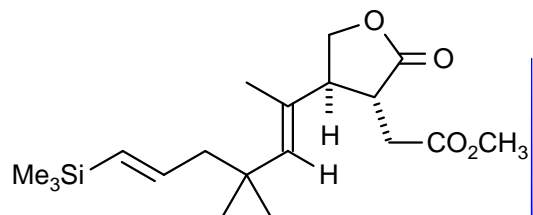
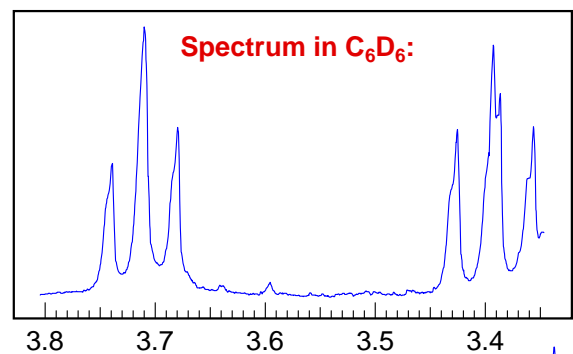


C₁₈H₃₂O₄Si

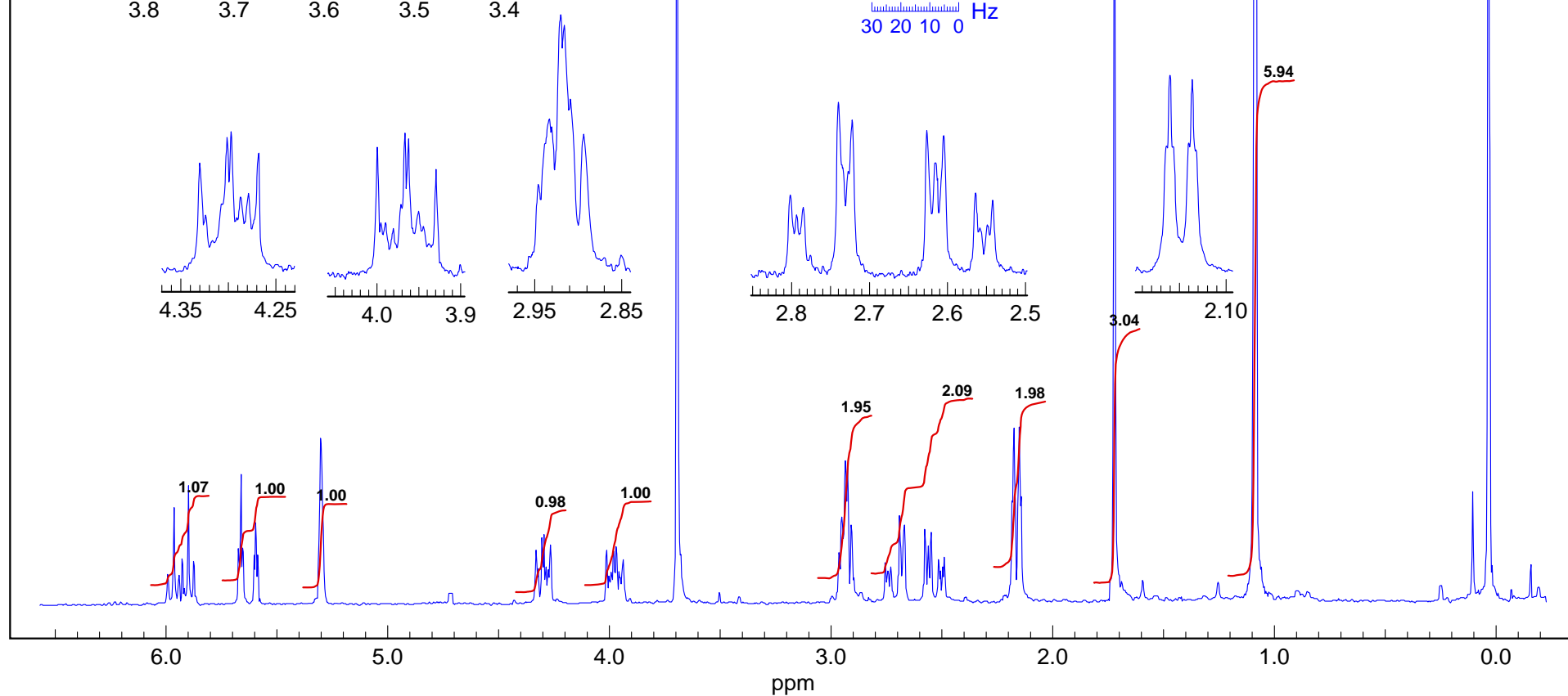
270 MHz ¹H NMR spectrum in CDCl₃

Source: Margaret K. Jones/S. D. Burke (Reich digitized hard copy) g

CDCl₃



30 20 10 0 Hz



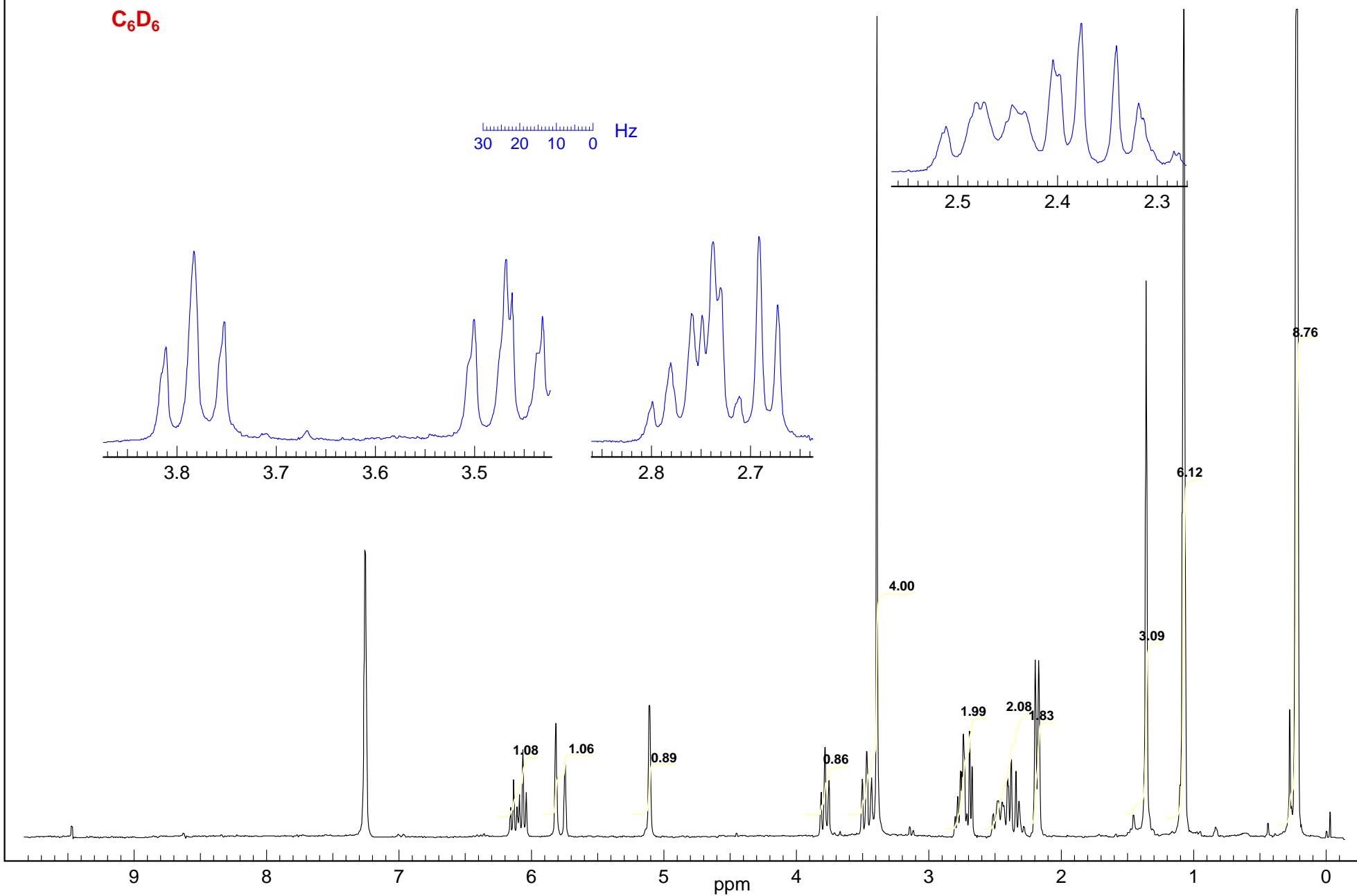
$C_{18}H_{32}O_4Si$

270 MHz 1H NMR spectrum in C_6D_6

