HÖNL-LONDON FACTORS FOR MULTIPLET TRANSITIONS IN HUND'S CASE a OR b.

<u>JAMES K. G. WATSON</u>, Steacie Institute for Molecular Sciences, National Research Council of Canada, Ottawa, Ontario, Canada K1M 1P2.

Hönl-London factors are the factors that give the dependence of spectroscopic line intensities on the rotational quantum numbers. Recently^a it has been shown that many tabulations of Hönl-London factors for singlet-singlet transitions do not allow for the special cases of $\Pi - \Sigma$ and $\Sigma - \Pi$ transitions, where a consideration of the parity symmetrisation shows that an extra factor of 2 is required. The present work extends these considerations to multiplet transitions, in either pure Hund's case a or pure Hund's case b.

^aA. Hansson and J. K. G. Watson, J. Mol. Spectrosc. 233 (2005) 169