

RICH Module 2 Planning Meeting Minutes

Date: November 23, 2020

Time: 10:00AM – 11:00AM

Attendees: Aaron Brown, Brian Eng, George Jacobs, Tyler Lemon, Marc McMullen, Marco Mirazita, and Valery Kubarovsky

1. Discussed detector assembly plans in relation to COVID-19

- 1.1. Goal is to start assembly before Summer 2021 with detector installation in Fall 2021
- 1.2. Ideally, assembly of new module will be in same way as previous module
 - 1.2.1. INFN collaborators will come to JLab for assembly and final tests
- 1.3. Contingency plan, including potential delay in assembly and installation, will be developed in case travel is not permitted and JLab is still in an elevated MEDCON state at scheduled time of assembly

2. Electronics

- 2.1. Approximately 240 PMTs on hand at JLab, being tested by Valery Kubarovsky
- 2.2. Procurement underway by INFN for Multi-anode Readout Chip (MAROC) boards and PMT adapter boards
- 2.3. FPGA board adapter will be procured by JLab

3. Aerogel

- 3.1. Manufacturing of tiles underway, with ~50 tiles expected to be ready to ship to JLab in a few weeks
 - 3.1.1. Shipment will be held until tiles can be received and safely stored at JLab
- 3.2. Aerogel testing equipment procured by George Washington University (GWU), but it has not been set up due to COVID-19 travel restrictions; if INFN cannot set up equipment, aerogel most likely will not be tested at GWU

4. Planar mirrors

- 4.1. Expect shipment to JLab in a few weeks
- 4.2. Requested that DSG to check condition upon arrival and store mirrors in small clean room
- 4.3. No optical acceptance tests are needed
- 4.4. Dimensions and fit of mirrors on mounting structure should be verified when all components are received

5. Spherical mirrors

- 5.1. New mold for mirror production had to be fabricated
- 5.2. First mirror delivery expected Spring 2021 at the earliest
- 5.3. Support structure for mirrors will be fabricated by a new company to save cost; expected delivery to JLab in February 2021
- 5.4. D0 test, Shack-Hartmann measurements, and reflectivity measurements will be performed at JLab

6. Detector mechanical structure

- 6.1. Assembly tests currently underway in Italy by INFN; expected to conclude this week
- 6.2. Components expected to ship by end of 2020 and arrive at JLab in early 2021
- 6.3. Requested that DSG check and verify components upon arrival and determine best storage location for crates

- 6.3.1. Large crates do not need to be stored in cleanroom
- 6.3.2. DSG will discuss potential storage areas with Walt Akers

7. Discussed procurement of new aerogel storage dry cabinet

- 7.1. Brian Eng will debug and troubleshoot current XDry cabinet to see if it can easily be repaired
- 7.2. If XDry cabinet cannot be repaired, Tyler Lemon will continue discussing quote and options with Super Dry
 - 7.2.1. Quote will include one main dry cabinet bay, one expansion bay, and an adequate number of shelves for aerogel storage
 - 7.2.2. Hall B will procure new cabinet

8. Interlock system for new module

- 8.1. Same number of environment sensors needed as previous module—16 temperature sensors and 16 humidity sensors
- 8.2. Will need monitoring of nitrogen flow and airflow
- 8.3. Interlock system will be needed when electronics assembly occurs for testing

9. Air cooling compressor has been procured

- 9.1. Compressor will be installed in Hall B in February 2021
 - 9.1.1. Compressor usage will be prioritized towards running RICH module 1 to acquire physics data
- 9.2. Because cooling will be needed during assembly and electronics testing, an old compressor may be moved to EEL during assembly