

18th Summary of Meeting for S1-Global module design, Cryomodule and Cryogenics (20090804)

Date: 2009/08/04

Time: 22:00-23:00 (Japan Time)

Attendant: Jim Kerby, Don Mitchell, Paolo Pierini, Serena Barbanotti, Eiji Kako, Hiroataka Nakai, Hitoshi Hayano, Tetsuo Shidara, Akira Yamamoto, Norihito Ohuchi

All presentations are unloaded in the INDICO site:

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Agenda

1. Report Module-C works at Zanon (Norihito Ohuchi)
2. S1-G delivery from FNAL (Don Mitchell)
3. FNAL cavity dressing schedule (Jim Kerby/Tug Arkan)

Discussion

(1) Report of Module-C works at Zanon (Norihito Ohuchi)

- Y. Kondo and N. Ohuchi (KEK) and A. Bosotti (INFN) worked at Zanon from July 27 to 31 for setting sensors on GRP.
- Installed sensors:
 - 8 PtCo resistance thermal sensors on GRP/ 4 PtCo sensors on 5K plate of support post
 - 4 Cu-Constantan thermocouples on 80 K plate of support post
 - 5 WPMs on GRP
- 3 PtCo sensors and 3 CC sensors could not be installed on the 5K and 80K thermal shields (upper plates). They will be installed after transporting these components to KEK.
- The vacuum vessel was worked on welding the coupler windows, and the process was on schedule.
- The Module-C components will be completed in the middle of September. Norihito plants to visit Zanon for confirming the final construction of the Module-C.

(2) S1-G delivery from FNAL (Don Mitchell)

- The presentation is the updated hardware with the magnetic shielding. See the pictures which were made by JT file.
- The magnetic shielding is assembled with aluminum tapes.
- For the extra shielding between FNAL and DESY cavities, the diameter of the shield has a good match with DESY cavity and the length of overlap by FNAL and DESY cavities is 10 mm.
- The JT file will be shipped, and all delivery components are shown.

Q: For assembling the shielding of FNAL cavities, will only aluminum tapes be used? No bolts and nuts?

A: Between FNAL shielding and DESY shielding, aluminum tapes are fine for assembling. DESY shielding plates are settled by aluminum tapes with screws. FNAL cavities use M3 screws.

Q: In this view graph, is the right side up-stream for S1-G? Electron comes from the right end side.

A: Yes, the FNAL cavities locate at up-stream side of the cryomodule.

C: The delivery components should be double checked from the JT file by KEK.

Q: Are the FNAL cavities the ILC-type? How many changes are there?

A: The cavity is the ILC-type, and the changed components are bellows and the magnetic shielding. The changes are not big deal.

C: The copper heat sinks come from INFN.

Q: How is the design between the cavity flange and KEK gate valve? The connection flange design is different from the design of connection flange of the FNAL cavity.

A: For the design of the transition ring from the FNAL cavity to this gate valve, FNAL need the drawing of the gate valve.

A: KEK will send the drawing of the gate valve.

(3) FNAL cavity dressing schedule (Jim Kerby/Tug Arkan)

- The HTS of AES1 is scheduled for first two weeks in September. The installation of cavity in HTS will be for three days in the end of August.

- The AES4 is behind of AES1, and September 7 is the Labor Day. The three weeks after this day is good for visiting FNAL, but this schedule is during the SRF workshop in Berlin.

- It is early to decide the schedule of visiting to FNAL, and it is good time for this at the ALCPG09 in Albuquerque.

Q: Is the high pressure system in Argonne well?

A: Bacteria problem was resolved. There still exist the control issues.

Q: The installation of AES1 into HTS is scheduled from 31 August, and when will cooling down of HTS start?

A: The cooling will start September 8 earliest.

C: The tests of AES1 and AES4 will not be overlapped. Tug is now concentrating on the AES1 test.

C: Eiji Kako (KEK side) should inform the available days for visiting FNAL.

Q: During the HTS test of AES1, will FNAL do the preparation of the HTS test for AES4?

A: FNAL has one HTS, and then during the test, the preparation of installing AES4 into the HTS will be going.

Q: Can KEK people see both the test and the preparation of installation process?

A: Eiji should teach the exact schedule for visiting to Jim, and Jim will check the schedule of test and the preparation schedule.

Q: When is the assembly period of CM2?

A: Earliest, it will be February and March in 2010.

C: The schedule is almost same period for assembling S1-G cryomodule in KEK. The coupler assembly by DESY people might conflict between these two cryomodule.

C: FNAL is not sensitive yet for this issue. For the first couple of cavities, there are a lot of uncertainty and difficulties. At present situation, it is considered that there exists a direct conflict between two cryomodules.

C: Akira asked Hanse via Nick to help the coupler assembly for the S1-G cryomodule. Now, it is holiday time, and then the response from Hanse is being waited.

Next meeting date

Meeting Date: 25 August 2009 22:00 (Japan time), 8:00 (FNAL), 15:00 (INFN and DESY)

- Updated schedule of FNAL cavity assembly and tests, and KEK visiting schedule (Jim Kerby /Tug Arkan / Eiji Kako)
- FNAL and KEK cavity assembly tools (Tug Arkan / Eiji Kako)
- Others