THE INFRARED SPECTRUM OF THE NH_4^+ CATION TRAPPED IN SOLID NEON

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Both of the infrared-active vibrational fundamentals of the NH_4^+ cation trapped in solid neon have been observed near the corresponding gas-phase band centers. Experimental conditions favoring the stabilization of this species–the first protonated molecule to be prepared in a neon matrix environment–will be explored. The study was extended to the partially and fully deuterated ammonium cations, for which the first infrared spectroscopic data will be reported.