

The ILD MDI/Integration Working Group

Status and Plans

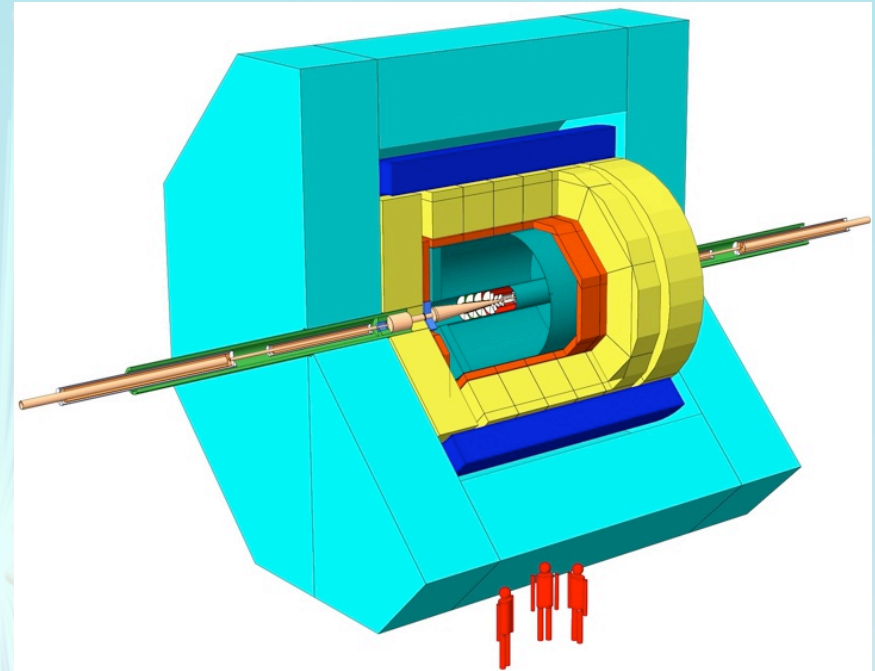
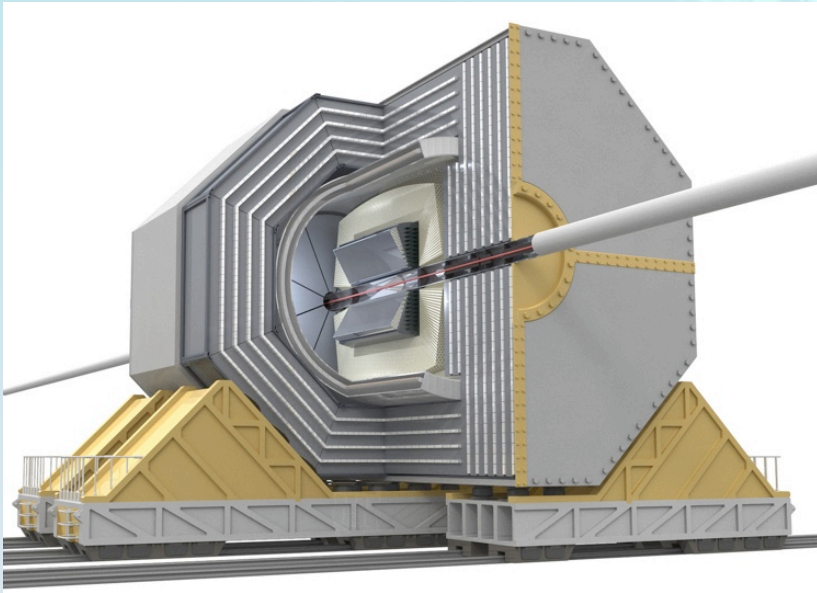
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ILD Worksop

Zeuthen

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- Joint Steering Board supervises the common effort to find a common detector concept and design which will lead to the submission of a common LOI
- Several working groups have been set up to tackle the critical joint design efforts:
 - Detector Optimisation
 - Conveners: Mark Thomson, Tamaki Yoshioka
 - **MDI/Integration**
 - **Conveners: Toshiaki Tauchi, KB**
 - Costing
 - Conveners: Akihiko Maki, Henri Videau
- Contact people form links to detector R&D collaborations



- There is no common definition I know about for MDI
- „Everything in the machine which has an impact on the detector and vice versa“ comes closest
- Usually the following things are discussed under the MDI label:
 - Interaction Region Design (crossing angles, magnets, etc.)
 - Detector Forward Regions
 - Beam-induced Backgrounds
 - Diagnostics (Luminosity, Energy, Polarisation)
 - Detector Hall Design
 - Engineering Issues: e.g. Push-pull
- Basically all of these issues have been tackled at GLD and LDC in separated efforts (intense communication took always place)
- Now it is time to join the efforts and find common answers for the common Lol

Charge issued by the ILD Joint Steering Board:

- The MDI/working group is charged to produce a self-consistent design of the structure of the ILD detector from the viewpoint of machine-detector interface (MDI) and detector integration for the LOI that is to be submitted by October 1, 2008.
- Specifically, it covers the design of the beam pipes, magnets, iron return yoke, beam instrumentations, and their supports that require works by the detector group.
- Also, it should address general detector structure and assembly issues, where the aspects that affect the machine design will have initial priority. Beam background studies should be performed when necessary.
- The group should work closely with the machine people and the groups working on subdetectors that affect the structure of the ILD detector.
- (...)

- MDI/Integration working group has started in October
- Regular phone meetings take place
- MDI discussions at ALCPG'07 (FNAL)
- Topcis under discussion:
 - Interaction region designs
 - Beam pipe designs
 - Forward regions and masking
 - Backgrounds
 - Assembly procedures
 - Mechanical design
 - Detector hall design
 - Push-pull issues

- All MDI/Integration WG meetings are kept on Indico:
 - <http://ilcagenda.linearcollider.org/>
 - Physics and Detectors
 - Detector Concepts
 - ILD
 - MDI/Integration
- A mailing list has been set up
 - Subscribe at:
<https://lists.desy.de/sympa/info/ild-detector-mdi>
 - Contact list at
ild-detector-mdi@desy.de

- So far we concentrated mainly on understanding the work done at GLD and LDC
- We agreed that the differences between LDC and GLD are not that big
- Now it is time to agree on a first draft of the ILD design!
- T.Tauchi has drafted a task list to be worked on in the following session:
 - Assess solutions at LDC and GLD
 - Define people to work on the tasks
 - Find common designs where possible
 - Identify open tasks
- Agree on common procedures:
 - Technical coordinators
 - Common CAD drawings