

NPS Collaborator's Meeting

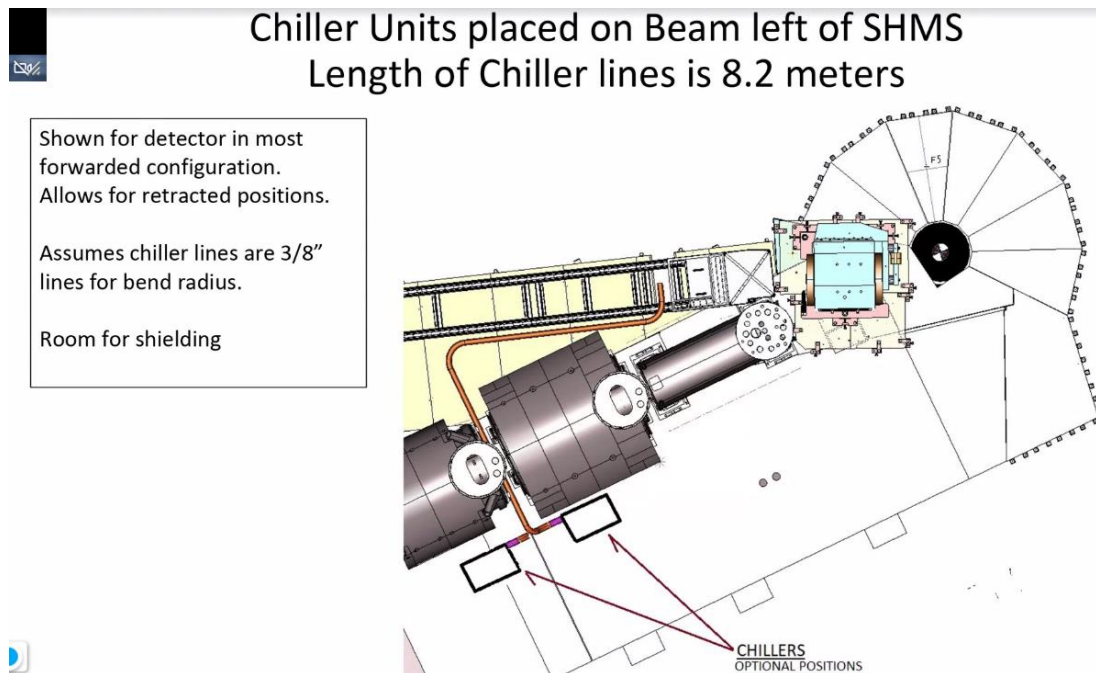
Date: October 29, 2020

Time: 9:00AM – 10:00AM

Attendees: Vladimir Berdnikov, Marie Boer, Aaron Brown, Alexandre Camsonne, Rolf Ent, Tanja Horn, Charles Hyde, Steven Lassiter, Hamlet Mkrtyan, Carlos Munoz-Camacho, Gabriel Niculescu, Julie Roche, Brad Sawatzky, Vardan Tadevosyan, Bogdan Wojtsekhowski, and Carlos Yero

1. Detector Frame Assembly

- 1.1. Carlos Munoz-Camacho presented information about [temperature sensor placement](#) in the crystal zone and the readout instrumentation for those sensors
- 1.2. PMT housing being assembled and packed for shipment to JLab
- 1.3. Cooling fans being tested
 - 1.3.1. Carlos Munoz-Camacho will provide more information on fans, specifically if it's possible to read speed
- 1.4. Plan to place chillers (as well as temperature readout instrumentation) behind SHMS magnets to provide shielding
 - 1.4.1. Distance from detector would be ~8 m
 - 1.4.2. Steven Lassiter showed two proposed locations



2. DSG Update

- 2.1. Presented [NPS Collaborator's Meeting](#) DSG Update
- 2.2. Mindy Leffel has fabricated 950 of 1100 HV divider cables
- 2.3. All components to fabricate 140' multi-conductor cables have been ordered; no change in shipping status or expected delivery dates
- 2.4. All CAEN HV stability and current trip testing is complete; EPICS ramp testing has started

- 2.5. PMT and crystal numbering will be done in the same manner
 - 2.5.1. Equation to map PMT number to PMT position:
$$\text{PMT pos \#} \vee \text{Crystal \#} = n \times 36 + m; n \in [0,29] \wedge m \in [0,35];$$
where n is column number and m is channel number
- 2.6. Discussed which color rules for LEDs will take precedence if there are multiple faults at the same time
 - 2.6.1. DSG is exploring solutions for this (including a possible blinking pattern)
- 2.7. DSG is researching temperature sensor readout instrumentation
 - 2.7.1. Carlos Munoz-Camacho is using a Keysight model 34980A mainframe and model 34921A multiplexers to read temperatures from K-type thermocouples
 - 2.7.2. DSG has decided to use 4-wire RTDs that could also be read out via the Keysight mainframe and multiplexers
 - 2.7.3. Researching how to integrate the Keysight mainframe into the interlock system

3. Fast Electronics

- 3.1. There has been no resolution of components not having proper voltage ratings; multiple solutions still being considered