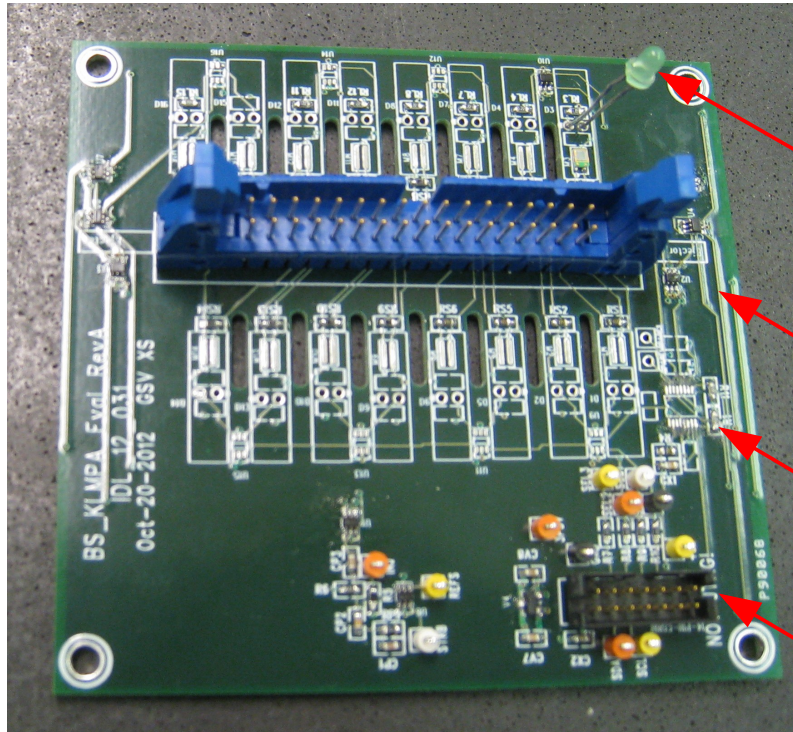


Preamplifier Test Hardware and Firmware Development

Brian Kirby and Xiaowen Shi
Nov. 2, 2012

Electrical/Optical Test Card

Partially Populated Optical Test Card



LED beside MPPC

32 pin connector

DAC chip (not present)

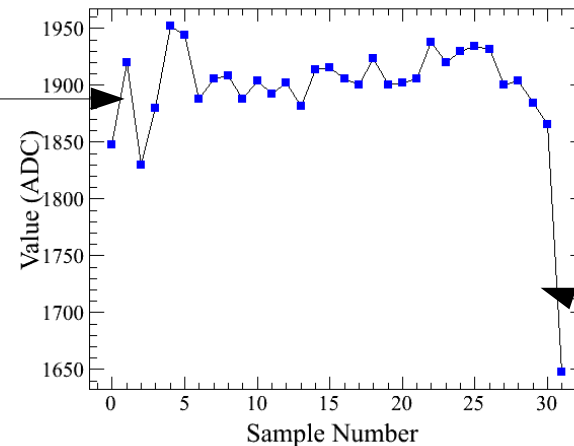
Power + serial interface

- Test card can be assembled to provide electrical or MPPC pulses to the TARGET4 inputs (can't provide both at the same time)
 - Schematics posted at:
http://www.phys.hawaii.edu/~idlab/taskAndSchedule/PCBs/PCBs_homepage.html
 - Will assemble 2xOptical card and 2xElectrical versions of the card
 - Still need to define interface between 32 pin connector on card and preamplifier board

TARGET4 Readout Firmware

- Firmware still under development for TARGET4 readout
- Had some success sampling a 70MHz sine-wave from a signal generator (see below)
- Need to implement triggered readout of MPPC pulses quickly, currently behind schedule!

No input signal waveform



Waveform readout when 70 MHz 400mV p-p input sine wave

