

Introductio

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Boundary conditions, History, Where we are going

ILD session, ALCPG07
23-Oct-07

Hitoshi Yamamoto
For ILD joint steering board

Research Director (RD)

- RD
 - **Responsible for the ILC experimental program**
 - **Sakue Yamada formally accepted the post.**
 - **Starting intensive activities**
- Structures under RD
 - **WWS co-chairs requested by RD to assist him**
 - Having weekly phone conference
 - **IDAG being selected by RD and WWS co-chairs**
 - Reviews LOIs and advises RD
- LOI call was sent out by ILCSC (RD, WWS).

LOI Call (Sent out, Oct 5)

Dear Colleague,

The International Linear Collider Steering Committee (ILCSC) announces a call for Letters of Intent (LOIs) to produce reference designs for the two ILC detectors. These designs will be detailed in two Engineering Design Reports (EDRs) to be completed on the timeline of the machine EDR being prepared by the Global Design Effort. The guidelines for the LOIs are presented in the appended document and a public presentation of the WWS roadmap for detectors can be found in the LCWS07 web site. The LOIs should be sent to the ILCSC by October 1, 2008 and will be reviewed by an advisory body appointed with the approval of ILCSC. This body, together with a management team led by the Research Director Sakue Yamada who has been appointed by ILCSC, will start a process leading to the formation of two groups capable of preparing the two engineering designs and the EDR documents.

Sincerely Yours,

Shin-ichi Kurokawa

Chairman of the International Linear Collider Committee

<http://physics.uoregon.edu/~lc/wwstudy/lois/LOIguidelines.pdf>

Why LOI call Now?

- Group formation process should be open
 - **Give chance to all interested parties in HEP community**
 - Avoid impression of decisions internal to ILC community
 - → **LOI call**
- Detector needs to be synchronized to accelerator
 - **A practical requirement to start taking data when accelerator is ready:**
 - Conventional assembly: late by ~2 years.
 - Surface assembly: barely in time, by assembling on surface while exp. hall is being dug and prepared
 - Start construction in 2012~3, EDR in 2010
 - → **LOI call now, group formation in 2008**

What is LOI?

- What LOI IS:
 - **A basis to form two groups capable of producing EDR**
 - **Describes resource needs and their evolution in time**
- What LOI is NOT:
 - **It will not contain financial commitment**
 - **It will not exclude any other groups to produce EDRs in time for construction.**
 - In such a case, the 'ILC lab' would decide final two groups.

LDC/GLD → ILD

- Pros
 - **More manpower, more funds**
 - **Political critical mass**
 - **Revitalization of studies**
 - Physics and detector optimization
 - Focused studies in the ‘horizontal collaborations’
- Cons
 - **Need to unify the detector design**
 - **Can we work together?**
 - Prides, regional priorities, political power share
- We have decided that pros outweigh cons
 - **So we hope!**

LDC/GLD → ILD

- History:
 - **After Beijing ACFA, Feb 07**
 - Some talks of close collaboration between LDC/GLD
 - **Before DESY LCWS : (~May 07)**
 - Joint contact persons' meetings
 - Agreed to move toward a single joint LOI
 - GLD EB approved 'single joint LOI'.
 - **DECY LCWS07**
 - First joint concept study meeting
 - LDC meeting approved 'single joint LOI'
 - First face-to-face contact persons' meeting
 - Decided to establish a joint steering board

Name: ILD

- Joint Steering Board meeting (Sep 13)
 - **Among the names proposed by JSB, 'ILD' was taken to be the name.**
 - Until a collaboration is formed.
 - More 'interesting' name to be picked then.
 - Other names suggested: DOLCE, ILIAD, IDL...
- Web site:
 - www.ilcild.org
 - A plone site - under preparation
 - Currently pointing to a DESY site
 - Under construction
 - **ILC agenda server**
 - <http://www.linearcollider.org/cms/?pid=1000364>

ILD Joint Steering Board

- JSB charge
 - **Do whatever is necessary to produce the single LOI in time.**
 - **It is open after the LOI phase.**
- JSB selection
 - **Balanced regionally and in expertise**
 - GLD provides 2 Asians and 1 American
 - LDC provides 2 Europeans and 1 American
 - **GLD EB voted for candidates**
 - Candidates not restricted to GLD EB
 - **LDC took the current contact persons as candidates**
 - **2 Asians and 2 Europeans decided as above**
 - **2 Americans decided based on above+expertise**

ILD Joint Steering Board

- JSB members
 - **Dean Karlen, Graham Wilson**
 - **Ties Behnke, Henri Videau**
 - **Yasuhiro Sugimoto, Hitoshi Yamamoto**
- No spokesperson(s) elected
 - **ILD is not a collaboration**
- Current structures for LDC and GLD are kept alive.

Working Groups for LOI

- JSB meetings
 - **Held every ~2 weeks**
 - TV/phone meetings
 - **Established two working groups**
 - Optimization
 - MDI/integration
 - **Set guidelines for the WG activities**
- Two working groups
 - **Optimization**
 - Mark Thomson, Tamaki Yoshioka
 - **MDI/integration**
 - Karsten Buesser, Toshiaki Tauchi

MDI/integration working group charge:

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. In order to organize the needed activities, **two conveners** have been elected. They are to define necessary tasks and to organize subgroups to perform them. **The Steering Board will assist** the conveners in fulfilling the charges. **The timeline should be such that by May 2008, the relevant designs should be defined enough to start authoring the LOI.**

Optimization working group charge:

Investigate the dependence of the physics performance of the ILD detector on basic parameters such as TPC radius and B-field. On the basis of these studies and the understanding of any observed differences, the WG will make recommendations for the optimal choice of parameters for the ILD detector. It is the responsibility of the WG conveners to organize this work, while the steering board will assist them in executing the charge.

The WG should aim to have first results from detector optimization studies by the 1st of May 2008 in time for the ILD Letter of Intent to write an ILC Detector EDR. It is understood that the detector optimization studies will be an on-going effort throughout the EDR phase.

Working Groups

- Activities are starting
 - **A few meetings with core people held**
 - Discussion of charges
 - How to proceed
 - **General kick-off meetings**
 - Optimization
 - Oct 31
 - MDI/integration
 - After ALCPG07

Subdetectors

- Currently no new structure is set up for ILD
- Eventually needed to write the subdetector sections of LOI
- ILD subdetector groups
 - **Relation to the horizontal collaborations?**
 - **More discussions at the 2nd ILD session**

Calendar

- FNAL ALCPG/GDE
 - **23-Oct (Tue) morning: 1st session**
 - **26-Oct (Fri) afternoon: 2nd session**
- ILD workshop
 - **First ILD workshop, ~2.5 days.**
 - **Dec 07 ~ Jan 08, in Europe**
- TILC07 Sendai (ACFA/GDE) Mar 3~6, 08.
 - **ILD meeting: 1.5 days.**
 - **www.awa.tohoku.ac.jp/TILC07 (currently blank)**

Calendar

- ~May 2008
 - **Basic detector parameters defined for ILD**
 - **Enough to start authoring LOI**
- Oct 1, 2008
 - **LOI submission**

There is so much to be gained by joining forces.

Let us focus on getting things done,

- and not on your own tribal prides, territorial interests etc.
- but respect those on the other side.