

ROTATIONALLY-RESOLVED SPECTRA OF THE  $\tilde{A}-\tilde{X}$  SYSTEM OF  $C_3 - Ne$  AND  $C_3 - Ar$  VAN DER WAALS COMPLEXES

GUIQIU ZHANG, *DEPARTMENT OF CHEMISTRY, SHANDONG TEACHER'S UNIVERSITY, PEOPLE'S REPUBLIC OF CHINA*; JUN-MEI CHAO and YEN-CHU HSU, *INSTITUTE OF ATOMIC AND MOLECULAR SCIENCES, ACADEMIA SINICA, P.O. BOX 23-166, TAIPEI 107, TAIWAN, R. O. C. AND DEPARTMENT OF CHEMISTRY, NATIONAL TAIWAN UNIVERSITY, TAIPEI 107, TAIWAN, R. O. C.*

A preliminary report of our rotational analysis of the  $\tilde{A}-\tilde{X}$  system of  $C_3 - Ne$  and  $C_3 - Ar$  van der Waals (vdW) complexes will be given. The complexes were generated from 193-nm photolysis of a gas mixture containing allene and rare-gas atom under supersonic molecular beam condition. The laser-induced fluorescence spectra near the  $C_3, \tilde{A}-\tilde{X}, 2_0^2 - K_0^1$  band were recorded with a resolution of  $0.03\text{cm}^{-1}$ . Both a- and c-type transitions were observed. The rotational constants and geometry of these vdW complexes will be presented.