VIBRATIONAL EFFECTS ON THE HYPERFINE STRUCTURE OF HNC

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The pure rotational spectrum of HNC has been recorded in a coaxially configured millimeter-wave jet spectrometer. The increased resolution afforded by this technique has allowed us to fully resolve the ^{14}N quadrupole hyperfine components to obtain a precise value for eQq. In addition to the ground state, we have recorded pure rotational spectra of the few lowest excited vibrational states. The quadrupole structure for HNC is compared to that obtained for HCN, and the evolution of the hyperfine coupling constant with vibrational excitation is discussed in the context of HCN↔HNC isomerization.