

# **RD's Report on the status of physics/detector activities**

**SiD Workshop  
@SLAC**

**Sakue Yamada  
August 21, 2012**

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**Where we are?**

**Interim report distributed**

**Plan and Status of DBD**

- **Structure of DBD**
- **Plan**

**Post 2012 scheme for physics/detector**

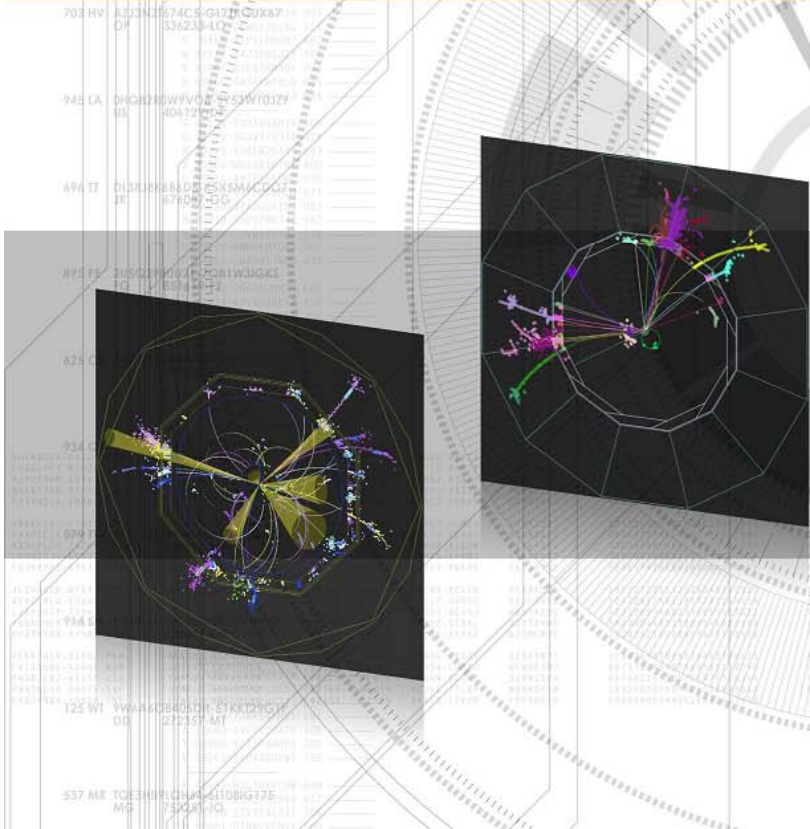
# The time line of the LOI process

- Oct. 2007: **Call for LOIs was made by ILCSC**  
**appointment of RD to conduct the process**
  - Jan. 2008: Detector management was formed
  - Mar.2008: IDAG formed, 3 LOI groups known
  - Mar.2009: 3 LOIs submitted
  - Summer 09: IDAG recommendation for  
validation and ILCSC's approval
  - Oct 2009: Work plan of the validated groups
  - **End 2011: *Interim Report completed***
  - **End 2012: Detailed Baseline Design Report**
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- The timeline diagram consists of a vertical blue bar. At the top, the year '2007' is written. Below it, 'RDR' is written in yellow. A pink dot is positioned below 'RDR'. The year '2008' is written below the pink dot. A red dot is positioned below '2008'. Below the red dot, a yellow dot and another red dot are positioned. The year '2009' is written below these two dots. A red dot is positioned below '2009'. Below the red dot, a yellow dot and a pink dot are positioned. The year '2010' is written below these two dots. A yellow dot is positioned below '2010'. The year '2011' is written below the yellow dot. The year '2012' is written below '2011'. A red star is positioned below '2012'. At the bottom of the bar, a yellow arrow labeled 'Now' points to the right, and a red star is positioned below it.

