

DSG-RICH R&D Meeting

Date: December 13, 2021

Time: 11:00 AM – 12:00 PM

Attendees: Mary Ann Antonioli, Peter Bonneau, Aaron Brown, Pablo Campero, George Jacobs, Mindy Leffel, Tyler Lemon, and Marc McMullen

1. Backplane PCBs

Peter Bonneau, Mindy Leffel, Tyler Lemon, and Marc McMullen

1. Tyler Lemon performed an initial test on backplane PCB
 - 11 of 48 sensor channels did not work
2. Peter Bonneau and Tyler Lemon debugged backplane PCB, resolving issues causing the 11 channels not to work
 - Three bad channels were caused by bad ribbon cables from RMC to backplane
 - Three bad channels were caused by LabVIEW programming issues
 - Five bad channels were caused by shorts at inverter
 - Shorts were cleared by using a needle-point probe to clear solder
3. Peter Bonneau will lead an R&D effort to improve PCB's and chassis' indication of I²C communication status

2. Electronic panel cRIO issues

Tyler Lemon

1. All sensors in electronic panel stopped recording data
2. cRIO had a channel read timeout error
3. Upon restart, cRIO reported that all four modules in cRIO could not be found
4. Tyler Lemon prepared spare cRIO as a replacement
 - Replacement will occur Tuesday December 14, 2021
 - cRIO loaded with LabVIEW software and appropriate modules installed

3. Air-cooling buffer tank pressure transducer

George Jacobs and Tyler Lemon

1. Pressure transducer (PT) on air-cooling buffer tank is reporting ~ -800 psi in tank
 - Indicates that transducer has most likely failed and needs to be replaced
2. PT model: MKS 722B14TCD2FA Baratron General Purpose Absolute Capacitance Manometer
3. DSG has no spares on hand
4. In case Hall B Engineering does not have spares and there is a long lead time on an identical replacement, DSG will investigate potential alternative PTs

4. Tyler Lemon will arrange shipment of spherical mirrors and d0 test station to Composite Mirrors Applications in Tuscon, AZ

5. Design of chassis to house hardware interlock system components complete

Tyler Lemon and Marc McMullen

1. Marc McMullen will forward fabrication drawings to chassis fabricators