HOW METHYL TOPS TALK TO EACH OTHER

MELANIE SCHNELL, *Fritz-Haber-Institut der Max-Planck-Gesellschaft, Faradayweg 4-6, D-14195 Berlin, Germany*; JENS-UWE GRABOW, *Institut für Physikalische Chemie und Elektrochemie, Gottfried-Wilhelm-Leibniz-Universität Hannover, Callinstrasse 3-3a, D-30167 Hannover, Germany*.

The rotational spectra of C_{3v}-symmetric molecules such as $(CH_3)_3GeBr$ are complicated exhibiting dense line patterns arising from internal rotation of the three methyl tops, the quadrupole coupling interaction of the bromine atom, and the large number of isotopes. The molecular symmetry (MS) group of such molecules is G_{162} [1]. The internal rotation of the three methyl groups lead to 6 torsional groups for K=0 and 11 torsional groups for K=11. In the present study, we will focus on the interaction of the methyl top internal rotation and the top-top communication as well as the interaction between the methyl top torsion and the nuclear quadrupole moment of the bromine.