Table 3.1 Pulser Calibration Data

Pulse Height Dial Setting	... ...	... ...
$^{100}/_{1000}$		
$^{200}/_{1000}$		
$^{300}/_{1000}$		
$^{400}/_{1000}$		
$^{500}/_{1000}$		
$^{600}/_{1000}$		

Exercise A From the data in Table 3.1, make a plot of voltage versus channel number. Figure 3.6 shows a typical calibration curve for this experiment.

2. Accumulate a spectrum in the MCA until reasonable statistics are acquired in all of the peaks of interest for the unknown.

3. Use the cursor of the MCA or one of the programs stored in the MCA to find the centroid and the number of channels across the FWHM for the unknown source.

4. Repeat steps 1-3 for the other unknowns that the instructor may wish to have analyzed.

Exercise A Determine the energy or energies of the alpha peaks in your unknown spectrum from the calibration curve.

EXPERIMENT 3.2

Using the Calibration Curve to Determine the Energy of the Unknown Alpha Source

Scope

The calibration obtained in Experiment 3.1 will be used to accurately determine the alpha energies of one or more unknown sources.

Experimental Procedure

1. Turn off the Bias voltage and slowly leak the vacuum chamber up to atmospheric pressure. This should take about 1 minute. Replace the ^{210}Po source with the unknown source that is supplied by the instructor. Pump the system back down and then turn on the Bias supply to its recommended value.