A NEW LINE LIST FOR $A^3\Pi$ - $X^3\Sigma^-$ TRANSITION OF NH RADICAL

ANTON MADUSHANKA FERNANDO, *Department of Physics, Old Dominion University, Norfolk, VA, USA*; PETER F. BERNATH, *Department of Chemistry and Biochemistry, Old Dominion University, Norfolk, VA, USA*.

The NH radical is important in astronomy as it is observed in cool stars and the interstellar medium. A new line list for $A^3\Pi$ - $X^3\Sigma^-$ electronic transition has been prepared using line positions from the literature and calculated line intensities. High level ab-initio calculations are performed with Molpro to obtain the A-X transition dipole moment function. Potential energy curves and the line strengths are calculated by Le Roy's RKR and LEVEL programs. Line intensities and Einstein A values were calculated with Western's PGOPHER program after converting Hund's case (b) output of LEVEL to Hund's case (a) input needed for PGOPHER.