Using NSCLDAQ and SpecTcl with a CAEN V775 TDC

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Revision History

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Chapter 1. Introduction

This document will show how to take data from NSCLDAQ, and analyze it with SpecTcl using a CAEN V775 32 channel TDC. We are going to:

- Show a simple electronics setup that will send test pulses into the V775.
- Show how to use the SBS readout framework to read events from the V775
- Show how to use NSCLSpecTcl to create raw spectra for the TDC online.

This paper assumes that you are at least somewhat familiar with Linux since the DAQ software runs on a Linux box. It also assumes that you a little familiar with C++. Finally it will be helpful if you know how to use an oscilloscope, as that will be needed to setup your electronics. All the code is available at: http://docs.nscl.msu.edu/daq/samples/caenv775/code.zip

Chapter 2. Setting up the Electronics.

Chapter 3. Creating the Readout program

Chapter 4. Creating the tailored SpecTcl

Chapter 5. Running the system.

Chapter 6. Taking the example further.

Appendix A. The full readout program.

Appendix B. The full SpecTcl program.

Appendix C. Scripts and other glue components.