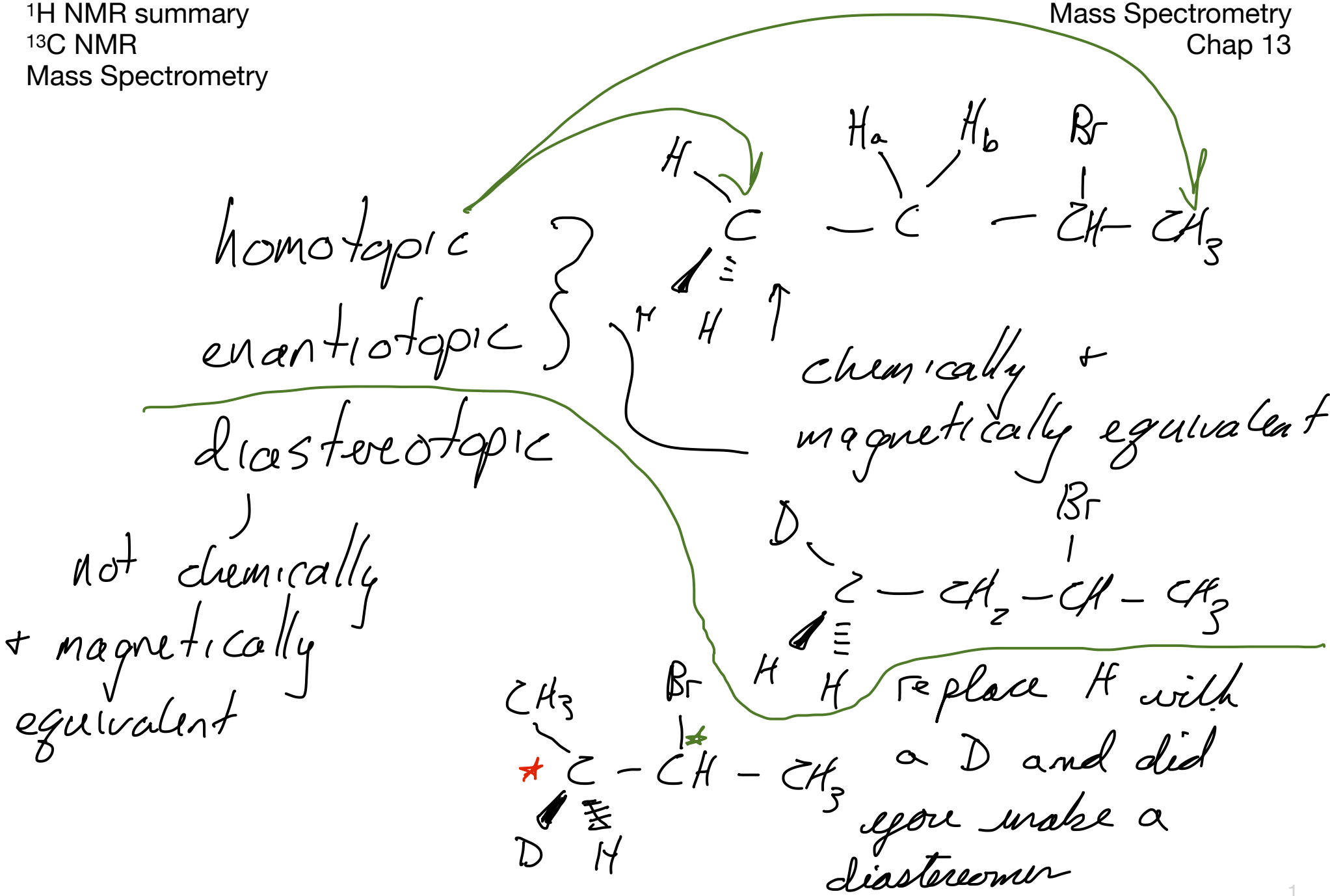
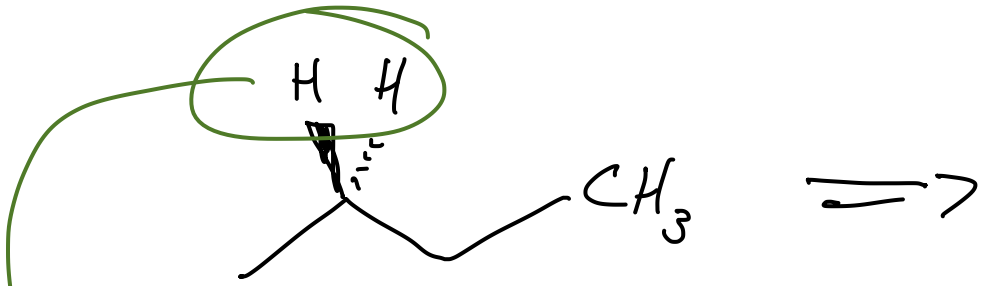
Today

