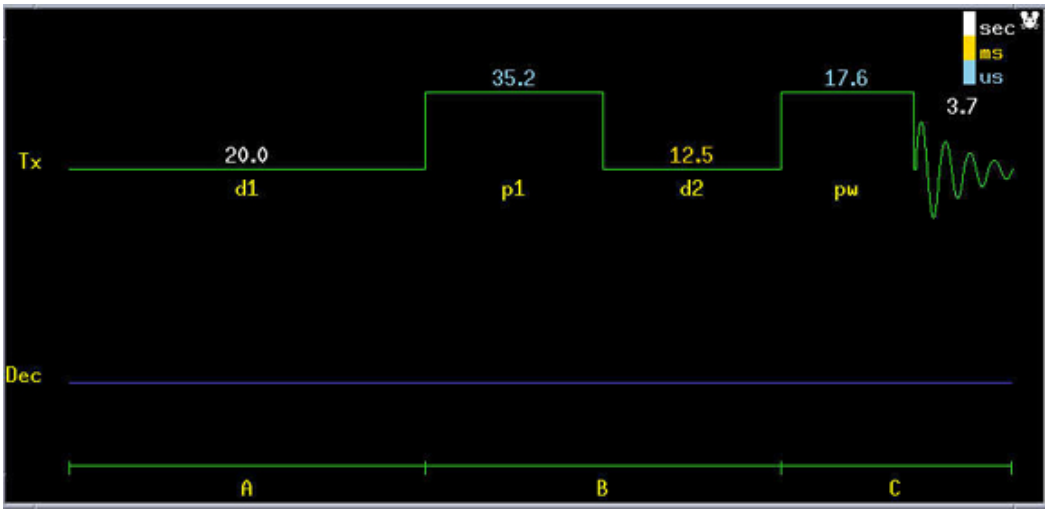
T1 measurement

T1 measurement is very important if you are going to run 2D NMR.
T1 is called spin-lattice relaxation time. Here lattice means the ***environment*** of the magnet, the proton.

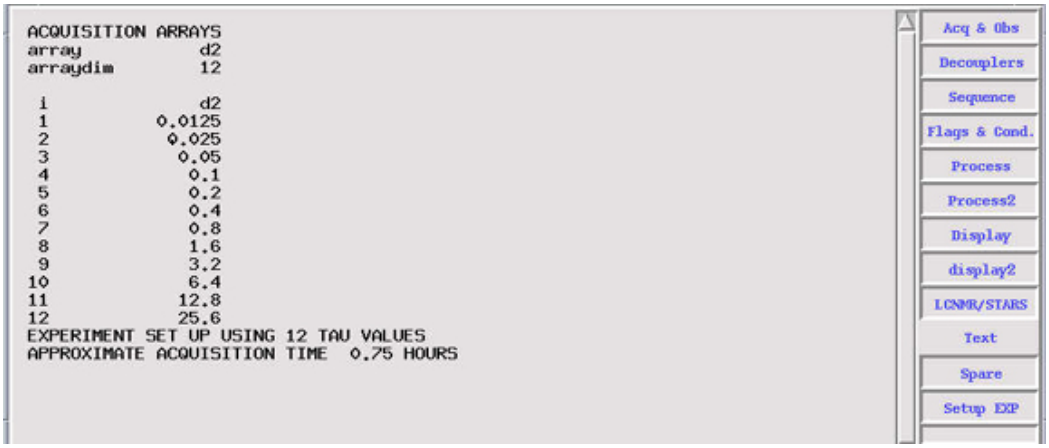
dot1 ↵ ; this command sets up the t1 experiment, which prompts for the following:

enter minimum t1 expected (sec): 0.1 ↵ (0.1 to 1 second is a good starting point)
enter maximum t1 expected (sec): 4 ↵ (5 to 10 sec are typical)
enter number of transients (nt): 1 ↵ (use minimum *nt*). Sometimes it does not popup, so you need to type in.

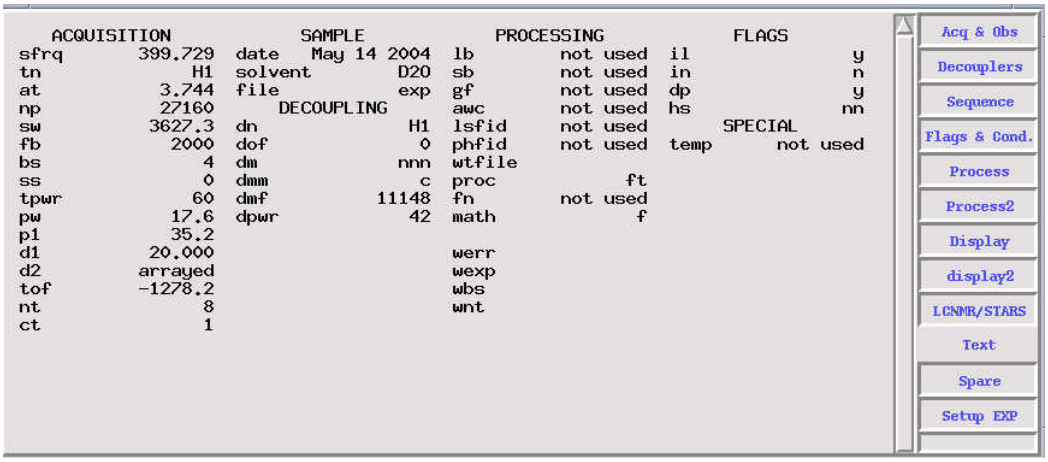
By typing **dps**, you will see the sequence.



