Final state distributions upon vibrational predissociation of the HCl dimer

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Photofragment angular distributions have been obtained for the vibrational predissociation of the HCl dimer. The initial state was selected by exciting the "free"- or "bounded" H-Cl stretch with an F-center laser. Assignment of the final state distributions allows for accurate determination of the dissociation energy of the dimer to be 439(2) cm^{-1}, in good agreement with the recent study of Ni *etal* [a]. The influence of the hyperfine interaction on the angular distributions will be discussed.

[a] H. Ni, J. M. Serafin and J. J. Valentini *J. Chem. Phys.* **104** 2259 (1996)