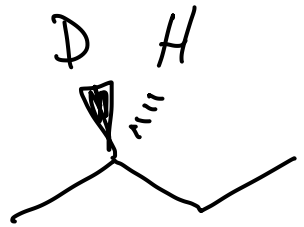
^{1}H NMR summary
^{13}C NMR
Mass Spectrometry

Next Class

Mass Spectrometry
Chap 13

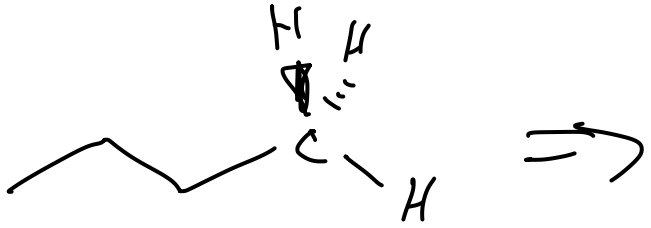


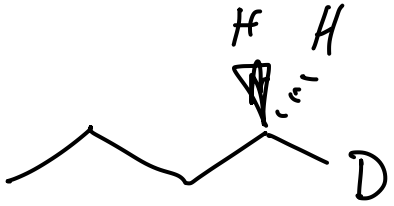




so these are enatiotopic

1 of two possible enantiomers

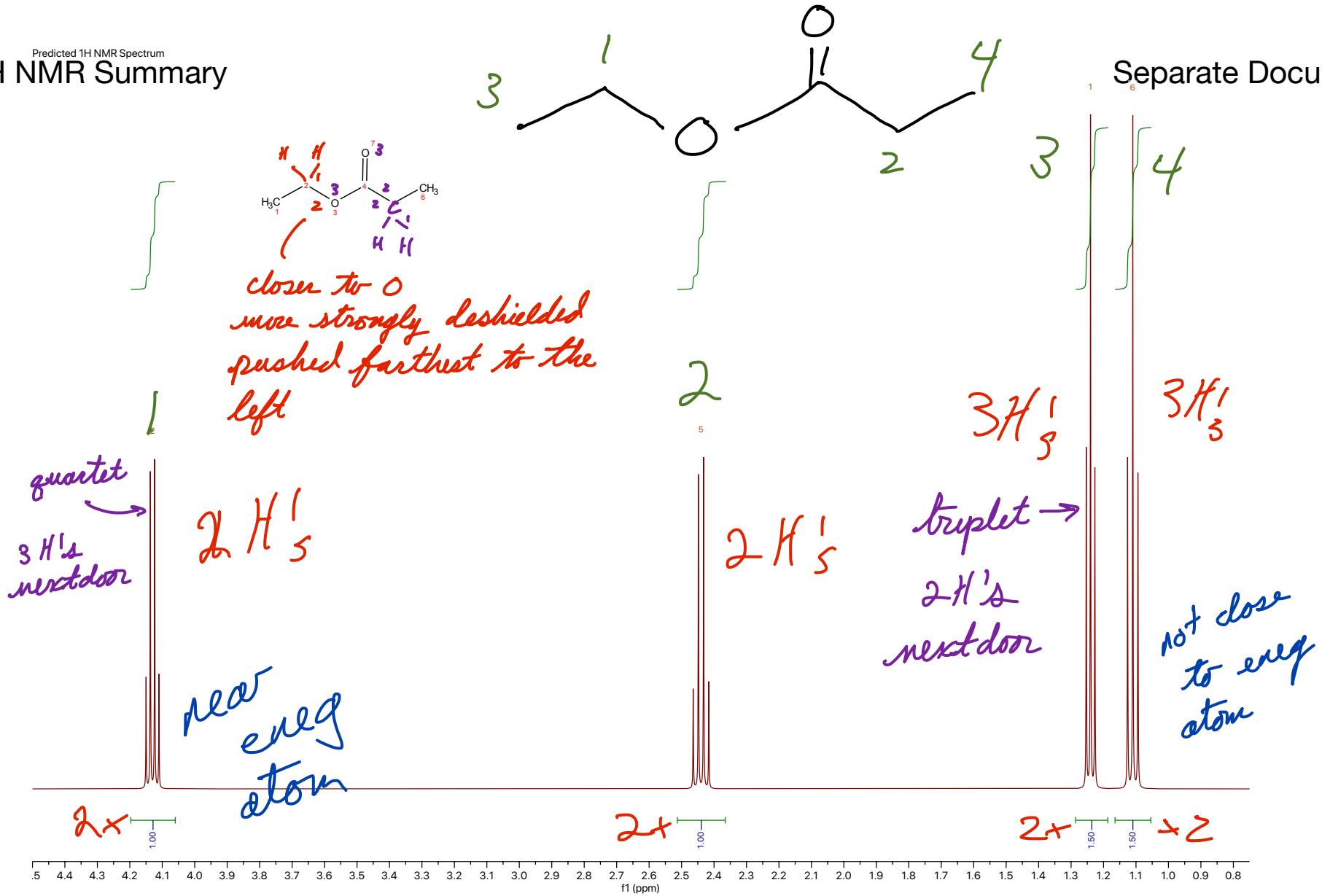




homotopic

^{1}H NMR Summary

Separate Document

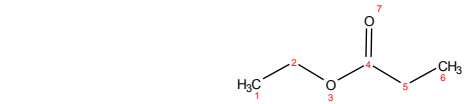


☆ # of different types of H atoms	☆ Chemical environments of the H atoms	☆ How many of each type of H atom	# of H atom neighbors
	chemical shift	integration	multiplicity

