The stretch-bender reference-frame was developed to allow the separation of large amplitude bending motion and symmetric stretching. It has been used to calculate vibrational resonances, the effects of spin-orbit coupling, and of overall rotation. Its use allows the block factorisation of the Renner-Teller interaction matrix. We wish to show the utility of this approach when two different approaches by Dixon and Duxbury, and Jungen and Merer, are used to minimise the effects of the large amplitude bending upon the Renner-Teller interaction. It also allows the effects of large amplitude motion on the rotational structure to be calculated, including the switchover from bent to linear behaviour.

\[b\] Molec. Phys. 43, 255 (1981)
\[c\] Molec. Phys. 40, 1 (1981)