The d2 array detail is listed below this window.



Dot1 also sets up the **pw** and **p1** as are shown in the pulse sequence. You can type **dg** to double check all the parameters.

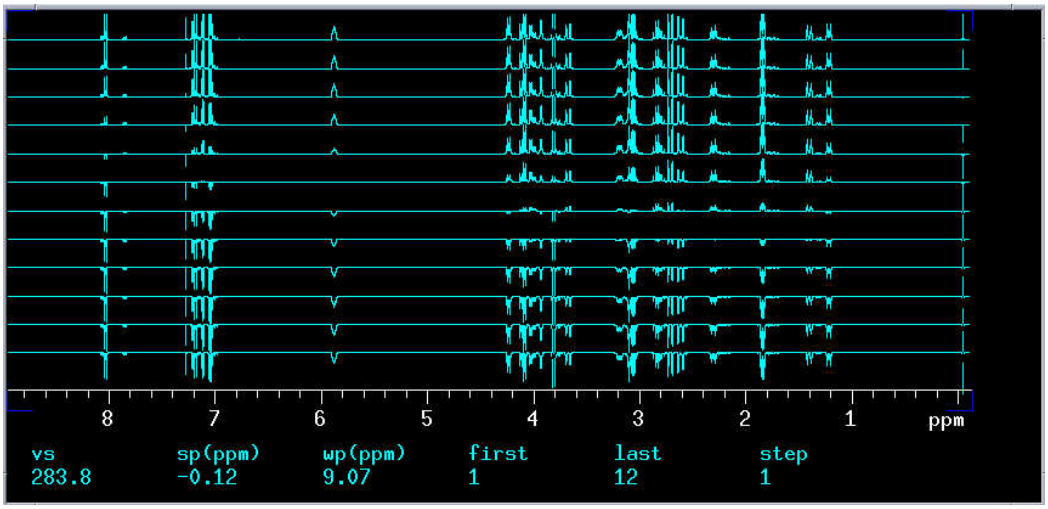


In the text, ***pw=pw90***; ***p1=2*pw90***
d1=4*t1(max) (t1(max) is the maximum t1 expected entered above)

Now you see that ***nt*** is ***8***.. Please change it to ***1*** to save your time.

ga ↵

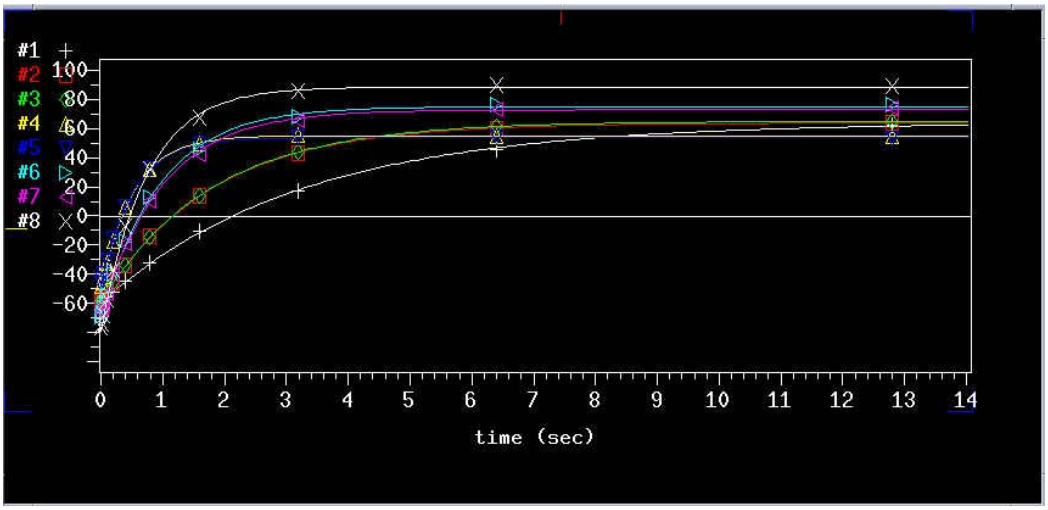
When the experiment is done, type dssa ↵



dscale, vp=10

ds(12) (please use the last spectrum)**,**
aph
click ***ph*** and adjust the level using the mouse. Peaks above the ***ph*** line will be selected.
dll or **dpf**
t1s (you will get the T1 for each peak).
(If you type **t1** rather than **t1s**, you get all the information at all 12 steps of the array of d2).

expl ↵ will give you the following exponancial curves. T1 is the constant of the curve.



Note:

Please do not type **wft**, which will show you the first spectrum and all the peaks were down. But you can type **wft(12)** to show the last spectrum.