Suppress Multiple Solvent Signals

The easiest way is with Multi-Frequency Presat

This is accessible through the BioPack on the 600 MHz NMR.

To initially set this up, you need to contact Dr. Stephen Lynch as BioPack is not normally active in user accounts.

1) With the water pulse sequence from BioPack active, setup a normal Proton in exp1, change
nt = 1
gain = 0
go
wft f aph

2) Move the fid to another experiment and change into that experiment:
mf(1,2) jexp2 wft
[mf = movefid]

3) Select the peaks to suppress, so first create the file
mfll('new')

4) Go through the spectrum and type:
mfll
on any peak to suppress
[if you do not see a cursor, type: ds or wft]

5) Run water setup macro:
water

6) Type:
dps

You should see the pulse sequence displayed.

7) Set any parameters to change, so scans (nt), delay between scans (d1), saturation delay time/length of time to saturate resonances (satdly), saturation power (satpwr). The higher the satdly the better the suppression. For resonancs with long T1 times, longer satdly is necessary. The higher the power, the wider the range of saturation for each resonance. Finally, set the gain parameter either manually or automatically. To set automatically, set:
gain = 'n'

To set manually set gain to a number, so

gain = 20

The higher the gain, the better the signal to noise until there is overflow of the receiver/analog to digital converter (ADC). Typically, on the 600 with good suppression, gain = 20 is possible before overflow. With poorer suppression, possibly as low as gain = 6. If gain is too high you will see an error message of ADC Overflow or Rvr Ovfl and the red light on the far right of the remote display module (currently located on top of the console to the left of the computer, below where the module shows the temperature).

8) Start experiment, type:
go

9) Data should be processed as normal, for higher signal to noise, use line broadening, lb = 0.5. Phasing may be difficult with the suppression. Baseline corrections will be helpful in Mestre Nova.