LINE LIST FOR THE LOWEST FOUR DOUBLET STATES OF NO

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- We propose a method of modeling the sharp avoided crossing between the $B^2\Pi$ and $C^2\Pi$ states of NO.
- A rovibronic Hamiltonian matrix, containing the B-C coupling terms, is constructed using the variational nuclear motion program DUO. Its eigenvalues are fitted to the MARVEL analysis results.
- An accurate line list of NO, called XABC, is computed for nitric oxide which covers its pure rotational, vibrational and rovibronic spectra.
- XABC provides comprehensive data for the lowest four doublet states $X^2\Pi$, $A^2\Sigma$, $B^2\Pi$ and $C^2\Pi$ of NO in the region of $\lambda > 160$ nm ($\tilde{\nu} < 63\,000$ cm^{-1}) .
- The data are available via exomol.com .
- More details via DOIs: 10.1063/5.0038527, 10.1093/mnras/stab1154