THE MICROWAVE SPECTRUM OF THE FLUOROBENZENE-NEON DIMER

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The microwave spectra of three isotopomers of fluorobenzene-neon (normal, ^{22}Ne and *d*-5) have been observed using a Fourier transform spectrometer. Twenty-two transitions were fit to eight constants. The dimer has a stacked structure with the neon over the fluorobenzene ring in the symmetry plane. The center of mass distance (R_{cm}) is 3.44(1) Å, with the neon sitting between the center of mass and the center of the ring. The rotational constants have been determined as A = 1926.421(2) MHz, B = 1645.236(3) MHz, and C = 1279.734(1) MHz. The electric dipole moment was measured to be $|\mu_a|$ = 1.15(3) D, $|\mu_b|$ = 1.12(3) D, $|\mu_t|$ = 1.61(5) D.