INFRARED SPECTROSCOPY OF ISOTOPICALLY SUBSTITUTED NO_3 TRAPPED IN SOLID NEON

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A sufficient concentration of NO_3 trapped in solid neon has been produced for detection of all of its previously reported infrared bands between 700 and 2600 cm^{-1}, most of which lie within 2.5 cm^{-1} of the gas-phase band origins. Analysis of the infrared spectra obtained for isotopologues of NO_3 which contain nitrogen-15 and/or oxygen-18 is consistent with a planar, threefold symmetric structure for the ground-state molecule and provides information supporting the occurrence of extensive mixing of ground-state vibrational levels of E' symmetry and vibronic interaction with the $\tilde{B}\,^2\mathrm{E}'$ excited electronic state.