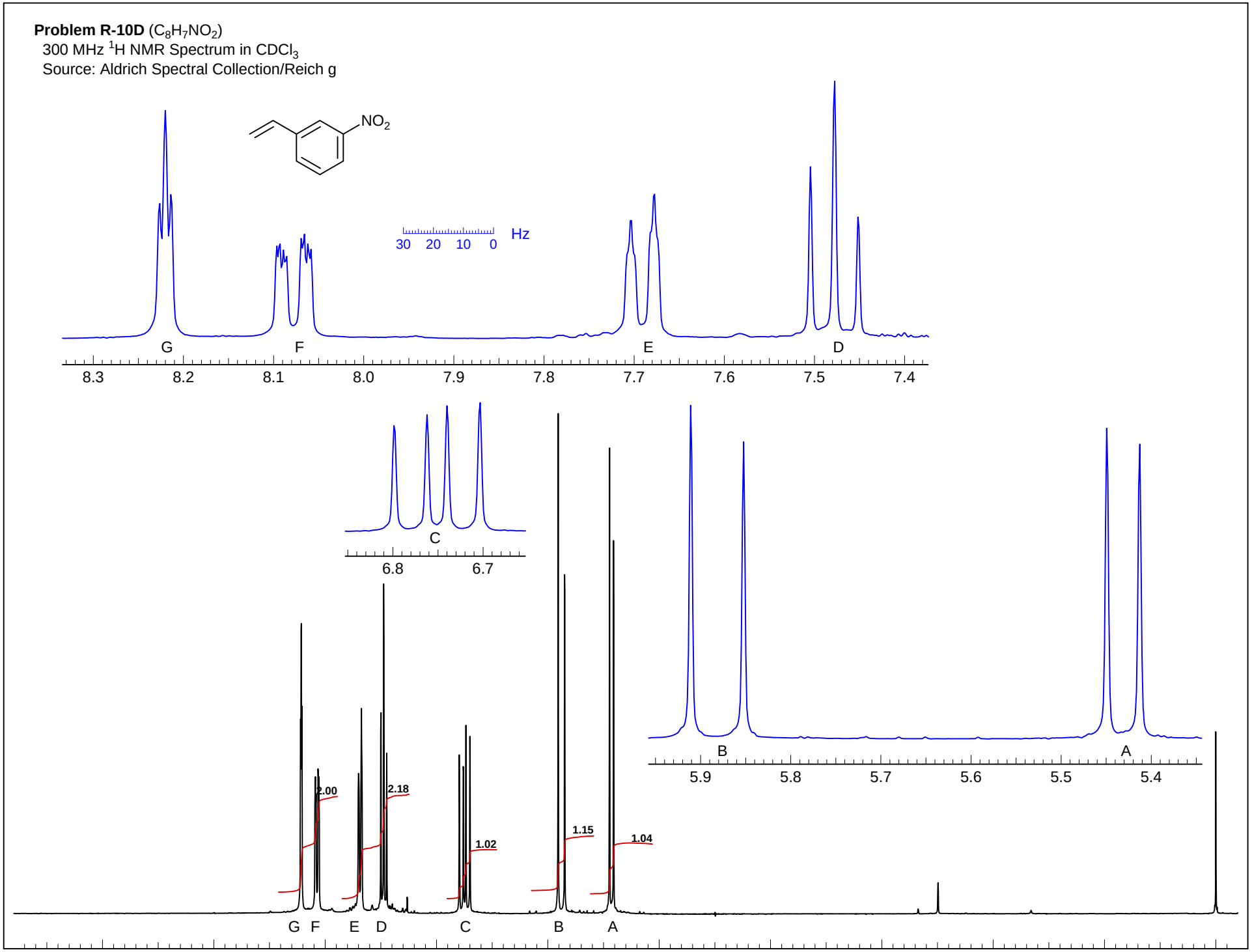
Problem R-10D ($C_8H_7NO_2$)
300 MHz ^{1}H NMR Spectrum in $CDCl_3$
Source: Aldrich Spectral Collection/Reich g



PLT ex-1-2010-11-gq.plt

Problem R-10D ($C_8H_7NO_2$). Determine the structure of **R-10D** from the ^1H NMR spectrum provided.

(a) DBE_____

(b) Analyze the ^1H NMR signals. For each of the signals listed below report multiplicity and coupling constants to the extent the signals are amenable to first order analysis, and the part structure each corresponds to.

A _____

B _____

C _____

D _____

E _____

F _____

G _____

(c) Give the structure of **R-10D**. If more than one structure is possible, circle your best choice. Label the protons with the assgnments (A-G)

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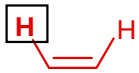
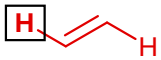
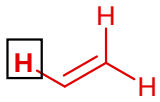
Problem R-10D ($C_8H_7NO_2$). Determine the structure of **R-10D** from the ^1H NMR spectrum provided.

2 (a) DBE 6

(b) Analyze the ^1H NMR signals. For each of the signals listed below report multiplicity and coupling constants to the extent the signals are amenable to first order analysis, and the **part structure** each corresponds to.

