The O_2 emission on the day side is produced as a result of photolysis of O_3, 90 % of ozone molecules produce oxygen at a1Δg state; then there are two ways of de-exitation of the O_2 : by the emission (98% of emission in 1.27 micron band and the rest in 1.58 micron) or by collisions with the CO_2 molecules at altitudes lower than 20 km. OMEGA nadir observations are used to study the seasonal and latitudinal behavior of the ozone apparent abundances. High concentrations of O_3 are observed in the Northern hemisphere between latitudes 50˚ and 90˚ around Ls 0˚ (in spring) and less pronounced maximum 160˚ - 180˚ (in autumn); in the Southern hemisphere around Ls 130˚ and 200˚ (spring), and probably at Ls around 0˚. Ozone is present also in the equatorial region starting from Ls 20˚ at the second Martian year of the mission. Limb observations are used to sound the ozone profiles in the atmosphere.