Figure 13.10. Electronics for measuring the mean life of the 14.39 keV state in ^{57}Fe (Experiment 13.3). The detectors used are a thin window NaI(Tℓ) for the 14 keV gamma and a 3″ x 3″ NaI(Tℓ) for the 122 keV start pulse.

keV line (fig. 13.7). When the window has been set, return the electronics to the configuration shown in fig. 13.10.

2. On the stop side, adjust the gain of the amplifier so that the 14 keV output is about 4 volts. Use the electronics in fig. 11.11 to set the ΔE window so that it brackets the 14 keV peak shown in fig. 13.11. After the gain and SCA #2 are set, return the electronics to the configuration shown in fig. 13.10. Remove the source and turn on the pulse generator.

3. Set the TAC on 200 nsec full scale time range. Set SCA #1 at minimum delay and SCA #2 at 150 nsec: The TAC output should occur in about channel 500 of the 1000 channel MCA. If it does not, adjust the delays in the SCA's so that it is stored about mid scale on the MCA.

4. Make a delay vs pulse height curve for the TAC. Plot the data and determine the time per channel for this 200 nsec range. Turn off the pulse generator and place the ^{57}Co source between the detectors.

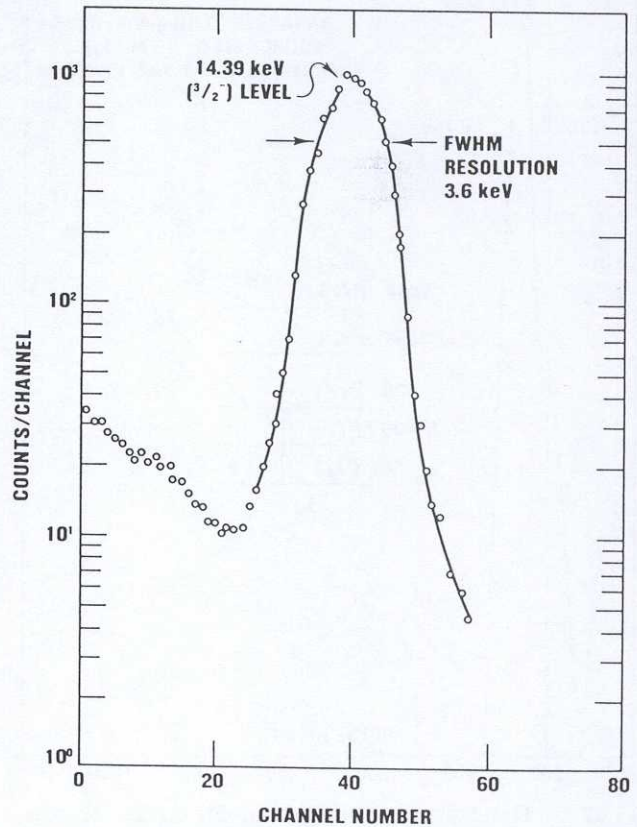**5.** Set the timer for a time of 600 sec and start the system counting.

Figure 13.11. Beryllium window NaI(Tℓ) spectrum of the 14.39 keV gammas from a ^{57}Co source.