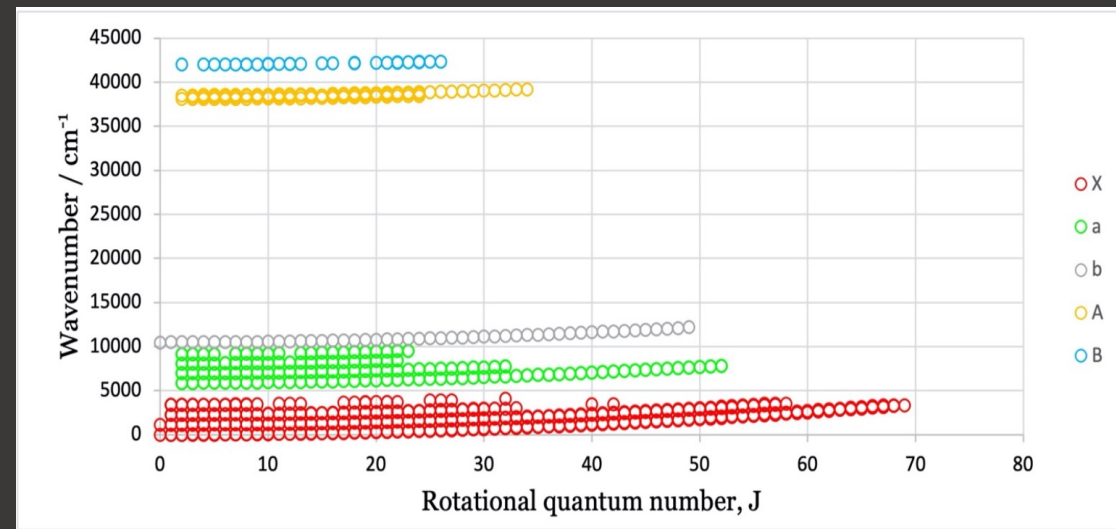


# ExoMol: A MARVEL analysis of experimental transition data and an *ab initio* line list for SO

## Stage 1: Measured Active Rotational-Vibrational Energy Levels = **MARVEL**

- 971 rotational-vibrational empirical energy levels and uncertainties covering the  $X^3\Sigma^-$ ,  $a^1\Delta$ ,  $b^1\Sigma^+$ ,  $A^3\Pi$ ,  $B^3\Sigma^-$  states has been generated using MARVEL.
- 971 MARVEL energy levels = 8407 transition at experimental accuracy.



## Stage 2: DUO

- Ab initio model for SO: 11 PECs, 19 SOCs, 17 EAMCs, 29 TDMCs.
- Ab initio line list consisting of 2665460 transitions with quantum numbers, frequencies, and Einstein coefficients and 262410 states computed.

