LIFETIME ANALYSIS OF A DISSOCIATIVE STATE: OPTICAL-OPTICAL DOUBLE RESONANCE SPECTROSCOPY OF THE V=3 LEVEL OF THE A^1P STATE OF BH

A. GILKISON, J. CLARK, C. R. VITERI and E. R. GRANT, *Purdue University, Department of Chemistry, West Lafayette, IN USA.*.

The A $^1\Pi$ state of BH is characterized by its barrier to dissociation. We have observed new structure in the v=3, J=4-7 region near the top of the barrier by means of constant energy scans over intermediate states in double resonant transitions locked on single B $^1\Sigma$ - X $^1\Sigma$ transitions. Linewidths provide new information on the barrier height and tunneling lifetimes.