A 5.43, 1H, d, J = 10 

B 5.88, 1H, d, J = 17 

C 6.75, 1H, dd, J = 17, 10 

These together require a vinyl group ($CH=CH_2$) with no other coupling

The coupling between the gem-vinyl protons is too small to resolve

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D 7.48, 1H, t, J = 8

E 7.69, 1H,dt, J = 8, ca 1

F 8.07 1H, ddd, J = 8, 2, 1

G 8.22 1H, t, J = 1.5 (probably dd)

These together require a meta-substituted benzene

(c) Give the structure of **R-10D**. If more than one structure is possible, circle your best choice.

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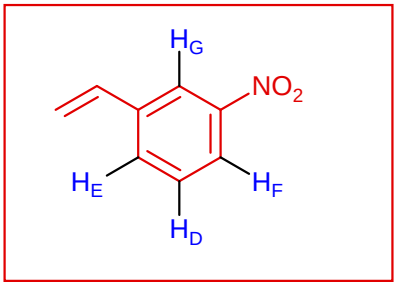

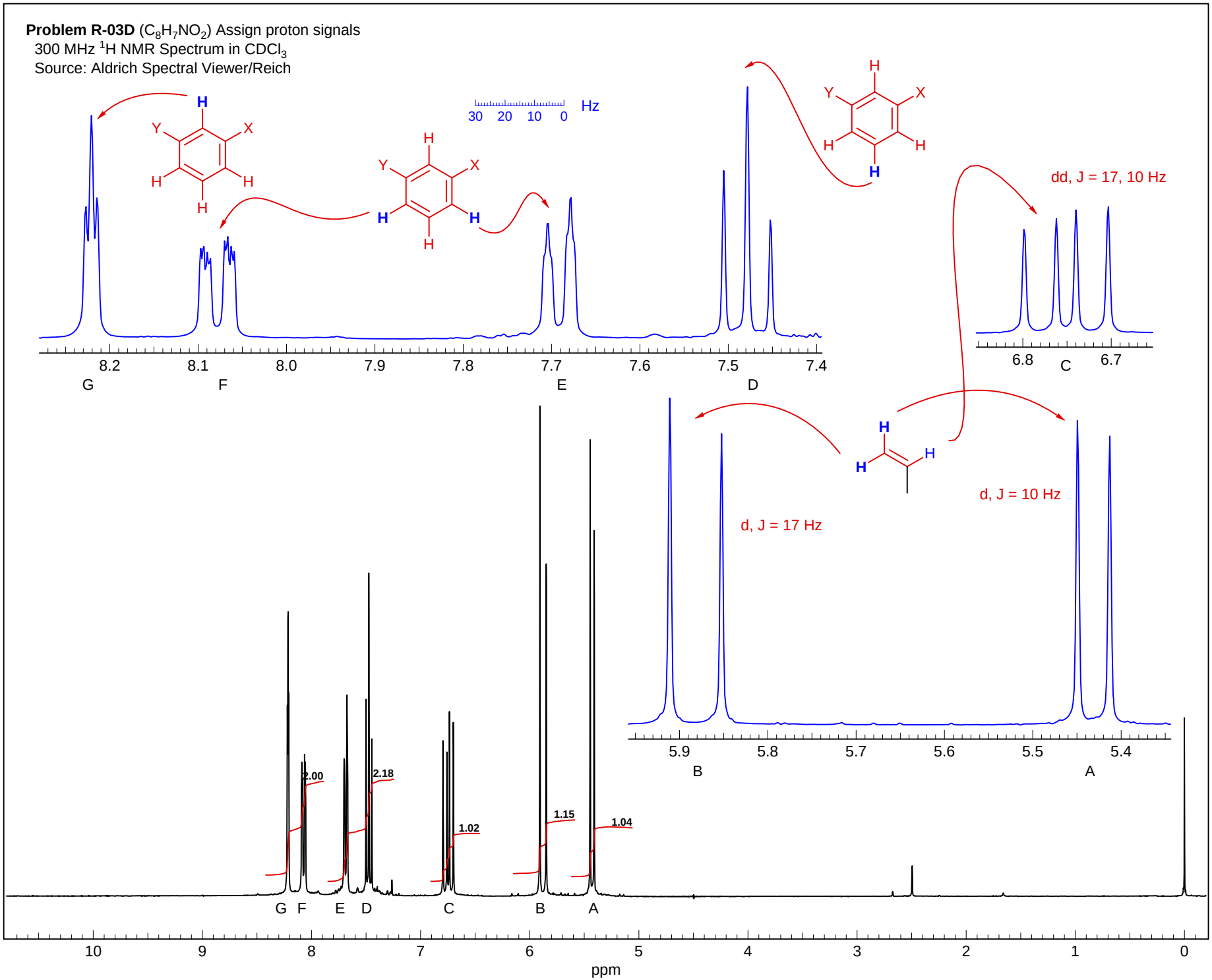

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