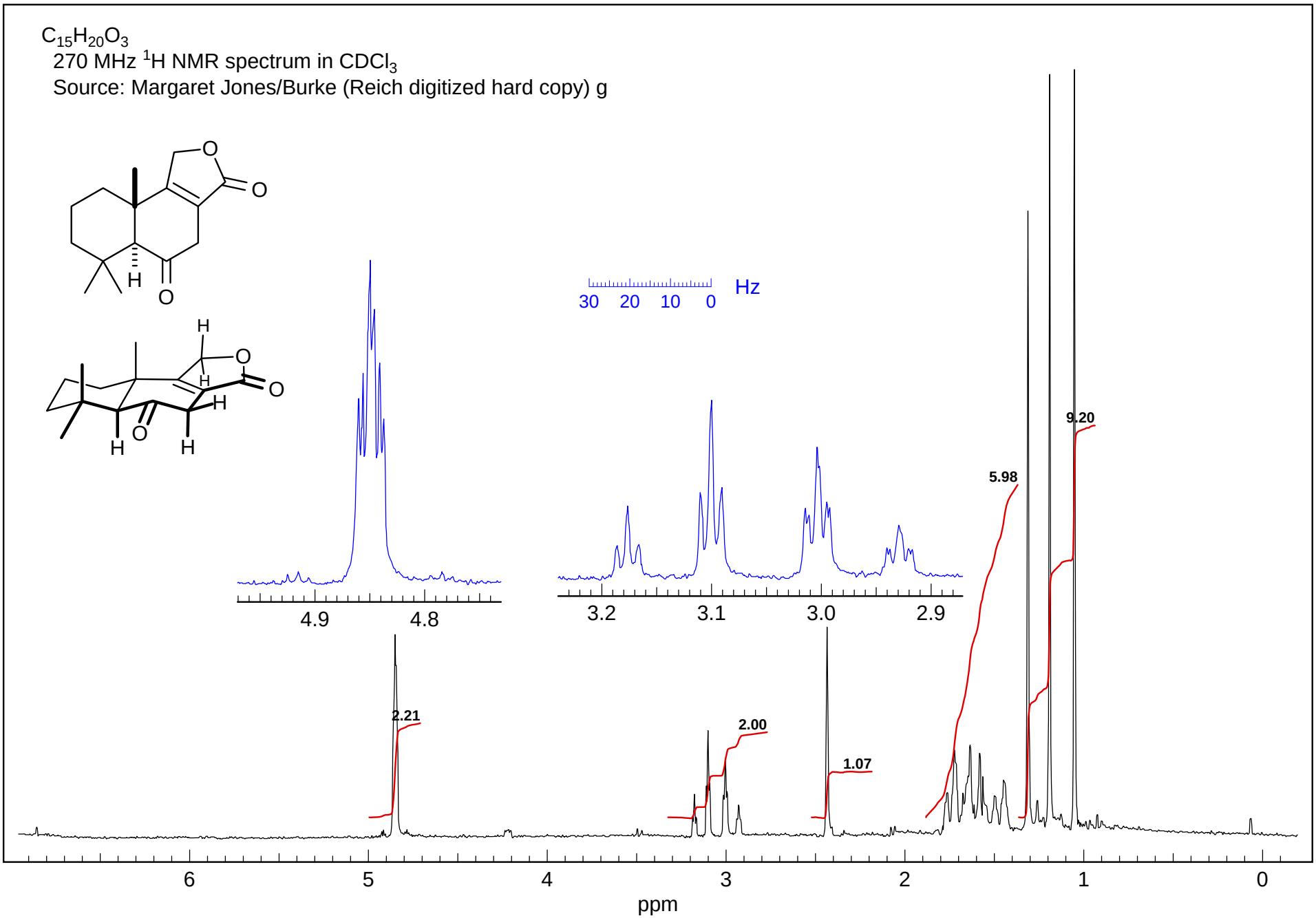
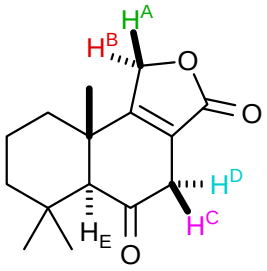
Exercise: Analyze the expanded multiplets (centered at δ 3.05, δ 4.85).

