



News from the ATHENA Proposal Committee: Integration & Global design Subgroup

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Meetings

Our meeting time: Wednesday at 11.00 (EDT)

INDICO pages: <https://indico.bnl.gov/category/378/>

- 18 June: attendance: only the subgroup members
- 25 June: Software, Tracking, PID and Calorimeter WG conveners invited
- 2 July: Software, Tracking, PID and Calorimeter WG conveners invited
- 7 July: Software, Tracking, PID, Calorimeter, far-forward and far-backward WG conveners invited
- 14 July: Software, Tracking, PID, Calorimeter, far-forward and far-backward WG conveners invited
- 21 July: all the WG conveners, Elke, Coordination committee invited:
 - ▶ 3 T magnet session with Valero Calvelli and Renuka Rajput-Ghoshal
 - ▶ Slides available at : <https://indico.bnl.gov/event/12530/>
- 29 July: DWG conveners, Elke, Coordination committee invited
- No meeting in the first week of August (EICUG annual meeting)
- 11 August: Elke, Coordination committee, the DWG conveners invited
 - ▶ update about simulation status
 - ▶ status of mechanical integration (engineer Roland Wimmer)
 - ▶ dRICH with pressure vessel mechanics

Strategy

- Define a limited number of global detector configurations
 - ▶ Start simple then increase complexity
 - ▶ Configuration defined with the help of the DWG conveners
- Configurations implemented in the simulation in the [DD4hep](#) frame
 - ▶ Activity shared between the Software working group and the DWGs
- Configurations used by the WGs with the following goals:
 - ▶ **DWGs** check the detector performance using complete and realistic (= material and services) configurations (p/p_T resolution, σ separation for PID)
 - ▶ **PWGs** check if and at which extent the configurations match the requirements for physics
- Validation activity requires coordination and hence a colleague who keeps track of the validation exercises and the relative outcome: **B. Mohanty** has kindly agreed to serve as [Validation Coordinator](#)

Detector Configuration

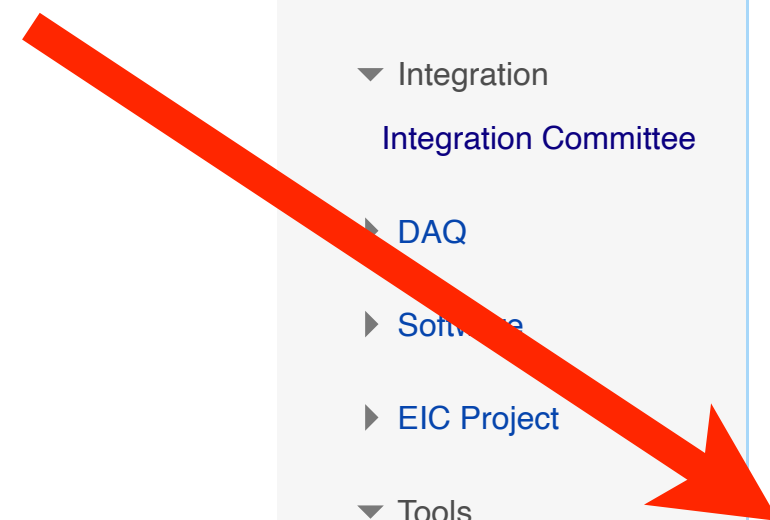
Configuration Labels: B, P, N

- Need unambiguous ID of specific configuration.
- Label according to their coverage (using existing letters from software group)
 - ▶ B = Barrel
 - ▶ P = forward, Positive endcap
 - ▶ N = backward, Negative endcap
- Followed by a two-digit version number M.N
 - ▶ M defines specific subsystem composition (change if subsystem add or remove)
 - ▶ N labels the geometry(e.g. pixel size, thickness, service material etc) are changed within a given overall configuration M.
- If needed the software group can add a 3rd number (M.N.V) for software version or the like - up to them

Documentation

ATHENA Wiki

All configurations considered so far. Referring pages have links to DWG specifications



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Integration

Welcome to the Wiki page of the Detector Concept/Integration Committee.

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Committee [edit]

Members of the Committee are:

- Silvia Dalla Torre (INFN Trieste, Italy): Silvia.DallaTorre@ts.infn.it (contact person)
- Alexander Kiselev (BNL, USA): ayk@bnl.gov
- Franck Sabatie (Saclay, France): Franck.Sabatie@cea.fr
- Bedangadas Mohanty (NISER, India): bedanga@niser.ac.in
- Thomas Ullrich (BNL, USA): thomas.ullrich@bnl.gov

Project Contact / Liaison: Elke Aschenauer (BNL): elke@bnl.gov

Current Configurations [edit]

Explanation of configuration labels can be found [here](#). The names associated with the exact labels are simply common short names to describe the configuration combination.

- [Baseline](#) (B-0.0, P-0.0, N-0.0)
- [Baseline+](#) (B-1.0, P-1.0, N-1.0)

Important Information from the Project [edit]

Many important pieces of information concerning beams, IR, magnet, and engineering are provided by the project and available on the [Project](#) pages.

Subsystem Spec Sheets (DWG) [edit]

- TBD

Validation Results (PWG) [edit]

- [List of Key Measurements and Plots](#)

Progress

- **First relevant data production scheduled to start this week**
 - ▶ Status to be reviewed at the tomorrow meetings
 - ▶ Expected: all detectors in, a part a possible issue for mRICH
- **About magnet configuration: an answer promised by mid August**
 - ▶ A joint tracking-PID meeting probably needed, to be organized
- **Important progress in addressing the geometry and location of the dRICH**
 - ▶ Integration was discussed yesterday

