A Hands on Introduction to NMR

22.920

Lab and Problem Set #7

Spectroscopy and J Modulation

1. Look at the FID of a 2-spin system after exciting only one line. Why does the FID vanish and then reappear?

2. Observe a ¹/2 - t - ¹ - t - echo and see that the amplitude of the echo varies with the time t. Relate this to J modulation.

3. Observe a selective ¹/2)x - t - ¹/2)x FID with the time between pulses equal to 1/2J. Here we are interested in the FID following the second pulse, and there is no echo (if the first pulse is selective).

4. Change the second ¹/2 pulse to be selective for the second spin. Why does the FID still vanish?