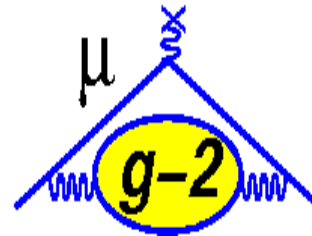


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WP3: Muon g-2 Calibration System Update

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Outline

- Asynchronous DAQ
- Local Monitor 2
- Laser hut cooling system
- IFG calibration studies

Asynchronous daq

- Needed to collect Am/NaI pulses for long-term stability studies
- We have reduced buffer lengths to prevent buffer overflows
 - Reduced Digitization Frequency (down to 100 MHz)
 - Reduced Waveform Length (down to WL=88)
 - Reduced Waveform Presamples (down to WP=16)
- We are nevertheless still getting occasional overflows, about 1 every 12 hours
- A programming fix is being worked on

Local Monitor 2

- All 24 PMTs ready (output set at -80 mV)
- Readout implemented on Naples electronics (Corradi card pre-amp abandoned)
- Two outputs from Naples pre-amps:
 - One processed further by Naples electronics
 - One available for sending to the Riders
- But only 10 channels available on the Riders
- Not yet working because of the failure of the Crate Controller, swap foreseen next January

Laser hut cooling

- Necessary to prevent HW failure due to overheating of the laser heads, which must work below 30 °C
- A cooling system was installed during the summer-fall shutdown
- Now the warmest temperature, on the table where the laserheads are placed, is presently stable at 26-27 °C

IFG calibration studies

- IFG functions appear to overcorrect the gain, possibly due to the fact that the laser system simultaneously irradiates all the SiPMs
- The phenomenon could be investigated by irradiating a smaller number of SiPMs
- This could be done by inserting an iris of an appropriate diameter between the launch fiber tip and the diffuser thereby reducing the number of irradiated SiPMs to a number comparable with physics data
- Work is ongoing