



Status

Ties Behnke

7.2.2017

# ILD internal meetings



Regular ILD phone meetings: every first Tuesday of a month, at 14:00 Paris time

Regular Software/ optimization meetings: every second week on Wednesdays at 14:00

ET meets regularly every two weeks on Tuesdays at 13:00 Paris time.

Other meetings as needed.

Web page: ILD presence on <https://confluence.desy.de/display/ILD/ILD>

Central ILD Web page: [www.ilcild.org](http://www.ilcild.org) under revision

# Update from the IA



Marc excuses that he cannot attend today's meetings.

Following the discussions at the IA the rules for the publication and speakers bureau are being re-optimized.

Based on the outcome of the discussions the composition of the speakers bureau will be put up for a vote soon.

In the meantime Kiyotomo is thankfully filling the position already.

# Update from the LCCPDeB



New chair: Jim Brau, Oregon

LCCPDeB is the “advisory” body to the deputy director for physics and experiment.  
(formerly Hitoshi Yamamoto)

ILD Member: Ties Behnke

MDI: Karsten Buesser

Software: Frank Gaede

Physics: Keisuke Fujii

Meets regularly every two-three weeks.

# Re-Optimization of ILD



Goal: in – depth justification of the ILD design

For a range of physics channels

For a range of performance criteria

We want to understand the performance of ILD and how it relates to the relevant sub-detector performance

We want to understand the relation between performance and cost.

We will continue to maintain options as a way to maintain broad technological attractiveness and innovation potential: there is no need for hard decisions on options now.

To enable such a comparison we have defined two ILD models:

# ILD models



Have converged on two geometric ILD models (ILD-S and ILD-L) as “boundaries” for the optimization

Both models now are available in DDSIM (optimization needed)

## ILD-S

- Same length as ILD-L
- Size similar to CLIC for maximum synergies
- Concept same as ILD-L

| Detektor          | DBD (ILD-L) | Small ILD (ILD-S) |
|-------------------|-------------|-------------------|
| B-Field           | 3.5 T       | 4 T               |
| VTX inner radius  | 1.6 cm      | 1.6 cm            |
| TPC inner radius  | 33 cm       | 33 cm             |
| TPC outer radius  | 180 cm      | 146 cm            |
| TPC length (z/2)  | 235cm       | 235 cm            |
| Inner ECAL radius | 184 cm      | 150 cm            |
| Outer ECAL radius | 202.5 cm    | 168.5 cm          |
| Inner HCAL radius | 206 cm      | 172 cm            |
| Outer HCAL radius | 335 cm      | 301 cm            |
| Coil inner radius | 344 cm      | 310 cm            |

# Decisions needed



Central region:

- With or without Anti-DID field
- Optimized forward layout

Calorimeter geometries

- HCAL geometry

Two task forces have started,  
see talk by Claude later today  
on recent progress

We need to define the software baseline soon (by summer?)

# Software baseline



A software baseline is no technology decision.

To arrive at such a decision:

- We need to understand the implications of different technologies on performance, if any
- We need to ensure that the options are fully implemented into our simulation and reconstruction framework
- All options need to be validated centrally  
(See talk by Frank later)

A software baseline does not preclude dedicated studies (and samples) for concrete questions with other technologies.



# Decisions needed



Central region:

- With or without Anti-DID field
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Two task forces have started,  
see talk by Claude later today  
on recent progress

To make progress we propose an intermediate ILD meeting to discuss software/ optimization tools/ status of the task forces

# ILD technical workshop



When: April 24-28, in Lyon, France

Focus: discuss and make progress on the technical aspects of ILD

- Software tools
- Optimization tools
- Where are we concerning a full scale production in 2017
  
- Task force meetings: Anti-DID, HCAL
  
- Overall discussion of the optimization strategy

# Proposed meeting schedule



| Monday   | Tuesday   | Wednesday                    | Thursday                    |                       | Friday   |
|--|---|------------------------------|-----------------------------|-----------------------|--|
|  | - tracking<br>- PFA                                 | - MDI and subdetector status | - HLR tools and application | - anti-DID Task Force | - discussion<br>- decisions<br>- closing plenary |
| L  | U   | N                            | C                           |                       | H  |
| - core tools<br>- generator<br>- simulation and Grid tools | technical: status of sub-detector simulation models | - physics and optimization   | - HCal geometry Task Force  |                       |  |

Details to be discussed, overall schedule defined.

# Next LC workshop



Next LC workshop: scheduled for

June 26-30, at SLAC, United States

This workshop will have a two day slot for concept meetings at the end.  
(Thursday and Friday)

More details are being worked out and will be announced hopefully soon.

# Conclusion



ILD continues make progress

Lots of good work is happening, though mostly person-power limited

We propose a more technical intermediate meeting to discuss the state of the optimization