

MICROWAVE SPECTRA OF THE O₂-HF COMPLEX

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Microwave spectra have been recorded for the complex O₂-HF. Spectra were readily located based on results of previous infrared work.^a but yield spectroscopic constants of somewhat higher accuracy. The observed transitions show well resolved structure arising from the ¹H and ¹⁹F nuclear spins. Magnetic super-hyperfine structure due to the interaction of the proton and fluorine nuclei with the spin magnetic moment of O₂ appear to be of comparable magnitude to the HF spin-spin interaction in at least some of the observed transitions. Progress on the simultaneous analysis of these hyperfine and super-hyperfine effects will be reported.

^aW. A. Fawzy, C. M. Lovejoy, D. J. Nesbitt, and J. T. Hougen *J. Chem. Phys.* **117**(2), 693 (2002).