

MINUTES OF THE WEEKLY WA104 TECHNICAL MEETING – 03/05/2017

Convener at CERN: Claudio Montanari

Present at CERN: Maurizio Bonesini, Tommaso Cervi, Gian Luca Raselli, Massimo Rossella, Alberto Scaramelli, Andrea Zani

Present on Vidyo Connection: Linda Bagby, Andrea Falcone, Angela Fava, Fernanda Garcia, Umut Kose, Paola Sala, Anne Schukraft, Maura Spanu, Bob Wilson

The Indico page of the event is: <https://indico.cern.ch/event/636596/>

Montanari summarises recent news: there was a meeting on procurement to be performed from INFN in the morning before the meeting. The transport of the T600 will take place no sooner than end May/beginning of June. The work on the warm vessel at FNAL started the day before the meeting: bolting of the walls will take around two weeks, then one week will be spent on welding. Montanari will be at FNAL from the 19th to 25th of May to discuss, among other things, welding protocols.

Scaramelli then starts a review of the items that need to be completed (in terms of documentation) for the upcoming electrical safety review at FNAL, as shown below. The reference document is an excel spreadsheet prepared by Bagby and loaded on docdb (#1466, v7): <https://sbn-docdb.fnal.gov:440/cgi-bin/ShowDocument?docid=1466&version=7>

- Concerning the laser system, Bonesini has no updates. Bagby states that the FNAL Laser Safety Officer (LSO) is aware of the fact that the documentation for this system will arrive along with the hardware, and he is ok with that. This could simply imply a little more time for approval.
- TPC warm readout: Bagby states that what is missing for the review is schematics, gerber files and documents for the new flat circuit and power distribution card of the power supply. Fava states that the power supply itself will arrive at CERN on the coming Monday, to be then shipped to FNAL. Documentation will arrive later, as the Padova group concentrated on completing the hardware first. All documents (also including specs. for the mini-crate fans) should anyway arrive within mid-May. Bagby suggests to put into the documentation also all the tests carried out in Padova by Marino Nicoletto's group on the flex circuit. Zani, with Scaramelli and Guglielmi will figure out the fastest way to ship the power supply to FNAL through CERN. Scaramelli suggests to review the full chain of warm TPC readout electronics after the safety review, at around end of May.
- TPC wire bias: documentation of filters and distribution system is not available yet. The responsible person is still to be identified
Concerning the decoupling boards, Scaramelli states that the coming week the documents will be ready, then it will take two months for production and one for tests. Fava asks why these boards must undergo the safety review, since they are inside the detector. Bagby replies that she must check ratings are correct, and anyway they are part of the biasing circuit.
- TPC wires calibration: this item is not object of the safety review.
- Cathode HV distribution: Franco Sergiampietri has already provided documentation, that Bagby will review soon in order to identify possible missing parts. Montanari asks if Sergiampietri has also provided a calculation of the maximal energy release in case of discharge. To be verified.

- PMT electronics: the items to be reviewed are the VME crate and HV power distribution, however Nicoletto has provided the needed documentation and Raselli will make it available shortly. The only missing item is the specification of the warm cables, but since they are standard RG58, Bagby states that there is no need for it.

Concerning the trigger, Raselli states that he is still in the process of choosing a suitable board, but that is not needed for the review. On the other end, the adapters are subject to the review, but they have not been chosen yet.

- CRT trigger: Bagby states that after meeting with Sala and Kose, she thinks she has everything she needs for the review, as the design is the Bern one, also used in SBND. Kose points out that the design is actually slightly different, and he will provide documentation as soon as possible.
- Slow control: not subject to the review, will be discussed after the summer.
- Grounding and AC distribution: Bagby states that this is her responsibility, and it is moving along.
- RPS: again, Bagby's responsibility. She ordered 10 units, to be assembled in May. Two are already used for network and communication racks.

Bagby then asks which the next priority should be. She suggests the PMT electronics, but since that is mostly standard commercial material, it does not actually need a review. On the other end, the "most custom" item is the HV cathode distribution, as it features a custom filter. This is set as next priority.

Scaramelli concludes the meeting by re-stating that the next meeting on all the discussed items should be scheduled after the FNAL safety review, around end of May.