

HIGH-RESOLUTION FOURIER TRANSFORM SPECTRA OF NO₂ AND O₃ IN THE 12500-40000 CM⁻¹ RANGE
AT ATMOSPHERIC TEMPERATURES AND PRESSURES

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Spectra of NO₂ and O₃ in the 12500–40000 cm⁻¹ range were recorded with resolutions up to 0.5 cm⁻¹ using a Fourier Transform Spectrometer BRUKER IFS 120 HR. As the spectra are important reference data for atmospheric remote sensing, for each of the gases, spectra were recorded at temperatures between 203 and 293 K and at total pressures (with N₂) of 100 and 1000 mbar. The major advantage of the FTS is the high accuracy of the wavenumber calibration, which is essential for the determination of atmospheric concentrations of O₃, NO₂, and other trace gases from UV-visible spectra of the earth's atmosphere.