THE SPECTROSCOPY AND AB INITIO CALCULATION OF THE $C_3 - AR$ COMPLEX

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The C_3Ar van der Waals complex has been produced by photolyzing propargyl bromide at 193 nm in a supersonic molecular beam and probed by the laser-induced fluorescence. The spectroscopy of the ground electronic state of this complex was obtained by the wavelength-resolved emission from the $\tilde{A}$ state. In this preliminary report, the observed vibrational levels of the C_3Ar complex were assigned based upon our ab initio results calculated at the MP2/aug-cc-pvtz level.