

**Subject:** Re: [Eic-projdet-tic-l] TIC meeting 1/22, 2024 (Update on radiation hardness studies; built-in calibration systems/tools) - main outcome, v2

**From:** Silvia Dalla Torre via Eic-projdet-tic-l <eic-projdet-tic-l@lists.bnl.gov>

**Date:** 1/24/2024, 3:48 PM

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Dear Colleagues,

Two different items have been addressed:  
(1) update on radiation hardness studies; (2) built-in calibration systems/tools.  
We thank the colleagues for the highly informative reports.

Main outcome:

(1) update on radiation hardness studies

Prakhar Garg has summarized the available information extracting it from available material, mainly the presentations at the 12/11, 2023 TIC meeting. He is preparing a table including the available information, which will be cross-checked by DSCs when ready.  
For a more consistent evaluation of the radiation doses, the need of background figures where the rates from all the background sources are added up in a consistent way has been mention and a corresponding request will be address to the background WG.

(2) built-in calibration systems/tools

DSCs have presented their information about, including also alignment and monitoring. Three DSCs could not present and they are asked to report at the next TIC meeting on Jan. 29.

The advancement in assessing this matter is different in the various DSCs, as it was expected. The matter will be revisited at a coming TIC meeting with the goal of a deeper analysis and understanding of the needs and the strategies.

Two elements are very clearly evident from the reports:

- the key role that the temperature control and monitoring has for the majority of the subsystems;
- the need of a strategy for the acquisition of data collected for calibration and monitoring;

considering this second point, alignment and calibration discussions have already started as part of the Streaming Computing Model WG

( <https://indico.bnl.gov/event/21619/> , <https://indico.bnl.gov/event/21785/> ) and as part of the joint meeting of the Electronics and DAQ and Streaming Computing Model WGs at the collaboration meeting ( <https://indico.bnl.gov/event/20473/sessions/6744/#20240110> ), while the project will present the proposed approach for the slow control system.

Thank you, Markus, for the integration input received, now included in this version 2 of the notes.

Best greetings, Silvia

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