MICROWAVE SPECTRUM OF 1-HEXYNE (BUTYL ACETYLENE)

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The microwave spectrum of a conformer of 1-hexyne has been assigned. Preliminary rotational constants are B = 1326.660(1) MHz and C = 1254.719(1) MHz. Since Ray's asymmetry parameter is approximately -0.99 and only a-type transitions have been assigned, A remains undetermined. These rotational constants are consistent with an all anti heavy-atom planar conformation. Many unassigned transitions remain. We expect to assign b-type transitions for the conformer above as well as transitions from conformations with either the terminal acetylene or the methyl group in a gauche configuration.