

Minutes of WP-meeting 358

Attendance:

Zoom: Paul Colas, Ralf Diener, Ulrich Einhaus, Serguei Ganjour, Jochen Kaminski, Claus Kleinwort, Uwe Krämer, Paul Malek, Jurina Nakajima, Oliver Schäfer, Ron Settles, Aiko Shoji, Jan Timmermans, Maxim Titov, Keita Yumino

General News:

Maxim has submitted a general LCTPC abstract to VCI 2022, which will take place (most probably in a hybrid format) in February 2022. Peter Kluit will submit an abstract on the GridPix test beam to the ILCX2021 and Paul will submit an abstract on the cooling tests. There is also a FCC-France workshop early December 2021 at LAPP, Annecy, where a joint FCC-ILC discussion session is planned (co-organized by FCC and ILC proponents).

There will be a multilateral JP/US/UK/FR/GE discussion at the Ministry and FAs level during the week of October 11-15. On a political side, the general elections in Japan will take place end of October. Meantime, the new Head of LDP ruling party - Fumio Kishida was elected. The newly elected Minister of Finance of Japan - Shun-Ichi Suzuki is coming from Tohoku area and was one of the active members of the ILC Diet Federation.

End of next week there will be a meeting and discussion of MEXT with representatives of the US, German and French governments. However, no decisions will be taken before the general election. There have been several changes in the Japanese government since prime minister Abe retired. In particular the new designated finance minister is a strong supporter of the ILC. But because of his new duties, it is not obvious if this is good news for the ILC as other priorities may force him to be more neutral.

Keita reported that the COVID-19 numbers are falling again in Japan and people are allowed back to work at KEK.

Kees has defended his thesis and Jan has created a link to his thesis on the WPmtgs indico page. Uli has also handed it and is searching for a defense date.

PCMAG/LP setup, test beam:

Ralf: Test beam schedule:

- Next week there is a maintenance week and Paul and Serguei will come on Monday evening to do cooling tests with the 3D printed aluminum cooling unit. Ralf is preparing TRACI for this. He works together with the ATLAS technicians, who are building a new 2pCO_2 cooling unit called LUKAS.

News from the groups:

Oliver has continued testing the field shaper foil and the resistors. After noticing that there is a large, time dependent distortion in the resistor measurements, he tried placing the field shaper foil on different surfaces: An ESD mat for example had a too low surface resistance and wrong values were measured. So far the best option seems to be a bare wooden table. Oliver tested several resistors and all were within 50 Ohm of the same value. He will do a systematic measurement soon.

Jan reported that he had studied the trigger response at the beginning of the GridPix test beam. He had studied the rate of different coincidences to determine the individual detection efficiencies of the 4 scintillator + PMT combinations. The efficiency was varying and the best two scintillators had an efficiency of about 55%, giving a coincidence efficiency of 31 % only. After the meeting Jan was able to dig up some slides made by Ryo Yonamine (then KEK) dated 9 November 2008(!). As far as Jan remembers, these were not shown at a WP meeting then. From these slides (page 4) the response of the 4 (+1 spare) scintillators to a Sr source looked much more uniform than during the beam test. The slides have been uploaded to the current Indico page. The low efficiency mostly does not matter, if one runs the detector readout in a triggered mode and the rate is not important. However, as the Timepix3 runs in a self-triggered/open trigger mode, all data is collected and there are many tracks recorded without giving a trigger signal to the telescope. To improve the efficiency one could raise the voltage on the PMTs a bit, but not too far, as the PMTs are prone for discharges. One could also strip the scintillators and look if the material has cracks and if the connection to the light guide and from the light guide to the PMT are okay.

One could also use the test beam telescope scintillators for a test and mount them as trigger scintillators.

AOB:

The next workpackage meeting will take place on October 21st.