Subject: TIC meeting , July 1st, 2024 (TDR effort, progress (far backward); slow control strategies) - main outcome
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Dear Colleagues,

this e-mail is to underline the main outcomes of the June 3 TIC meeting,
dedicated to (i) TDR effort, progress (far backward) and
(ii) Slow control strategies.

The careful and detailed reports by the speakers have been appreciated.

(i) TDR effort, progress: far backward

The report is limited to the Luminosity system, as a detailed report about TimePix4 was provided at the previous
TIC meeting on June 24.

Important progress is registered for the LUMINOSITY mechanical and integration system,
with contributions from JLab designers and engineers from
the U. of York.
A luminosity calorimeter prototype (Tungsten and SciFis) is in preparation and the various steps have been illustrated.
Also the read-out for the prototype is under realization with support from JLab.
The option of pixelized AC-LGADs for the trackers of the pair spectrometers
instead of strip-type AC-LGADs is under consideration.
The central high-rate calorimeter will be, in its initial version, of the same technology as those of the pair spectrometers.
For higher luminosity, SciFi will not be able to stand the radiation and will be replaced
with quartz fibers. Also the read-out will need to be upgraded.
A dedicated event generator to study the high rate calorimeter was developed
and a paper describing it and the obtained results is in preparation.

(ii) Slow control strategies

The principle line of the project proposal for the slow control has been illustrated. It is based on the opensource
EPICS software tools, while the hart of the hardware is a set of PLCs, which will issue interlock and apply slow control
commands. Data from the slow control system will also be acquired by the DAQ system to be included in the

output data stream. The needs of a more advanced conceptual model, a centralized PLC software development
and a better defined model of interplay between the slow control and the DAQ architecture
have been put in evidence. The possibility to form a slow control-dedicated task force
when the model is more mature has been mentioned.

Two example of strategies for calorimeter slow control have been presented.
For the forward ECal, the model is the slow control integration is STAR FCS SC.
For the barrel HCal, the list of parameters to be monitored is presented from the experience in sPHENIX
including temperature and leak currents. Special dedicated runs with LED, cosmics and test pulse are
periodically collected.

David Tlusty, attending the meeting and currently involved in the STAR slow control system,
has anticipated his plane to contribute to ePIC slow control, receiving a warm welcome.

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

Best greetings, Silvia

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