

Report of the Infrastructure WG

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Given mandate

- 1: Study of the human and budgetary resource needs and their availability during construction and operation
- 2: The time profile of the resources and their reality to quire
- 3: The organizational structure to interact with the ILC laboratory

Members

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Purposes

A: to provide inputs from the detector groups to the Infrastructure design studies for the ILC lab, and to the Governance discussions

B: to prepare answers to possible inquiry in the expert sub-committee of the MEXT

The target date: February 2015.

The WG started in June and had several meetings,
on average once a month.

The work is still going mainly on the mandate #1,2.

Listed numbers are all preliminary yet.

We intend to finish the critical items for the MEXT review
by January.

*The WG contributed the section of “ILC Lab-Detector interface” of the
governance document.*

Basic plan

Based on a common guideline each group compiles its budget plan and construction schedule for every detector component to produce required numbers.

A modification to the mandate:

At present it is hard to make a resource plan.

Rather we concentrate to refine the cost given in the TDR.

The MEXT RC seems to require the total cost.

Presumption: Once the ILC is approved, there will be wide participation and necessary cost would be obtained.

Observation: The ILC detector cost is ca.10 % of the accelerator cost and is less expensive than that of the LHC detectors.

How to refine the cost and estimate the infrastructure requirements

A: time profile of construction for each detector component and of software works

This provides the number of people working on site and required support from the ILC lab.

B: consistency check between ILD and SiD for costing method

There are differences of costs for some components because of different production method and/or assumption

Status of consideration

ILD: Time profile of the budget and assembly work for each detector component was made with required human resources including physicists, engineers and technical staff.

Also required human resource from the ILC lab is listed.

The number of people from industry, if any, needs to be added.

SiD: Sum of the required human resources for detector assembly was provided including engineers and technical staff

The time profile of the necessary budget is being studied yet.

Survey of FTEs by each group

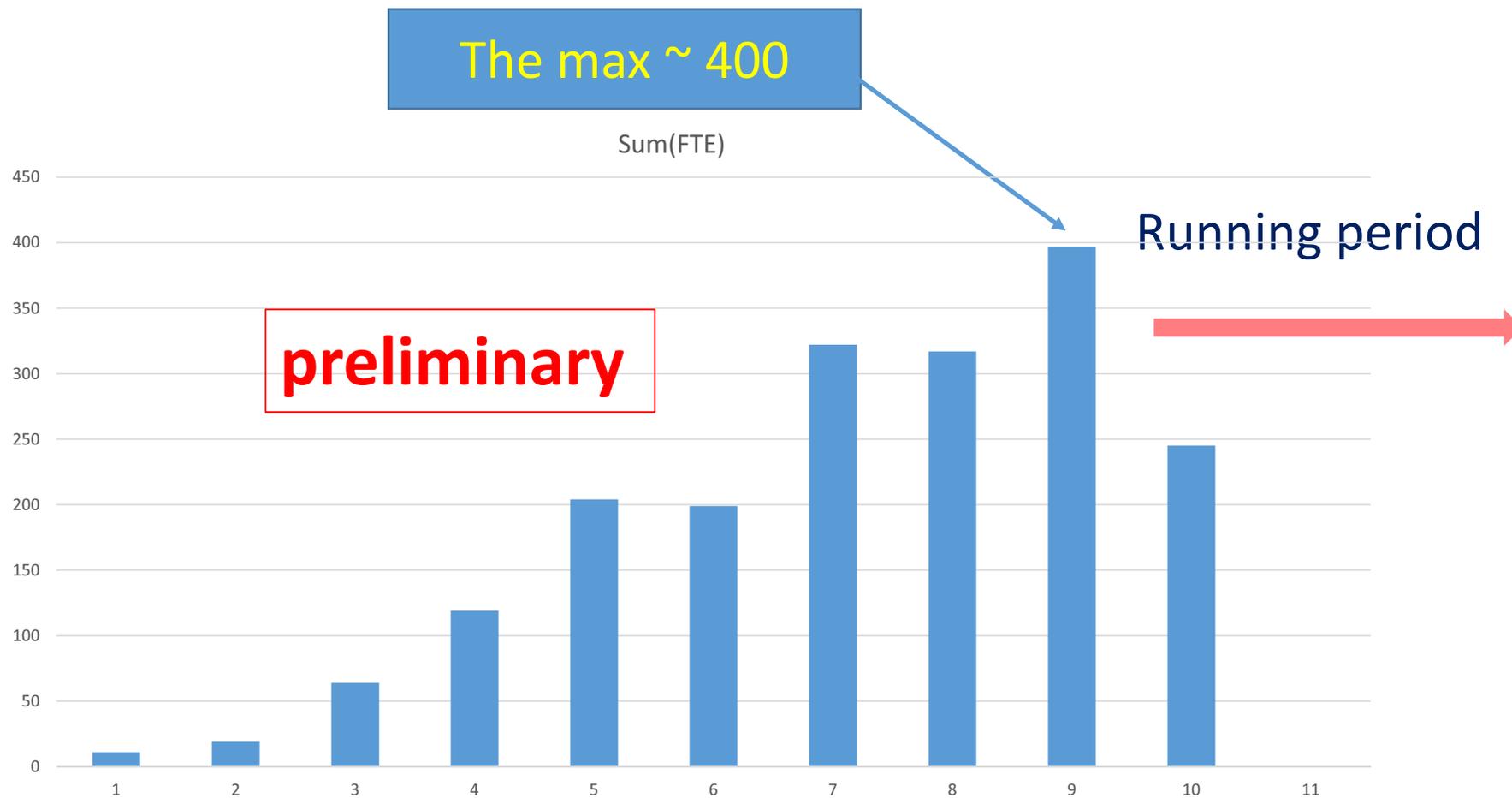
**Each group studied the number of FTEs for each component.
(The numbers are yet preliminary and removed from the posted version.)**

