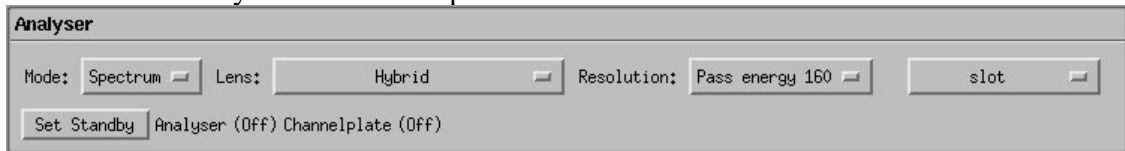
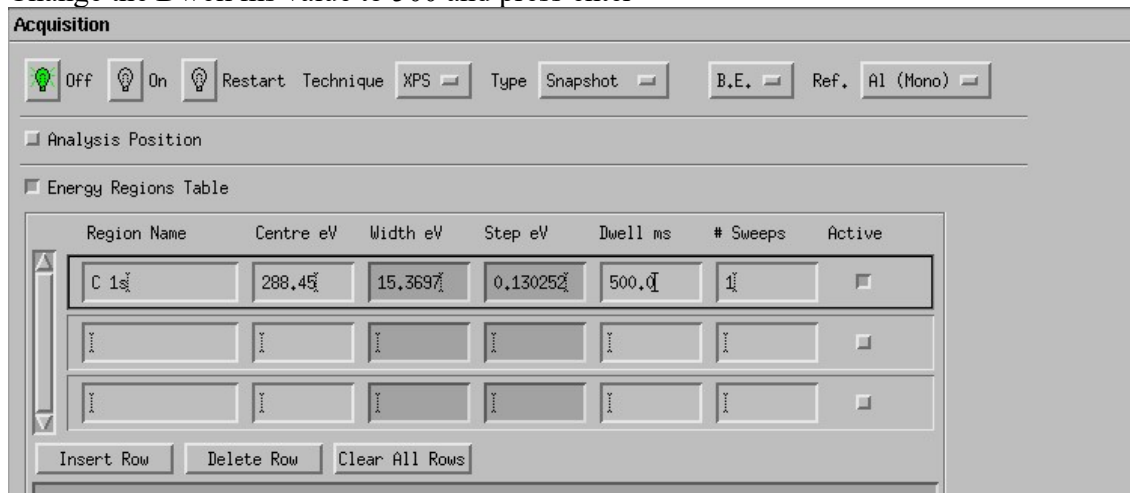


Optimizing Z for Spectroscopy Procedure

1. Go to the Instrument Manual Control Window
2. In the **Analyser** section, enter the following parameters:
 Mode: Spectrum Resolution: Pass Energy160
 Lens Mode: Hybrid Aperture: Slot

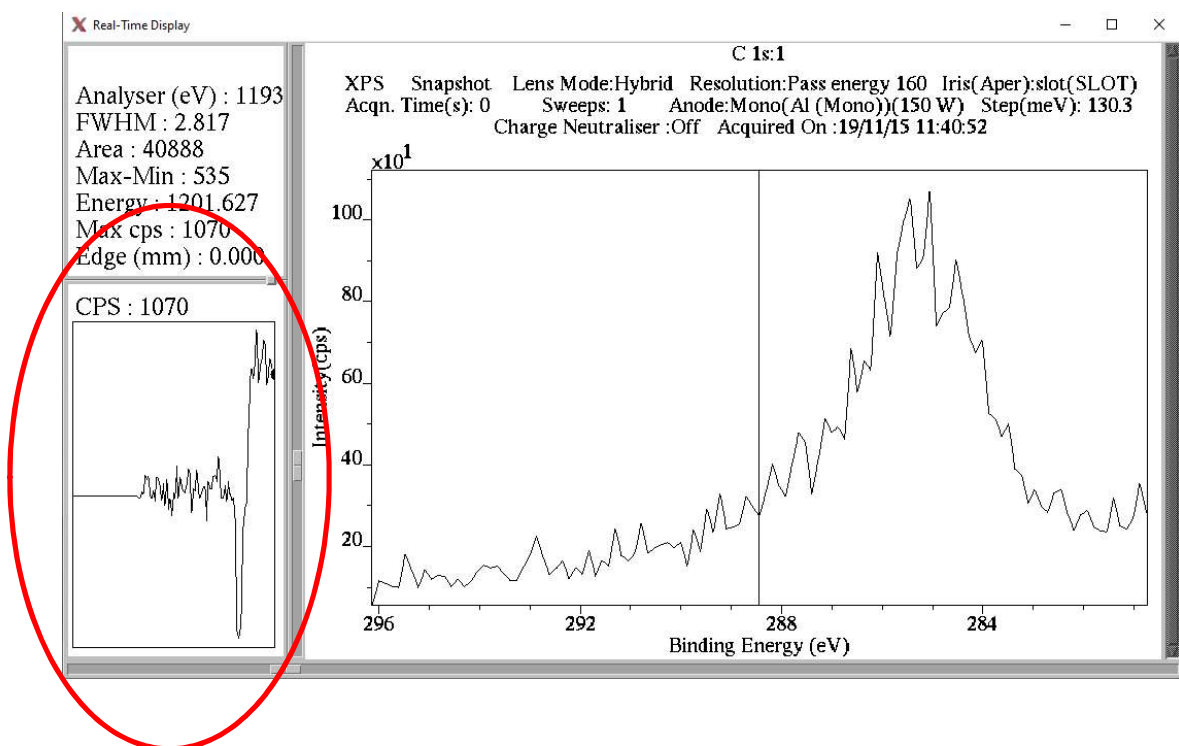


3. In the **Acquisition** section,
 - a. Enter the following parameters:
 Technique: XPS B.E. (Binding energy)
 Type: Snapshot Ref: Al (mono)
 - b. Select the “Energy Regions Table” box
 - c. Enter the energy peak to use for sample height optimization in the Region Name box (e.g., C 1s) and press enter. The region settings will automatically be entered when you press enter
 - d. Change the Dwell ms value to 500 and press enter



4. If the X-Rays are not on already, go to the Xray Gun section and manually ramp up the X-Ray voltage and current:
 - a. Set Anode HT to 6kV and Emission to 1mA. Always enter the voltage before the current, and remember to hit enter after typing in the numbers
 - b. Click the “Standby” light bulb and wait for light bulb to turn green
 - c. Click the “On” light bulb and wait for light bulb to turn green
 - i. Emission current should read 1mA and Anode HT (kV) should read 6kV
 - d. Set Anode HT to 10kV and Emission to 5mA
 - i. Emission current should read 5mA and Anode HT (kV) should read 10kV
 - e. Set Anode HT to 15kV and Emission to 10mA
 - i. Emission current should read 10mA and Anode HT (kV) should read 15kV

5. If the sample is non-conductive, turn on the charge neutralizer in the **Neutralizer** section
6. In the **Acquisition** section, click the “On” button to start the acquisition. If an acquisition had been previously started and stopped, you may need to click on the “Restart Technique” button first. After a delay, the green light bulb will toggle between off and on and a spectrum will appear in the Real Time Display Window
7. In the Real Time Display window:
 - a. Right click in the bottom left box and select Trace Counts
 - b. Right click again in the bottom left box and select Reset Trace
 - c. Observe the number of counts and manually adjust the Z height of the sample to maximize the CPS value.



8. In the **Acquisition** section, click the “Off” button to stop the acquisition.