# Interim Report was completed last December

ISSUED BY **ilc** international linear collider

International Linear Collider Physics and Detectors  
2011 STATUS REPORT



# Lessons from the Interim Report

(to be considered for DBD)

- **Editing required big effort (of the communicators)**  
(many authors, technical words, abbreviations, physics units → *may be less for DBD.*)
- **Some items took time: → *Keep in mind***
  - high quality figures**
  - checking of author list/institution names,**
  - additional information** (the funding agencies to acknowledge, report numbers of supporting labs.)

# Detailed Baseline Design report

**DBD is important !**

**Our 5 years efforts are summarized.**

***It will be the jumping board for the next step.***

***i.e.***

**Together with GDE's TDR, DBD will make a part of the project proposal when the consensus is reached that ILC is the LC to be built.**

***We plan to keep the target date of DBD.***

# LHC made a big step forward.

- Now we have to find whether the new boson is the SM Higgs particle or something new.
- ILC is the best facility to pursue it.



- **ILCSC told us strongly in Melbourne that *WE MUST KEEP the due date of DBD.***

# DBD will have 2 volumes

**Physics volume** (~200 pages)

*describes physics case for ILC*

**Detector and simulation volume**

(~360 pages)

*describes the feasibility of the detectors  
for solving the aimed physics questions.*

***It has***

**introductory chapter +**

**common issue chapter** (~60 pages)

**2 detector chapters** (150 pages for each).



# Expected Readers

- **Physicists in HEP and related field**

*Detailed and precise information will be given to convince experts.*

- ***We wish to make the case for ILC and its detectors.***

## Physics Volume

- A group of physicists convened by Michael Peskin prepared it.

(The base is the Physics CTG but invites wider contribution. The group started early last year.)

- The group has kept studying the LHC results as they developed.
- The first version was completed and is available for comments. (cf. Michale's Talk)

(It might be updated, if needed, toward the DBD completion.)

# Detector and Simulation Volume

## The introductory/common issue chapters:

the management, the common task groups and relevant experts

Depository is at DESY is open.

## The detector chapters:

two detector groups, ILD and SiD

These can be regarded as the advanced updates of the LOI contents.

**The planned contents were monitored by IDAG during KILC12 last April, and several suggestions were given and implemented.**

# DBD Format WG

**This group coordinates the format and contents of the detector volume.**

- **Members:**

(SiD) P. Burrows\*, M. Stanitzki

(ILD) T. Behnke, Y. Sugimoto

(Management)

J. Brau, J. Fuster, H. Yamamoto, S. Yamada

*(\* P. Burrows will be the contact to the TDR'S editors.)*

**This group will work also as the editing team.**

**The minutes of this WG can be accessed through our web page. (ILC > Physics and Detectors > detectors > DBD )**

## Coming due dates of the mile stones

***First draft: Sept. 21***

**IDAG monitoring during LCWS12 in October.**

***Semi-final draft: end of November***

**(We have to submit it to PAC to be reviewed.**

**PAC meeting, December 13/14.**

***(This is a review of both TDR and DBD for ILCSC.)***

***Final draft: Dec. 21***

***We need to submit DBD to ILCSC early next year.***

***(ILCSC will meet in February, jointly with the new LCB.)***

# Collection of the signatories

**We collect the signatories again using a similar way as the RDR signatories.**

When the mechanism is set up, it will be announced.

**Where to place the list ?**

(Like the RDR, all the signatories may be repeated in each volume.)

# Post 2012 plan

- The new organization will start next year.
- **LCB will start February next year.**
- **GDE/RD will remain till summer(June?) next year.**
- In Melbourne, ILCSC did not decide details of the physics & detector part of the new scheme.
- How/when to switch to the new scheme ?
- **We wish that the momentum for ILC be kept or strengthened in the new scheme.**

# Summary

- We are making the last spurt to complete the DBD, which is a summary of activities during the LOI era.
- IDAG monitoring of the draft in October
- PAC review in December
- ILCSC tells us to keep the due date, end of the year
- I wish a successful SiD workshop in view of these milestones and the goal.