

Subject: TIC meeting 10/16, 2023 dedicated to far detectors, main findings

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Dear Colleagues,

the TIC meeting on Oct. 16 (<https://indico.bnl.gov/event/20551/>) has been dedicated to the far detector subsystems, in particular to the backward sector.

An overview of the far subsystems has been provided by the project CAM, including the requirements for physics and the evolution of the subsystems, in particular comparing the version in IP6 and the one being considered at present for ePIC. The main differences between these two versions are reported here.

- low Q^2 taggers, silicon sensors coupled to timepix instead of AC-LGADs (more information in the dedicated report), W/SciFi instead of PbWO4 (as for luminosity measurements); the possibility of a secondary vacuum is an open question;

- luminosity measurements, AC-LGAD now in strip version; no longer PbWO4 replaced by W/SciFi in the luminosity pair spectrometers and W/SciFi or W/quartz fibers in the direct photon detection (for the pair spectrometers, see also the dedicated report which followed at the TIC meeting)

- far forward, option to replace PbWO4 crystals with Lyso in B0

- ZDC, the whole design is after investigation as discussed at the TIC meeting on Oct. 9

main points of attention:

- the activity for the pair spectrometer is organized in detail with defined work sharing; this is positively remarked;
- it has been noticed that the timepix is not used elsewhere in ePIC; the need to introduce one more technology has to be further investigated.

Upon request of the software WG dedicated to Physics and Detector Simulation, the updated status of the subsystem description in the simulation code has been presented, with the requirements to the DSC to provide integrations and updates about detector geometry and materials.

Best greetings, Silvia

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