Problem R-11P \((C_8H_8F_2Si)\). Below is the partial 300 MHz \(^1\)H NMR spectrum of vinyl difluorophenylsilane in acetone-\(d_6\) (courtesy of Josh Dykstra). Analyze the spectrum, and label the spectrum with coupling trees, and identify \(H_g\), \(H_c\), and \(H_t\). Report all coupling in the standard format \((^nJ_{X,Y} = 00.0 \text{ Hz})\). Apart from intensities, the spectrum is basically first order.
Problem R-11P (C₈H₈F₂Si). Below is the partial 300 MHz ¹H NMR spectrum of vinyl difluorophenylsilane in acetone-d₆ (courtesy of Josh Dykstra). Analyze the spectrum, and label the spectrum with coupling trees, and identify H₉, H₈, and Hc. Report all coupling in the standard format (³Jₓᵧ = 00.0 Hz). Apart from intensities, the spectrum is basically first order.

There are also a number of small peaks from ²⁹Si coupling to the various protons. Pretty indistinct - hard to be sure which might be impurities because usually can't see both satellites. One likely set of ²⁹Si satellites is shown for Hc.

The strange intensities of the middle peak (H₉) are confirmed by a simulation.