The MEXT RC is interested in these numbers.
When they are shown it must be clear that
they are mostly existing in the participating
institutions.

ILD gave also the number of FTEs required from the ILC lab.
SiD did not specify which but will requires if available.

**These numbers and the type of services
need to be considered in designing the
ILC Lab organization.**

The total number of FTE working at the ILC lab (ILD+SiD)



Plan

- Mutual consistency between ILD and SiD will be checked and coordinated in a face-to-face meeting at SLAC in January.
- Based on the inputs from SiD and ILD, we estimate necessary items and amount of infrastructure on site.
- Coordination of responsibilities between the ILC-Lab and the collaborations need to be discussed. (Cf. the governance paper)
safety issue,
organizing works in the hall (e.g. crane operation),
communication tools

Input to the Project Implementation Planning

- The chapter 8 of the PIP describes “interface between ILC laboratory & the detectors”.

We pointed out various functions expected from the lab by the detector groups.

They include services usually provided by the acc-labs like CERN/DESY/FNAL/KEK/SLAC.

e.g.

- PAC and/or review structure
- communication mechanism between the accelerator and detectors
- Supply of power, water and liq. He.
- Crane operation, transport assistance
- Safety measures including education and contact with the local authorities
- Central computer and IT facilities for communication
- Office, laboratory and meeting space
- Housing both for short and long term visitors, cafeteria
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Input to the Project Implementation Planning (cnt'd)

One point was strongly desired in the WG meeting:

i.e. The ILC lab have in-house experimental physicists.

For integration work, in-house experts will be desirable.

Once ILC starts running, physicists group at the lab (including theorists) will make the lab more attractive.

There should be strong postdoc or visitor/associate program, too.

- *The size of these physicists depends on the budget of the ILC lab and duration of the term.*

summary

- The work is still on-going.
- Some preliminary numbers are available.
- A meeting is planned between ILD and SiD for technical coordination and mutual understandings in January.
- We wish to make a costing list by the MEXT RC in February.
- There are matters to be discussed in the ILC-Lab designing.