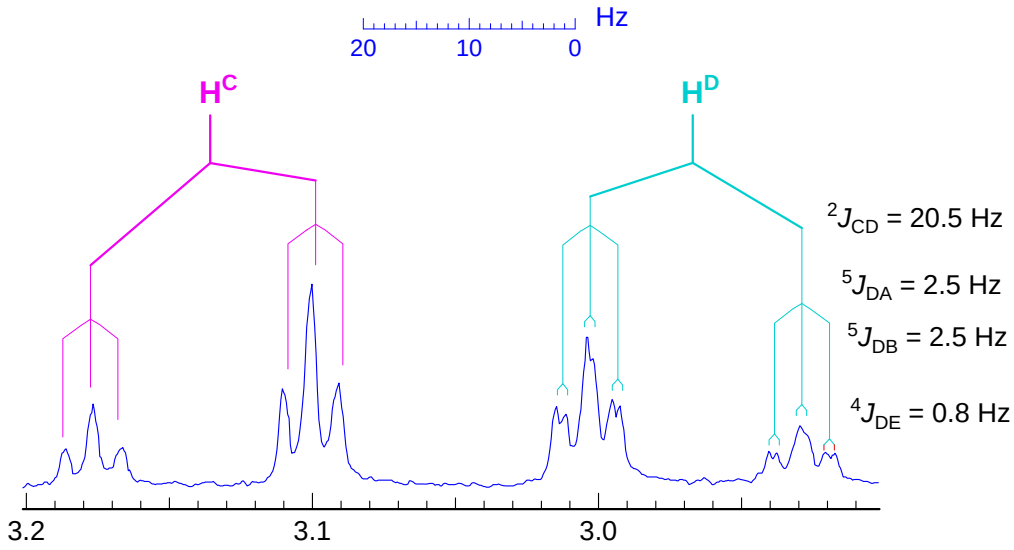


PLT NMR-burke-jones-butenolide-g.plt

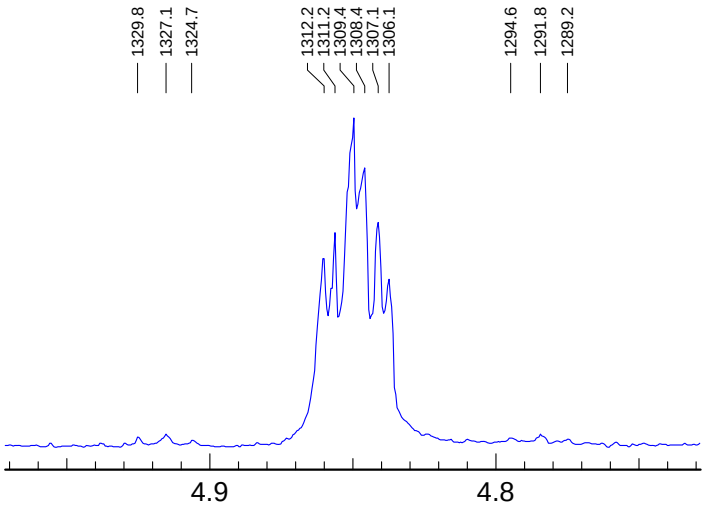
Exercise: Analyze the expanded multiplets (centered at δ 3.05, δ 4.85).

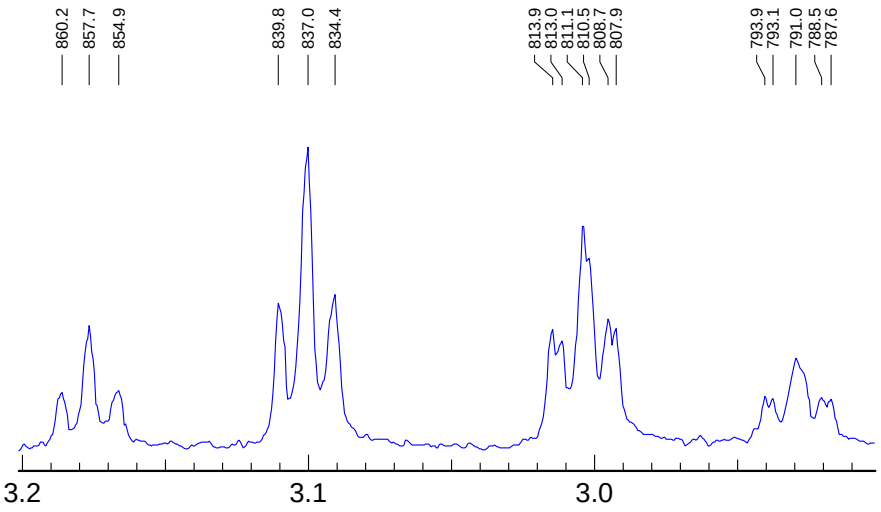


Both gem (^2J) couplings are unusually large, $^2J_{CD}$ especially so, because the CH_2 is flanked by C=O on one side and C=C on the other. Both effects make ^2J more negative, increasing the magnitude of these negative J values.

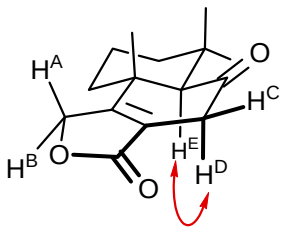


The central peaks here could *easily* be mistaken for a doublet of triplets.





H_D has an additional long range coupling, probably to H_E (^4J "U" coupling)



$^4J_{HH}$ = 0.8 Hz