Source: Margaret K. Jones/S. D. Burke (Reich digitized hard copy) g

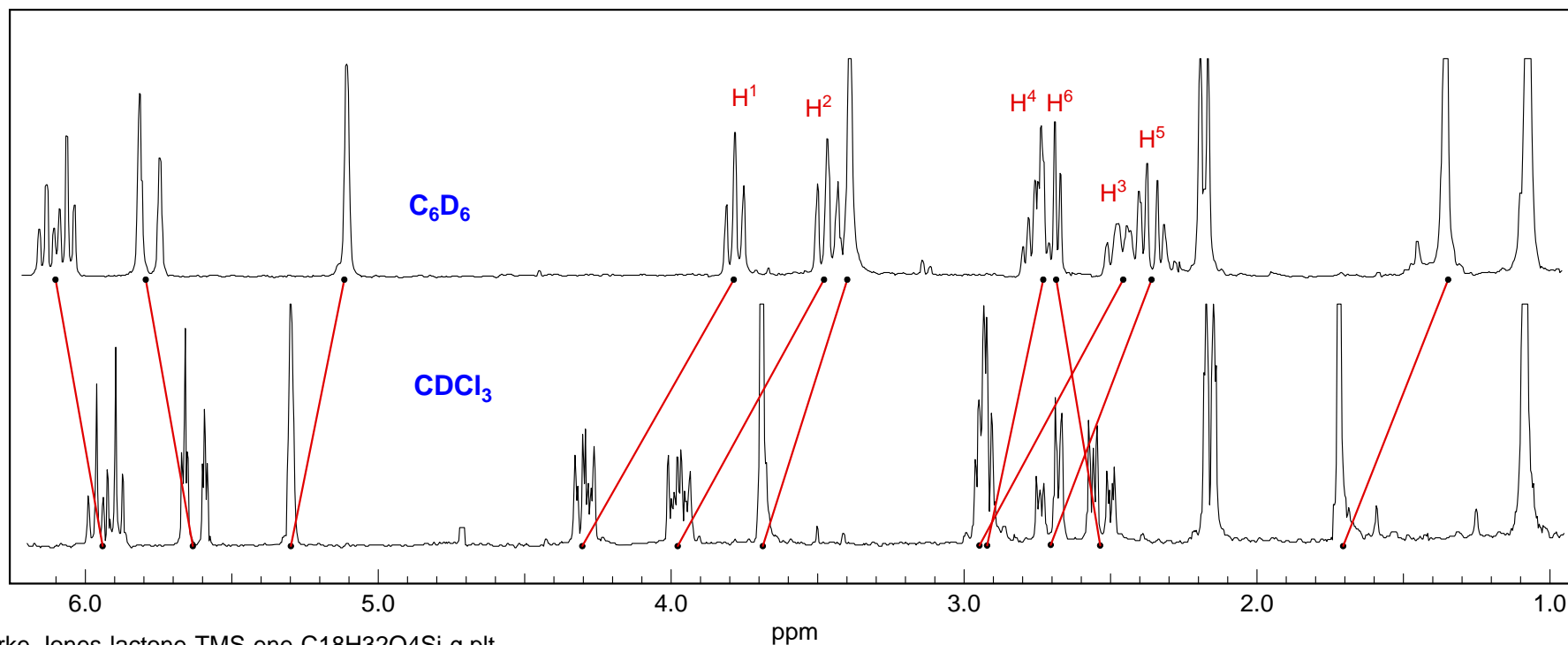
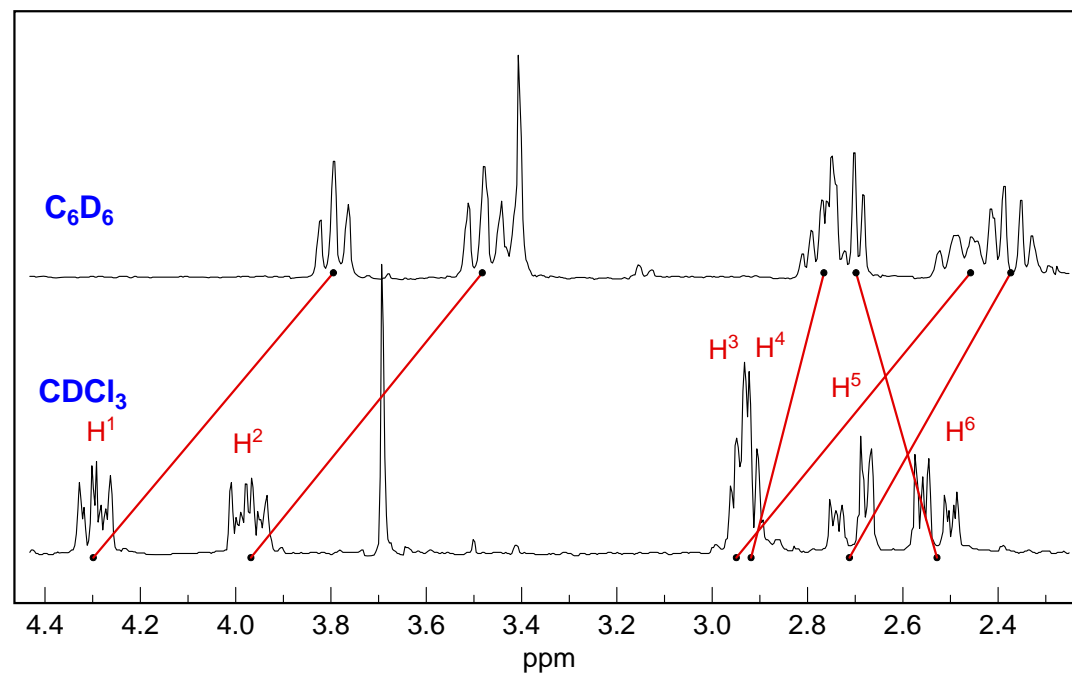
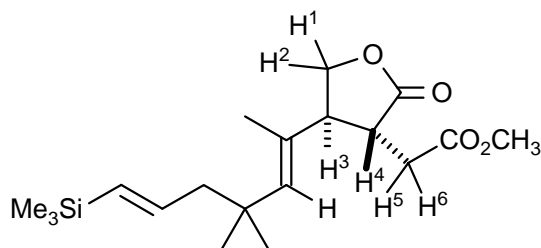
C_6D_6

30 20 10 0 Hz



ASIS Analysis:

The NMR spectrum in CDCl_3 is complicated by the very close chemical shift between the coupled protons H^3 and H^4 (ca 1 Hz), which leads to strong second order effects in all protons coupled to either one (H^1 , H^2 , H^5 and H^6). In C_6D_6 as solvent there are some quite dramatic shifts, mostly upfield, but some also downfield. The spectrum is now complicated by a close approach of coupled protons H^4 and H^6 (ca 20 Hz). The effects on H^3 and H^5 are unusually strong because one is coupled to the H^4/H^6 pair with a positive, and the other with a negative J . In such situations the near-degeneracy of energy levels happens when the chemical shifts are further apart than when both J are positive. H^1 and H^2 are now nearly first order since neither is coupled to the H^4/H^6 pair.



Simulations with WINDNMR. The only parameters changed in the CDCl_3 and C_6D_6 simulations are the chemical shifts, all J the same.

