News

Reorganization of ePIC

- Evolve DWGs to a structure more appropriate to the (pre-)TDR/construction phase: WGs -> Detector Subsystems. Each project corresponds to a subdetector built by a Detector Subsystem Collaboration of the groups and institutions contributing to it. Each project collaboration will choose its Detector Subsystem Lead/Detector Subsystem Technical Contact work in concert with EIC project CAMS. The breakdown in projects to be discussed/optimized with collaboration.
- TOF DSC: agreed to one subsystem for TOF, propose to have one DSL (Zhenyu Ye) and one deputy DSL (Satoshi Yano)
- PID Working Group, Tracking Working Group, Electronics, Readout and DAQ Working Group
- Latest status may be found at https://indico.bnl.gov/event/18688/

• EIC Project Review on PID detectors

- To assess the current state of all PID detector systems, serve as a status report for the EIC Project Management and DOE.
- Either around the first two weeks of June or the first week of July
- EIC Project Technical Review of the calorimeters in 12/2022: https://indico.bnl.gov/event/17721/ (PC: TR2022ECalHCal)
- EIC User Group Meeting @ Warsaw https://indico.cern.ch/event/1238718/
 - Early Career Workshop, EIC User Group meeting, ePIC meeting, Detector II/IP8 on July 23-31, 2023

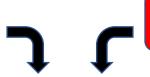
• Upcoming conferences

Quark Matter 2023 @ Houston in 9/2023: abstract submission by May 1

4/25/23 Zhenyu Ye @ UIC

TOF Detector - Hardware

<u>Sensor</u>: Design, prototype characterization, production QA/QC



<u>Frontend ASIC</u>: Design, prototype characterization, production QA/QC

Sensor-ASIC integration: Prototyping and characterization, production and QA/QC

<u>Detector Module Structure</u>: Design, prototype fabrication, production fabrication





Low Mass Kapton Flex: Design, prototype characterization, production QA/QC

Detector Module: design, prototype assembly, prototype characterization, production assembly, production QA/QC

Service Hybrid: Design, prototyping and characterization, production and QA/QC





<u>Power Supplies and Cables</u>: design, prototyping, production

Alignment System

<u>Cooling System</u>: design, prototyping, production

<u>Detector Support Structure</u>: Design, prototype fabrication, production fabrication

