MICROWAVE SPECTRA AND MOLECULAR STRUCTURES OF ARGON-*CIS*-1,3,3,3-TETRAFLUORO-1,2-EPOXYPROPANE AND ARGON-OXIRANYLMETHANOL

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Connected to our efforts in characterizing substituted oxiranes for use as potential chiral tags for the conversion of enantiomeric molecules into spectroscopically distinct diastereomeric complexes for chiral analysis, we are exploring how argon binding to these species is modulated by varying the identity of the substituents on the epoxy ring. Previously studied systems generally showed close contacts primarily to atoms contained in the ring, but in complexes with cis-1,3,3,3-tetrafluoro-1,2-epoxypropane and oxiranylmethanol, multiple minima of similar energies are predicted by quantum chemistry calculations, including some with significant interactions between the argon atom and substituent atoms. Progress on assigning and analyzing the spectra of these complexes will be reported.