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Observation of new ozone transitions in 5 μm region from FTIR solar spectra: Link with S&MPO databank

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A set of unassigned transitions has been observed in the 5 μm range in balloon borne high resolution (0.003 cm^{-1}) solar spectra .These relatively intense lines, accounting for altitude dependence, were supposed to be due to ozone absorption, but they were not included in the most common used HITRAN or GEISA databases.

A long term study of spectroscopic properties, aimed at developing the specially devoted S &MPO databank (Spectral and Molecular Properties of Ozone http://ozone.univ-reims.fr or http://ozone.iao.ru) has allowed to undoubtedly assign these lines: there are due to extremely strong accidental rovibrational resonances.

Specific answers as well as very good agreement between observed and calculated spectra will be reported.