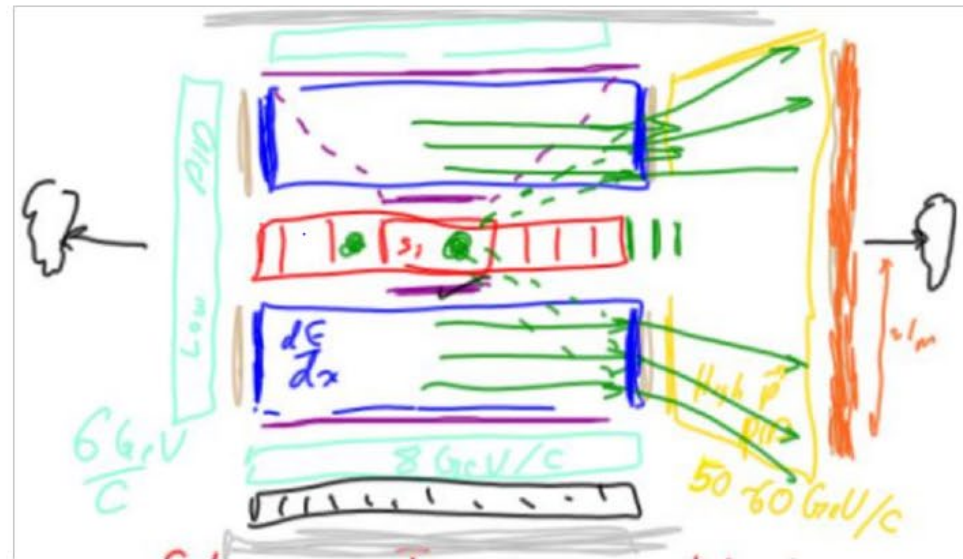


Global Design & Integration (GD/I) Detector

INTRODUCTION



eRD6 Group Meeting

**Silvia Dalla Torre, Jin Huang, Richard Milner, Carlos Munos Camacho,
Joe Osborn, Thomas Ullrich**

Reminder: Charge (4/26/2022)



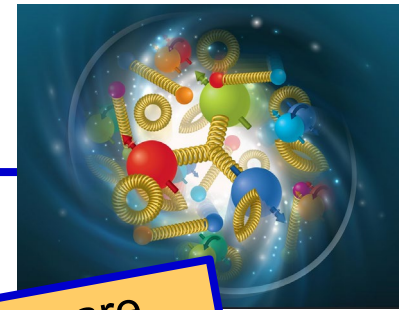
[...]

Your working group is fundamentally quite different from the joint detector and physics working groups that have been recently formed, in that we are asking your working group to take a broad view of the EIC project detector as it evolves to a technical design. The **global charge to your WG is as follows:**

- Work with the project and the joint working group to develop a detailed, integrated technical design of the project detector. This includes the integration of various detector systems, the necessary supports and services, and the requirements imposed by the ability to service the detector between EIC running periods.
- Work with the detector and physics working groups, as well as project management, to ensure that the integrated project detector remains capable of the full science program outlined in the EIC Whitepaper and NAS report. Where compromises need to be made in the integration of the project detector, ensure that the proper simulations studies are completed to ensure they do not unduly compromise the EIC science program.

[...]

Reminder: Charge (4/26/2022)



[...]

Your working group is fundamentally quite different from the other working groups that have been recently formed. It is your group's job to take a broad view of the detector design. The GD/I WG has to contribute to the detector design with particular care

- Therefore, GD/I WG has to be dedicated to:
 - Realistic integration aspects
 - Global performance (holistic view)
- Working groups, as well as project managers, must ensure that the integrated project detector remains capable of the full program outlined in the EIC Whitepaper and NAS report. Where compromises need to be made in the integration of the project detector, ensure that the proper simulation studies are completed to ensure they do not unduly compromise the EIC science program.

[...]

Reminder: Charge (4/26/2022)



[...]

Your working group is fundamentally quite different from other working groups that have been formed. It is your group to take a broad view of the project and to design a program of work that is consistent with the overall goals of the EIC.

