

A STUDY OF THE OVERTONE BANDS OF HALOGEN OXIDE MOLECULES BY LMR.

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The 2-0 overtone bands of the FO and BrO radicals in their  $\tilde{X}^2\Pi_{3/2}$  electronic ground state have been studied by CO Laser Magnetic Resonance. A number of vibrational, rotational, centrifugal distortion, spin-orbit, hyperfine, lambda-doubling and Zeeman parameters have been determined. The band origins and the anharmonicity constants  $\omega_e x_e$  ( $\text{cm}^{-1}$ ) are the following:

FO	$\nu_{2-0} = 2045.47377(27)$	$\omega_e x_e = 10.22713(10)$
$^{79}\text{BrO}$	$\nu_{2-0} = 1437.4786(18)$	$\omega_e x_e = 4.67583(43)$
$^{81}\text{BrO}$	$\nu_{2-0} = 1434.5422(19)$	$\omega_e x_e = 4.65703(39)$