

Tuning the inverse probe

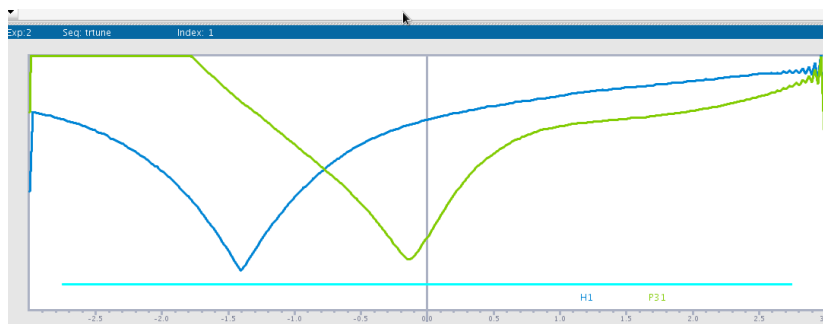
Last updated: August 3, 2018

Notes

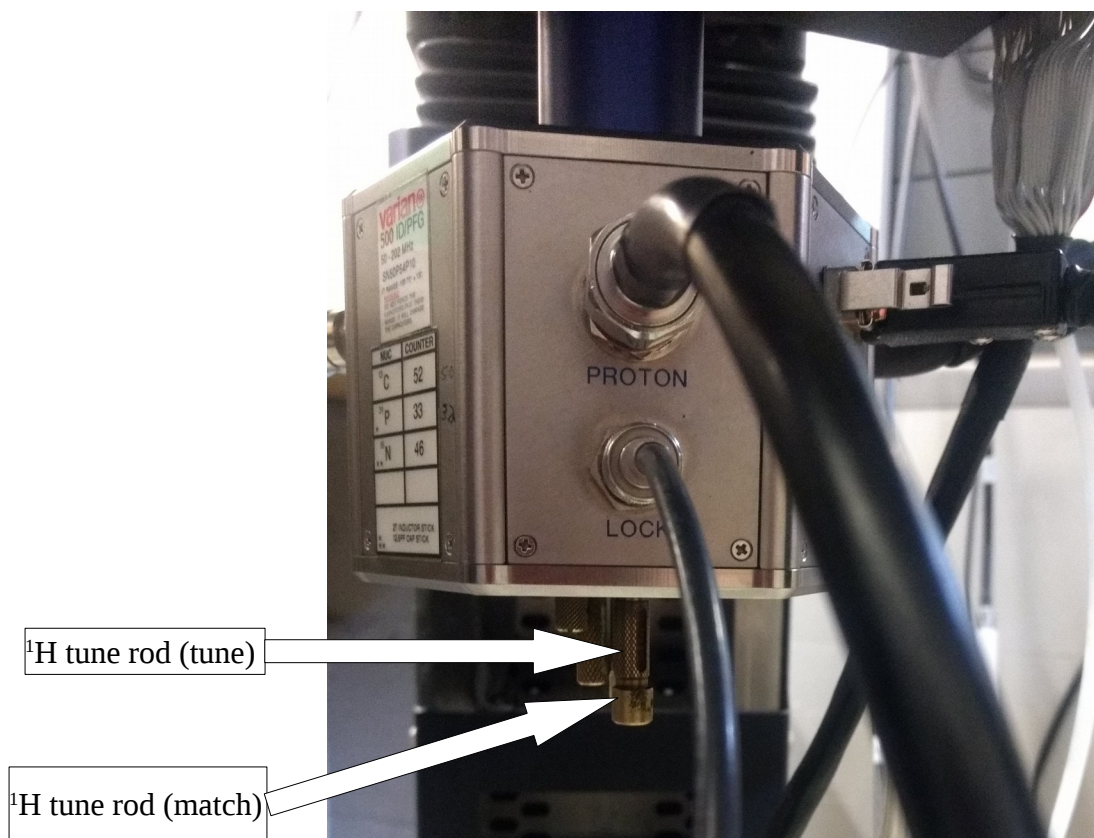
- The inverse probe is tuned simultaneously to ^1H (or ^{19}F) and to ^{13}C , ^{15}N , and ^{31}P
- The probe is very good for ^1H -detected experiments (such as ^1H or HMBC experiments), but it is poor for ^{13}C -detected experiments
- ***Tuning ^{31}P is a bit tricky on this probe and it hardly changes from sample to sample, so do not tune ^{31}P yourself***
- ***Don't tune the probe unless you have been shown how to – these notes are just a reminder***
- ***You must tune the probe if you are running any 2D experiment (COSY, NOESY, ROESY, TOCSY, HMBC). Ask for training if you do not know how***

Setup

1. Type `trtune` in the command line
2. Click on “Start Probe Tune”
3. Type `ff` in the command line (this corrects a bug where the dips are sometimes not displayed correctly) – often, the command does nothing
4. The goal of tuning is to adjust the blue (^1H) dip so that it is centred (tuned) on the green line and is as deep as possible (matched), nearly touching the bottom of the window



5. Use the red tuning rod to adjust the blue dip
 1. Rotate the upper (textured) part of the rod to move the dip side to side (this is “tuning”)
 2. Rotate the lower (smooth) part of the rod to move the dip up and down (this is “matching”)



6. When the probe is tuned, the ^1H tune dip (blue) will be in the middle and a sharp V, and the ^{31}P dip (green) will be near the middle.

