[Eic-projdet-tic-l] TIC meeting , June 17, 2024 (backward ECAL, ITS3 Testbeams at LBL, Tracking Mechanics) - main outcome

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Dear Colleagues,

this e-mail is to underline the main outcomes of the June 17 TIC meeting,
dedicated to (i) the backward ECAL, (ii) the ITS3 Testbeams
and (iii) the Highlights of the 12th Forum on Tracking Detector Mechanics.
The careful and informative reports from the speakers have been greatly appreciated.

(i) The backward ECal

The long path of the development started in 2015 has been shortly recalled,
in particular mentioning of a set of past testbeam exercises.
The specific activity for the ePIC backward ECal started 3 y ago, with focus on defining the mechanics and
the coupling with the electronics. The mechanical design is well advanced including
the concept for the assembly strategy.
Two options for the electronics are being studies, the one with discrete components ("ADC" option)
and the integrated one with CALROCs. The two options will be studied in a testbeam at Desy at the end
of October-beginning of November, 2024.
The opportunity to test with lower energy particle at MAMY is under consideration.

(ii) The ITS3 Testbeams

The very recent ER1 BabyMOSS test-beams by LBL/UCB at FTBF and BASE
have been presented, while the out coming results of these studies will be reported at a later time.
BabyMOSSes are portion of the wafer-size ITS3 sensors.
A babyMOSS telescope was tested with cosmics and
a 7-plane one was commissioned at the Fermilab Test Beam Facility.
The spatial resolution results consistent with expectation and
the cluster size dependence on incident angle has been also addressed.
A second testbeam will take place end of June-beginning of July.
The sensitivity to Single-Event Lutchup (SEL) has been studied at Berkeley Accelerator Space Effects Facility.
Further data will come from an exercise in July.

(iii) The Highlights of the 12th Forum on Tracking Detector Mechanics

The rich report has covered all the main areas of the workshop FTDM '24
at Purdue (https://indico.cern.ch/event/1336746/).
The attendance has been of ~60 participants with equal splitting between
engineers vs physicists. The work was organized over 3 days including a poster session and R&D sessions,
with long talks and ample time for discussion. A whole satellite session was dedicated
to mechanics for ePIC, including also cooling.
The ITS3 sensor support and cooling were discussed in a session dedicated to the ALICE upgrade.
The EIC-LAS module arrangement was also discussed.
Examples of past non-successful mechanical implementations have been presented and analyzed:
lessons to be learned.

If this notes need corrections/integration, please, write me back.
Thank you.

Best greetings, Silvia

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