Hi all,

Here are the minutes from today's meeting.

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o Prototype-II micro-coax conversion cable <Itaru>

- Presented board designs of both ROC and BEX ends. The design was approved by the participants, so **Itaru** will give a green light to Hayashi-REPIC for the fabrication.

- **Itaru** makes sure G10 backup on the connectors. → Actutally no. There is no G10 pasted on the conversion cable connectors unlike BEX cable. Layer-8 is the layer DF18 pairs are to be implemented. This layer will face to the BEX connector.

o Bias voltage dependent silicon signal amplitude <Cheng-Wei>

- **Cheng-Wei** try to superimpose the Hamamatsu's C-V curve on top of the actual observation to see how it is consistent with the Hamamatu's data.

- The sqrt formula is only valid for ideal infinite silicon thickness. **Cheng-Wei** should look for the literature at the realistic/empirical formula for the finite thickness of silicon.

- The offset value 200 or 280mV has been remains open question. This is a good chance to pin this down.

- **Cheng-Wei** should provide the Laudau+Gaussion fiitting code to NWU.

- **Cheng-Wei** should check if the relativistic rise is implemented in the GEANT (or software switch to activate it if there is any). The purpose of this study is to know if there could be different dE/dx between ~1GeV cosmic ray, 120GeV proton, and 800 MeV positron.

- **Cheng-Wei** should check the Bethe-Bloch's formula for expected dE/dx for a few MeV electrons as well.

- Itaru proposed cleaner measurements by the external trigger setup source-ladder-scintillator layout.

- After the meeting, Itaru realized the the entry of each ADC distribution bin should be normalized by the width of the bin as a fair comparison. If the DAC is only assign 1 ch for DAC0, then the entry of this bin will be very small which results in forming an artificial peak at the 2nd bin in the ADC distribution.

o Beam test analysis <Cheng-Wei>

- Keep the edge cut by 5 channel.

- The definition of the hit search window doesn't depend strongly to the width, so Cheng-Wei should focus to estimate the in-efficiency outside the window. This involves the thickness of the tail and possible noise hits.

- **Cheng-Wei** should study noise hits based on the measurements. Noise hit rate at given hit

rate or estimate rate from away side chip from the beam spot.

o <Rachid>

- Should make an action to setup 2nd Felix readout system in the BNL test bench so that Raul can develop while we use the system. We'll discuss in the stuff meeting next week.

- Inner carbon parts are planned to be shipped by May 9th or so. The barrel assembly will be started around middle of May.

- Genki/Rachid should count available 20 conversion cables in BNL and let us know how many additional conversion cables are needed for the barrel testing. Then each institute try to manage to send their spare cables to BNL.

o Taiwan ladder assembly <Wei-Che>

- The assembly will be completed within a week, and all testing will take another week. So the Taiwan ladders to be ready by the end of April.

- **Rachid** will inform us when BNL can accommodate more ladders from Taiwan.

o Source test <Genki>

- **Genki** should use massive shield cable to improve the propagated noise from the controller box.

- **Genki** will mask the dead channel and take data to see if the less yield around the dead channel is caused by the dead channel.

- The plan is to take a source data using Felix readout in near future.

Best regards,

-itaru

On 2022/04/14 20:19, Itaru Nakagawa wrote:

> Dear all,
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> We'll have the weekly meeting in following time.
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> **April. 14th Thursday 9PM in BNL = April 15th Friday 10AM in Japan = Friday 9AM in Taiwan**
>
> *indico

> https://indico.bnl.gov/event/15441/
>
> *Zoom
>
> https://zoom.us/j/92149923535
>
> Best regards,
>
> -itaru