^{13}C Are Spin 1/2 too

1.1 % of C is ^{13}C

Section



near O

2 ^{13}C's on a molecule .0001

low concentration of ^{13}C means it is harder to "see"

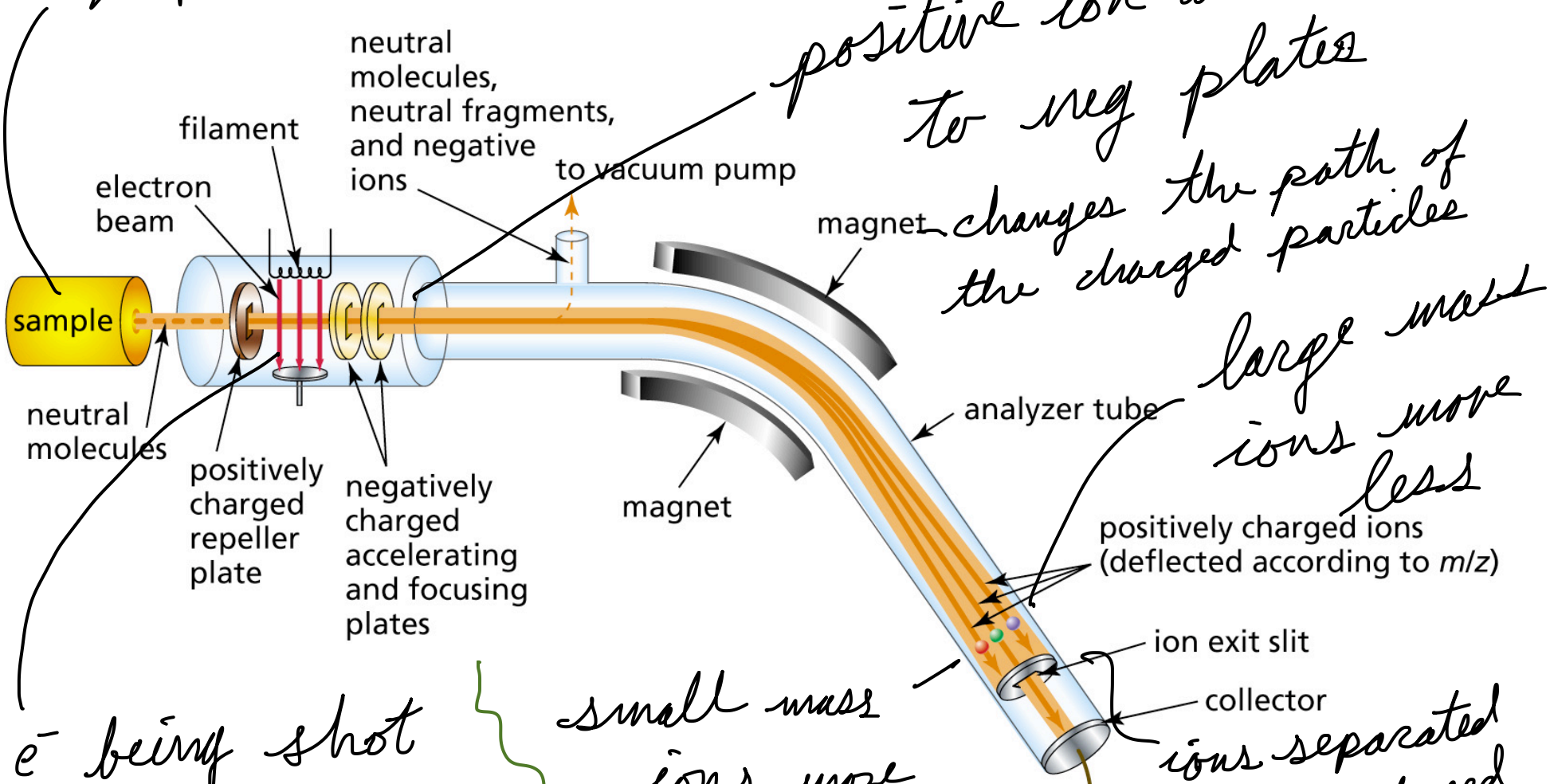
^{13}C nuclei resonate

proton decoupled ^{13}C NMR just produces singlet

decoupling also destroys the integration

# of different kinds of C atoms

chemical environment of C atoms



sample is converted to a gas

positive ion attracted to neg plates

changes the path of the charged particles

large mass ions move less

small mass ions move farther

ions separated based on their mass to charge ratio

e^- being shot from 1 electrode to another. These e^- ionize the molecule to make it $\oplus$