

TCMB report on Science Council of Japan

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4th subcommittee on Sep.13 10AM-12AM

10AM~11:15AM open session

One talk by myself about "Risks considered at the ILC". (~15 min. talk + 1 hour discussion)

- earthquake
 - blackout
 - radiation
 - beam-dump
 - e-source, positron source, SRF, BDS
 - preparation phase, commissioning, decommissioning
- are summarized. (most of the items are in the appendix)

There were various comments/questions. But they were within our expectations.

I do not think the sub-committee members are convinced, but it was a good meeting.

After this discussion, sub-committee moved to closed session.

- summary of issues
 - next hearing (if necessary)
- were (maybe) discussed.

Main+subcommittee on Sep.18 10AM-12AM

Today, chairman Iye shows the "Discussion note".

Rather serious comments are described here.

Issues on the discussion note

(Accelerator)

- What criteria do we use to choose the positron source and when do we decide?
- Do we really need two detectors? How can we share the detectors (time sharing)?
- How do we intend to monitor the beam dumps, and how do we exchange windows by remote control?
- Second beam dump is effective?
- If the safety gate valve (for beam dump window failures) malfunctions and closes, the beam will hit to the gate valve. What will happen in that case?
- ILC is quite large accelerator. Can we manage to operate it?
- Interlock system and timing-system works?
- How can we deal with leakage of primary cooling water containing radioactive substances such as tritium?
- Possibility of radio-activation of surrounding groundwater
- How serious do you consider using ILC for other uses? Will decommissioning expenses be international share?

(Human resources)

- Human resource development overlooking the entire ILC as a giant comprehensive system

(Cost)

-List items that are not included in the TDR

-Concept of the contingency

(International collaboration)

-Regarding international collaboration, how much are the groups in Europe and Americas pushing to each government? Does it start after Japan declares attraction?

-Are discussions with Asian countries, especially Chinese research groups being done?

(Civil engineering)

-Spring groundwater and countermeasures

-Countermeasures and additional costs when encountering difficult part such as active fault or fracture zone

-Is there any point that ILC tunnels require stricter specification than normal tunnel construction?

(Disaster)

-Measures to be taken when blackout occurs. Duration of emergency power supply.

-Does it go to the safe side when power loss or malfunction occurs

Most of them we have answers and we will prepare the material (maybe for Oct.2).

Finally one member said that **the most important thing is “physics on the ILC”**. If it is valuable, it is first priority at the SCJ discussion. (This is the only positive comment today, I think.)

Maybe some physics person will be invited on Oct.1 (main committee) to hear further about physics value.

Further hearing will continue.

(Next main committee is Oct.1 (1PM~5PM), subcommittee is Oct.2 (10AM-1PM).)

Schedule

(main committee)

4th main committee: Sep. 11 (Tue.) 10AM-12AM (Closed session)

5th main committee + sub committee: Sep.18 (Tue.) 10AM-12AM

6th main committee: Oct.1 (Mon.) 1PM-4PM

(subcommittee)

Informal KEK tour: Sep. 6 (Thurs.) afternoon (by some subcommittee members)

4th sub-committee: Sep. 13 (Thur.) 10AM-12AM

6th sub-committee: Oct.2 (Tue.) 10AM-1PM