

THE PURE ROTATIONAL FIR SPECTRA OF THE HO₂ RADICAL MEASURED
BY FOURIER TRANSFORM SPECTROSCOPY

ALBRECHT VON BARGEN, MANFRED BIRK and GEORG WAGNER, *DLR - Deutsche
Forschungsanstalt für Luft- und Raumfahrt e.V., Institut für Optoelektronik, Postfach 1116, D-82230
Weßling, Germany.*

Covering the spectral range 30 – 200 cm⁻¹, spectra of the HO₂ radical have been recorded with a Fourier transform spectrometer (Bruker IFS 120HR) in combination with a White type absorption cell (absorption path length 72 m) at high resolution (1/MOPD = 0.0017 cm⁻¹). Because of the fast self-disproportion of HO₂ the measurements were performed under flow conditions.

A line fitting program (INTBAT) was used to obtain the line positions and line strengths of more than 250 b-type transitions up to N'' = 22 and K'' = 4. Utilizing an A-reduced Hamiltonian in a parity conserving basis set the molecular parameters were determined by means of a non linear least squares fitting program. The results of the fit and a discussion of the relative line strengths will be presented.

Time required: 15 min

Session in which paper is recommended for presentation: 4,11