LASER SPECTROSCOPY OF THE $\tilde{A}^2\Pi - \tilde{X}^2\Sigma^+$ TRANSITION OF BaOH

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The $\tilde{A}^2\Pi - \tilde{X}^2\Sigma^+$ transition of BaOH has been rotationally analyzed using the technique of high resolution laser excitation spectroscopy. The BaOH molecules were synthesized in a Broida-type oven and a single mode Ti:Sapphire laser was used to record the spectra. Two vibronic bands ($001 - 001$ and $001 - 000$) in addition to the $000 - 000$ band have also been observed and assigned. Rotational and fine structure parameters were determined through a combined least-squares fit with the millimeter-wave pure rotational data of the ground state.