A NEW LINELIST FOR OH $A^2\Sigma$-$X^2\Pi$ ELECTRONIC TRANSITION

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The OH radical is observed in cool stars, interstellar medium, comets and is an important oxidizer in the Earth's atmosphere. A new linelist for the (A $^2\Sigma^+$-X $^2\Pi$) transition of OH has been calculated. The line positions have been obtained from the literature and the line intensities were calculated from a new ab initio transition dipole moment function obtained from Molpro quantum chemistry package. This dipole moment function along with the RKR potentials have been used in LeRoy's LEVEL program in order to calculate transition dipole matrix elements. These matrix elements are transformed from Hund's case (b) to Hund's case (a) as required for Western's PGopher program. The linelist was calculated with PGopher.