

IDT-WG2 report

KEK / IDT-WG2 Shin MICHIZONO (KEK)

- Internal Review
- External Review
- Next IDT-WG2: I propose Jan.21 (6 weeks later)

Internal Review

Nov. 21st (Thu.) and 22nd (Fri.): 14:30 ~ (Eu/CET), 5:30 ~ (US/PST), 22:30 ~ (JP/JST)

Day 1: Nov. 21st (Thu.)

14:30 Opening: (Chair, S. Michizono)

14:40 ~ TF-reports 1:

-14:40 Overview: A. Yamamoto

-15:00 CU Methodology & Acc. Cost-update (genera) I: B. List

-16:00 CFS Update with New Inputs: N. Terunuma

17:00 General Discussions

17:30 End

Day 2: Nov. 22nd (Fri.)

14:30 ~ TF-reports 2:

-14:30 SRF Update with New Inputs: A. Yamamoto

-15:30 Optional Study & Summary A. Yamamoto

16:30 General Discussions.

17:00 Closed session

17:30 End

Internal Review

Report of the Internal Review of ILC Cost-Update

2024 Dec.4

Shin MICHIZONO (chair of IDT-WG2)

It has been more than 10 years since the ILC was estimated at TDR. In addition, general prices have been rising rapidly in recent years. In response to them, a task force (ILC Cost-update Taskforce) under the IDT has been working on ILC re-costing since May 2024.

This Internal Review (organized by IDT-WG2) was positioned as a pre-review for the External Review* scheduled in December 19th and 20th. The important thing is to make sure that the ILC cost-update materials may be well understood by the External Review members.

* <https://linearcollider.org/wp-content/uploads/2024/09/IDT-EB-2024-001.pdf>

[General comments from Reviewers]

We deeply appreciate the task force members for having made so much progress in re-costing in the short time since May. Although the material presented includes some items that are still under review for the External Review, we look forward to further improving the completeness for the External Review.

Below are our comments on the individual documents. For each, a response from the TF is also included.

Report of the review (internal document) has already sent to TF and IDT-EB.

Day 1: Nov. 21st (Thu.)

TF-reports 1:

Overview: A. Yamamoto

External Review

Review of the updated ILC cost

The ILC cost was estimated at the time of the Technical Design Report in 2013 for the baseline machine at 500 GeV centre of mass energy¹ and in 2018 for 250 GeV centre of mass energy² as a staged machine. In May 2024, the Executive Board (EB) of the ILC International Development Team (IDT) decided to update the ILC cost with a goal to complete the work by the end of January 2025.

The updated cost shall be reviewed by an external review committee composed of

- Reinhard Brinkmann (DESY)
- Jie Gao (IHEP)
- Philippe Lebrun (CERN)
- Norbert Holtkamp (SLAC), Observer
- Tor Raubenheimer (SLAC)
- Lenny Rivkin (EPFL and PSI), *Chair*.

<https://linearcollider.org/wp-content/uploads/2024/09/IDT-EB-2024-001.pdf>

The committee is requested to provide a report to the IDT-EB, based on the information presented by the ILC Cost-update Taskforce, on the following three points:

1. Appropriateness of the method applied for the cost estimate,
2. Quality and amount of information,
3. Validity of the estimated costs and uncertainties.

To facilitate the review process, a remote introductory meeting of the review committee will be held in early November 2024, where the procedure being applied in the cost update process will be explained. The main review meeting, in hybrid mode at CERN, will be held on 19th and 20th of December 2024, and submission of a written report by the committee by around January 17th 2025 is desired.