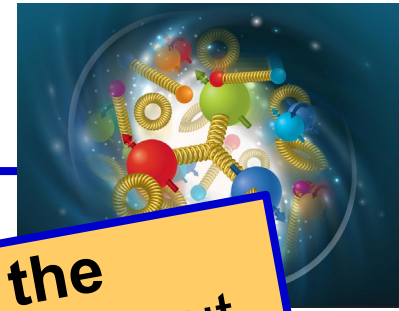
GD/I activity requires the constructive collaboration of the WGs!

- All WG conveners always invited with the request that at least 1 convener per WG attends
- All interested ePIC collaborators are welcome to the GD/I meetings

The project detector remains capable of the full range of physics studies as well as project studies. The project detector remains capable of the full range of physics studies as well as project studies. Where compromises need to be made in the integration of the project detector, ensure that the proper simulations studies are completed to ensure they do not unduly compromise the EIC science program.

[...]

Reminder: Charge (4/26/2022)



[...]

Your working group is fundamentally quite different from the other working groups that have been established. It is your group to take on the responsibility of leading the design of the project detector.

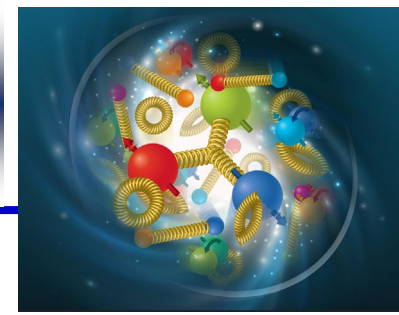
- With ePIC progress, GD/I became the body **analysing the detector technologies and making recommendations** about them.

- It has, therefore, been enlarged (4 conveners → 6 conveners) to include diversified expertise.

... as project detector remains capable of the full range of physics in the EIC Whitepaper and NAS report. Where corrections need to be made in the integration of the project detector, ensure that the proper simulations studies are completed to ensure they do not unduly compromise the EIC science program.

[...]

ACTIVITY



SO FAR

- 23 meetings, the first one on May 9, 2022
- In total:
 - 4 conveners' reports
 - 36 reports about detector items
 - 5 reports about simulation
 - 6 reports from PWGs
 - 4 reports by engineers
- 28 conveners' meetings

ALREADY SCHEDULED

- Jan. 23, 2023, Barrel EMCAL update for review preparation
- Jan. 30, 2023, Backward RICH update for review preparation



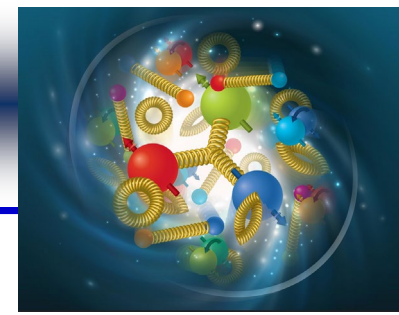
Preparing technical analysis and recommendations

Already completed:

- Choosing the technologies of the calorimetry in the forward endcap
- Assume as reference a backward RICH with LAPPD sensors, which can provide also ToF information (see Thomas's report)
- Waive the backward AC-LGAD layer in the backward endcap (see Thomas's report)

In progress:

- Barrel EMCAL Review (see Carlo's report)
- Backwards RICH review (see Joe's report)



Focusing on main needs along the Detector Design path:

By examples:

- Release of the global geometry Management system (*T. Horn, June 11, 2022*)
- Background sources (*E. Aschenauer, June 11, 2022*)
- Requirements for the simulation sample and technical constrains for the October simulation campaign (*J. Osborn, Sept. 26, 2022*)

GD/I WG LOGISTICS

- Indico: <https://indico.bnl.gov/event/15540/>
- Mailing List: eic-projdet-globalint-1@lists.bnl.gov
- Wiki: <https://wiki.bnl.gov/eic-project-detector/index.php/GDI>

- Conveners: Silvia Dalla Torre (Trieste), Jin Huang (BNL), Richard Milner(MIT), Carlos Munos Camacho (CNRS/IN2P3), Joe Osborn (BNL), Thomas Ullrich (BNL)
- Meetings typically Monday's 9:00 EST/EDT
 - ▶ if Monday is holiday ⇒ Thursday 12:30 EST/EDT

Please sign up to our mailing lists (avoids sending to too many lists) :
<https://lists.bnl.gov/mailman/listinfo/eic-projdet-globalint-1>

THANK YOU