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SPECTROSCOPY OF METHYLAMINE

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Resonance Enhanced Multiphoton Ionization (REMPI) spectroscopy is a multiphoton technique used to study neutral excited states by ionizing of (ro)vibrational levels of thegiven electronic state. Vibrational structures of methylamines in predissociative $\tilde{A}$ states have been investigated by recording REMPI spectra of jet cooled species. Amino wagging and CH_3 rocking modes are found to be major vibrational excitation in the electronic excitation process. All possible isotope analogs of methylamine (CH_3NH_2, CH_3NHD, CH_3ND_2, CD_3NH_2, CD_3NHD, and CD_3ND_2) are explored to give accurate molecular constants through the spectral simulation.