Hi all,

 Here are the minutes from today's meeting.

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o Source test data taking comparison between NI-Standalone and Felix <Genki>

- Source test results for FEM and FELIX based data acquisition are compared. As reported previously, the FELIX data so far show expected behavior while FEM based data show awkward behavior here an there.

- One of the hypothesis to explain why FEM based data show some dip structure in the BCO distribution is perhaps because of its internally generated clock within FEM-IB. If this clock generator is interfered with data taking, it may cause unevenness to the clock.

- It will be nice if we continue to pin down the cause of the incompleteness of the FEM base data acquisition though, we shouldn't spend limited man power on this. Since the FELIX demonstrates satisfactory so far, we should focus our resources on developing FELIX readout system.

- The ultimate way to confirm the FELIX system reads every single data supposed to be readout from a ladder is the calibration. Given the calibration pulse injected, we will know exactly what data to be readout. This requires to read the calibration script coded within ROC FPGA. This is out of scope for Raul, so we have to look into by ourselves. Otherwise, we have to ask for help to outside our group. **Any volunteer** is welcome to look into calibration block of the ROC FPGA code.

- **Rachid** will talk to Jack Freed to arrange the meeting with Raul to get start development for necessary online/control tools based on FELIX system without interfering Raul's development. For this meeting, presence of Martin may be useful. **Itaru** and **Rachid** will discuss the scope of the meeting and decide.

- The online/control codes including GUIs have to be developed within the sPHENIX DAQ framework. **Itaru** and **Rachid** will make sure to establish the environment to develop these codes.

- Rachid is already requesting a quote for the server for the 2nd FELIX test bench. The estimated lead-time is 2 months. The present goal is to get the 2nd test bench by this Summer so that these software developers start working on it.

o Low MIP position issue at bias voltage 50V <Cheng-Wei>

- **Cheng-Wei** posts slides on agenda page.

- Previous bias voltage vs. MIP peak was irrelevant because of different DAC value coverage of ADC bins. New measurement was executed using the external trigger by the punch thru beta-rays by stacking source-ladder-scintillator order.

- The translated depletion depth for the 50V operation bias voltage appeared to be 297um which is 23um thinner than full depletion 320um. The translation is provided by the

complement fit function on the Hamamatsu's CV measurements.

- The fully depletion voltage is typically around 60V according to Hamamatsu's measurements. **Cheng-Wei** should make the full depletion voltage distributions of all silicon sensors. This should be included in the silicon database which can be useful to be quoted during the INTT operation (in case we have to compromise the operating voltage for silicons draws relatively large dark current).

- Cheng-Wei attempted the DAC scan with the source, but it turned out to be unfeasible. Unable to observe the MIP peak, presumably due to broad energy distribution of 90Sr source and wide spread of the beta ray track.

- The mystery remains after all study we made. We'll pend this issue for now until we come up with new idea which is worthy to try.

o Taiwan Assembly <Wei-Che>

- The assembly of 40 ladders were completed by now. The gantry will be cleaned up since we have no plan to assemble more ladders.

- 16 more ladders to go for the performance valuation by the calibration data taking.

o Production Status <Itaru>

- All INTT memebers have to take DE&I training. Consider participate in coming collaboration meeting, Summer school, RBRC workshops.

- The prototype-II IPEX based conversion cable fabrication is ahead of schedule and expected to be available around May 20th. We'll test it in RIKEN immediately and then forward them to BNL right away for engineering study by Dan. At least one set of cable is to be sent to TIRI for performance data taking of the NIM article.

- Itaru will be traveling to BNL from May 9th to May 29th.

Best regards,

-itarru

On 2022/05/04 12:00, Itaru Nakagawa wrote:

Dear all,

We'll have the weekly meeting in following time.

May. 5th Thursday 9PM in BNL = May 6th Friday 10AM in Japan = Friday 9AM in Taiwan

*indico

https://indico.bnl.gov/event/15657/

*Zoom

https://zoom.us/j/92149923535

Best regards,

-itaru

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Sphenix-intt-l mailing list
Sphenix-intt-l@lists.bnl.gov
https://lists.bnl.gov/mailman/listinfo/sphenix-intt-l