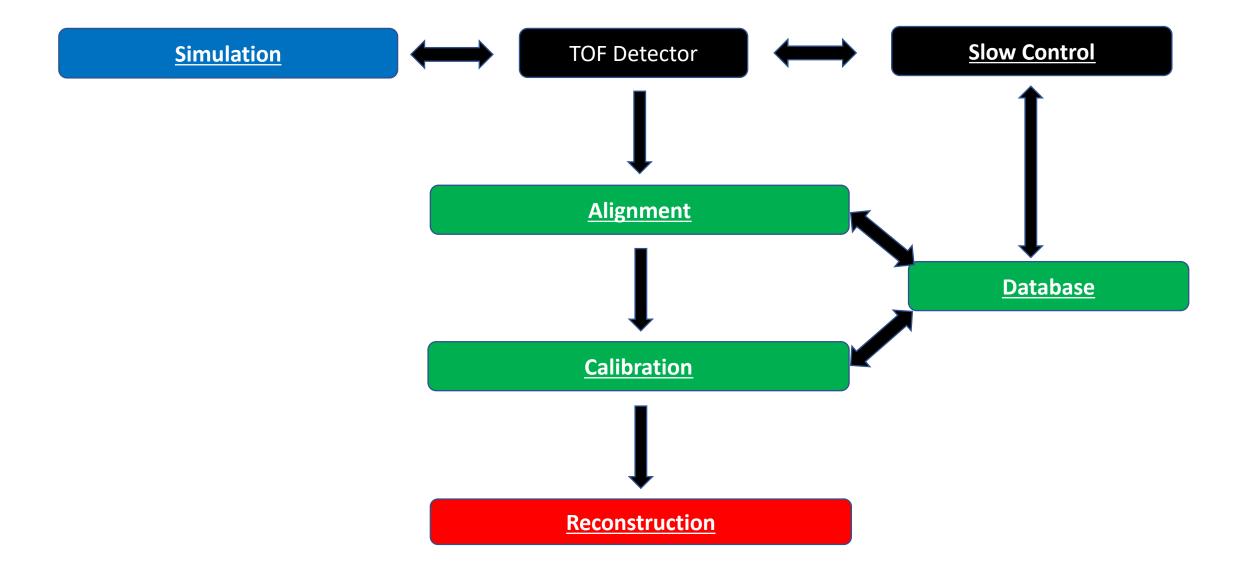


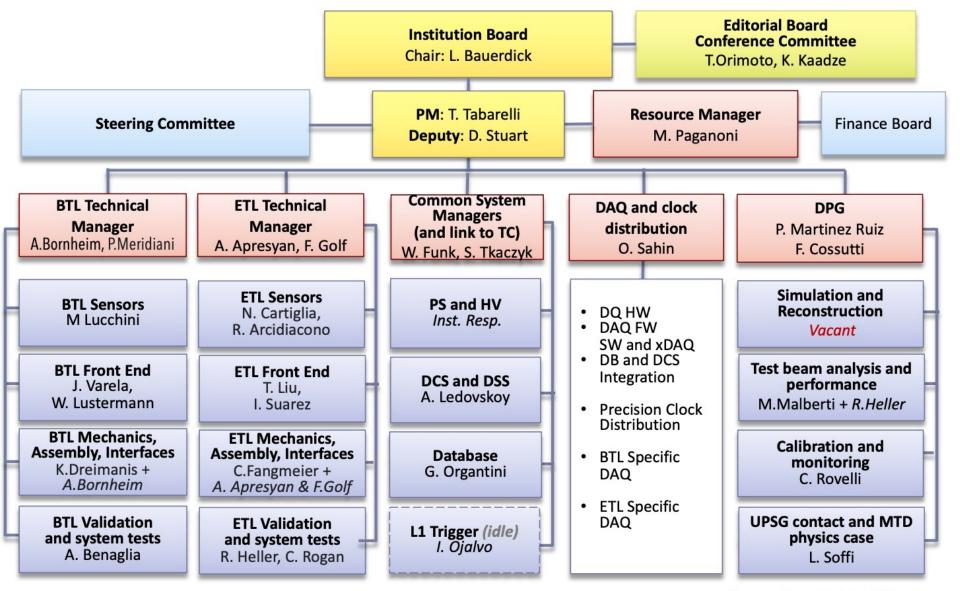
Slow Control

Backend DAQ Electronics:
Design, prototyping, production

TOF Detector Installation and Commissioning

TOF Detector - Software





Snapshot 2021, July 1st

Internal Structure

Barrel TOF

- Sensor: sensor, sensor-ASIC integration
- Frontend electronics: ASIC, service hybrid
- Detector Module: module structure, module assembly

Forward TOF

- Sensor: sensor, sensor-ASIC integration
- Frontend electronics: ASIC, service hybrid
- Detector Module: module structure, module assembly

Common systems

- Backend Electronics: power supplies, DAQ system
- Mechanics: support structure, cooling system
- Alignment system

• DPG:

• Simulation and reconstruction, Physics cases, Database, ...

EIC Project Technical Review of calorimeters in 12/2022

You are asked to address the following questions:

- Are the technical performance requirements appropriately defined and complete for this stage of the project?
- 2. Are the plans for achieving detector performance and construction sufficiently developed and documented for the present phase of the project?
- 3. Are the current designs and plans for detector and electronics readout likely to achieve the performance requirements with a low risk of cost increases, schedule delays, and technical problems?
- 4. Are the calorimeter fabrication and assembly plans consistent with the overall project and detector schedule?
- 5. Are the plans for detector integration in the EIC detector appropriately developed for the present phase of the project?
- 6. Have ES&H and QA considerations been adequately incorporated into the designs at their present stage?