DSG-RICH R&D Meeting

Date: July 19, 2021 Time: 11:00 AM – 12:00 PM

<u>Attendees</u>: Mary Ann Antonioli, Peter Bonneau, Aaron Brown, Brian Eng, George Jacobs, Tyler Lemon, Marc McMullen, and Amrit Yegneswaran

1. <u>Spherical mirror shipment to JLab from Composite Mirror Applications, Inc. (CMA)</u> *Tyler Lemon*

- 1. JLab shipping authorization form submitted and signed
 - Allows Shipping & Receiving to officially start arrangement of shipping and insurance
 - Waiting on packaging dimensions to finalize arrangements

2. SHT35 sensor PCBs' production order to be placed

Peter Bonneau, Aaron Brown, Pablo Campero, Brian Eng, Tyler Lemon, and Marc McMullen

1. After order is placed, Tyler Lemon will ship SHT35 sensors on hand to Advanced Circuits.

3. Backplane PCB

Peter Bonneau, Aaron Brown, Pablo Campero, Brian Eng, Tyler Lemon, and Marc McMullen

- 1. PCB dimensions are currently 3.75" x 14", but the possible addition of components may increase its size
- 2. Tyler Lemon will investigate using RJ-45 ports' built-in LED indicators to indicate I²C communication—LED on during active communication and off when idle.

4. <u>RMC review in progress</u>

Peter Bonneau, Aaron Brown, Pablo Campero, Brian Eng, Tyler Lemon, and Marc McMullen

5. <u>RICH-II LabVIEW User Interface</u>

Pablo Campero and Tyler Lemon

- 1. Indicators and controls to add
 - 48 x 5 Boolean indicator array for SHT35's status readback
 - A 48-element control Boolean array for each of the following:
 - I²C enable
 - Heater on
 - Heater off
 - Read status
 - Clear status
 - Reset
 - Two single Boolean controls for all sensors
 - Clear all sensors' status
 - Reset all sensors

					Clear All Status	Reset All Reset	Δ	Heater Status	System Reset Detected	Command Status	Write Data Checksum Error	Status CRC Error	
	I2C Enable	Heater On	Heater Off	Read Status	Clear Status	Reset		Heat	Syste	Com	Write	Statu	
Sensor 1	ENABLED	Heater On	Heater Off	Read Status	Clear Status	Reset		-	•	•	•	•	[
Sensor 2	DISABLED	Heater On	Heater Off	Read Status	Clear Status	Reset		-	•	•	•	•	[
Sensor 3	DISABLED	Heater On	Heater Off	Read Status	Clear Status	Reset			•	•	•	•	
Sensor 4	DISABLED	Heater On	Heater Off	Read Status	Clear Status	Reset	1	-		•	•	-	[
Sensor 5	DISABLED	Heater On	Heater Off	Read Status	Clear Status	Reset	1	-	•	•		•	[
Sensor 6	DISABLED	Heater On	Heater Off	Read Status	Clear Status	Reset				-	•	-	
Sensor 7	DISABLED	Heater On	Heater Off	Read Status	Clear Status	Reset		-					[
Sensor 8	DISABLED	Heater On	Heater Off	Read Status	Clear Status	Reset		-	-	-	•	-	
Sensor 9	DISABLED	Heater On	Heater Off	Read Status	Clear Status	Reset		-	•	-	•	•	1
Sensor 10	DISABLED	Heater On	Heater Off	Read Status	Clear Status	Reset	1		•	-	•	•	1
Sensor 11	DISABLED	Heater On	Heater Off	Read Status	Clear Status	Reset	1	-	-	-	•	•	
Sensor 12	DISABLED	Heater On	Heater Off	Read Status	Clear Status	Reset	1	-	-	-	-	-	[
Sensor 13	DISABLED	Heater On	Heater Off	Read Status	Clear Status	Reset	1	-	-	-		-	[
Sensor 14	DISABLED	Heater On	Heater Off	Read Status	Clear Status	Reset	1	-	-	-	-	-	1
Sensor 15	DISABLED	Heater On	Heater Off	Read Status	Clear Status	Reset	1	-	1-	1-	-	-	[
Sensor 16	DISABLED	Heater On	Heater Off	Read Status	Clear Status	Reset	1	-	1-	1-	-	-	1
Sensor 17	DISABLED	Heater On	Heater Off	Read Status	Clear Status	Reset	1	-	-	-	-	-	1
Sensor 18	DISABLED	Heater On	Heater Off	Read Status	Clear Status	Reset	1	-	•	•	•	•	-
Sensor 19	DISABLED	Heater On	Heater Off	Read Status	Clear Status	Reset		-	•		-	-	1
Sensor 20	DISABLED	Heater On	Heater Off	Read Status	Clear Status	Reset		-	-	-	•	•	1
Sensor 21	DISABLED	Heater On	Heater Off	Read Status	Clear Status	Reset			-	-		•	1
Sensor 22	DISABLED	Heater On	Heater Off	Read Status	Clear Status	Reset		-		-	-	-	1
Sensor 23	DISABLED	Heater On	Heater Off	Read Status	Clear Status	Reset		-	-	-	-	•	1
Sensor 24	DISABLED	Heater On	Heater Off	Read Status	Clear Status	Reset		-	-	-	•	-	1
Sensor 25	DISABLED	Heater On	Heater Off	Read Status	Clear Status	Reset	1	-	-	-	-	-	1
Sensor 26	DISABLED	Heater On	Heater Off	Read Status	Clear Status	Reset	1	-	-	-	•	-	1
Sensor 27	DISABLED	Heater On	Heater Off	Read Status	Clear Status	Reset		-		-		•	1
Sensor 28	DISABLED	Heater On	Heater Off	Read Status	Clear Status	Reset		-		-	-	-	1
Sensor 29	DISABLED	Heater On	Heater Off	Read Status	Clear Status	Reset		-	-	-	-	-	1
Sensor 30	DISABLED	Heater On	Heater Off	Read Status	Clear Status	Reset	1		•				

Screenshot of sbRIO program's front panel as an example of controls and indicators needed on the RICH LabVIEW user interface.