

MILLIMETER-WAVE ROTATIONAL SPECTRUM OF DEUTERATED NITRIC ACID

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Previous studies of the pure rotational spectrum of deuterated nitric acid, DNO_3 , have focused on the ground and first excited state, ν_9 . This paper focuses on the next lowest energy vibrational states, covering the spectral range from 128-360 GHz. Two of them are unperturbed, ν_7 and ν_8 , and two of them, ν_6 and $2\nu_9$ are highly perturbed. The unperturbed states are fit separately, while the two perturbed states are fit together using both Coriolis and Fermi interaction terms. Each state is fit to within experimental accuracy. We also extend the assignments and update the rotational constants for ν_9 .