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 $\omega_e x_e$ (cm$^{-1}$) are the following:

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