J-Modulation in 1D NMR ¹H Spectrum of Taurine and Aspartate Using Spin-Echo Technique

Halil Oturak, Adnan Sağlam, and Semiha Bahçeli

Department of Physics, Faculty of Arts and Sciences, Süleyman Demirel University, Çünür Campus, İsparta, Turkey

Reprint requests to Dr. S. B.: Fax: +902462371106; e-mail: bahceli@fef.sdu.edu.tr

Z. Naturforsch. **54a**, 305–310 (1999); received February 24, 1999

This study reports on a theoretical calculation of Hahn's spin-echo experiment in case of a model A₂B₂ spin system with a strongly coupling character and gives the experimental results of one-dimension ¹H high-resolution NMR spectra of taurine and aspartate. The calculated amplitudes of the spin-echoes for two different proton groups of taurine are given. Using results of our calculations for taurine, the computer simulations of *J*-modulation are implemented. It is shown that the agreement between the experimental and simulated spectra is good.

Key words: NMR; Amino Acids; A₂B₂ System; J-modulation.