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Polarization-resolved REMPI spectroscopy of the 5p-6s Rydberg transitions in CF₃I

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The 5p -6s Rydberg excitation in CF₃I is studied using a (2+1) REMPI scheme, with polarization and mass resolution. All of the two-photon-allowed electronic states in the manifold have been detected. Polarization analysis allows determination of non-totally symmetric vibrational frequencies in the excited states as well as the electronic symmetries of the states. Evidence is seen for interaction with other (likely valence) electronic states, especially in the upper spin-orbit components.