I. The plot only option

perl cleaned_upgrade.plx B30 rl.log B30 mh.log B30 ml.log 1.txt

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perl cleaned_upgrade.plx B30_rl.log B30_mh.log B30_ml.log plotonly

To generate data for plotting spectrum for each subcalculation (without extrapolation): simply replace the original output file name with "plotonly"). Main peak information will be printed out on to the screen and to the "outbands.txt" file.

II. The advance shoulder detection option

```
extn,3
sigma,0.4
sdtrl,0.2
sdtmh,0.2
sdtml,0.2
sdtrlleft,0.2,0.2,0.2,0.2,#
sdtrlright,0.2,0.2,0.2,#
sdtmhleft,#
sdtmhright,#
sdtmlleft,#
sdtmlright,#
sdtmlright,#
```

Basic shoulder detection parameters: set one sdt for each spectrum.

Advance shoulder detection parameters:

- set sdt parameters for each main peak on the spectrum.
- This option can be turned off by removing the section or placing "#" at the end, the program will go through basic shoulder detection as usual.
- The advance shoulder detection option can be turned off for one spectrum and turned on for another
- The number of sdtrlleft and sdtrlright values have to be the same as the number of main peaks on the spectrum. Ie. 4 main peaks on the rl spectrum, you need to give 4 numbers for sdtrlleft and sdtrlright.
- Place "NA" to replace a number: shoulder detection off for this side of this peak
- Place "df" to replace a number: use the same sdt value as in basic shoulder detection (the first one does the same thing as the second one)

```
extn,3
                        extn.3
sigma, 0.4
                        sigma,0.4
sdtrl,0.1
                        sdtrl,0.1
                        sdtmh.NA
sdtmh,NA
                        sdtml,0.1
sdtml,0.1
                        sdtrlleft,NA,0.1
sdtrlleft,NA,df
sdtrlright,NA,0.08
                        sdtrlright,NA,0.08
                        sdtmhleft,#
sdtmhleft,#
                        sdtmhright,#
sdtmhright,#
                        sdtmlleft,NA,0.1
sdtmlleft,NA,df
                        sdtmlright,NA,0.1
sdtmlright, NA, df
```

Parameters

sdtrlleft: shoulder detection threshold for left side of the main peaks on rl spectrum sdtrlright: shoulder detection threshold for right side of the main peaks on rl spectrum ...other parameters follow the same pattern