## Reports at LCB and KEK's review

Shin MICHIZONO (KEK)

LCB report (Feb.16)
8<sup>th</sup> (KEK's) linear collider review (Mar.6)











The meeting is held in Valencia, which is the third largest city in Spain, located on the East, is a place of contrasts between historic and modern Spain. Valencia's architecture dates from the first century b.C. as a Roman settlement, and goes to the most futuristic, 21st century design as the City of Arts and Sciences. Valencia mixes tradition and modernity, offering culture, museums, art, architecture, entertainment, gastronomy and on average enjoys over 300 days of Mediterranean light every year.

### Network connection:

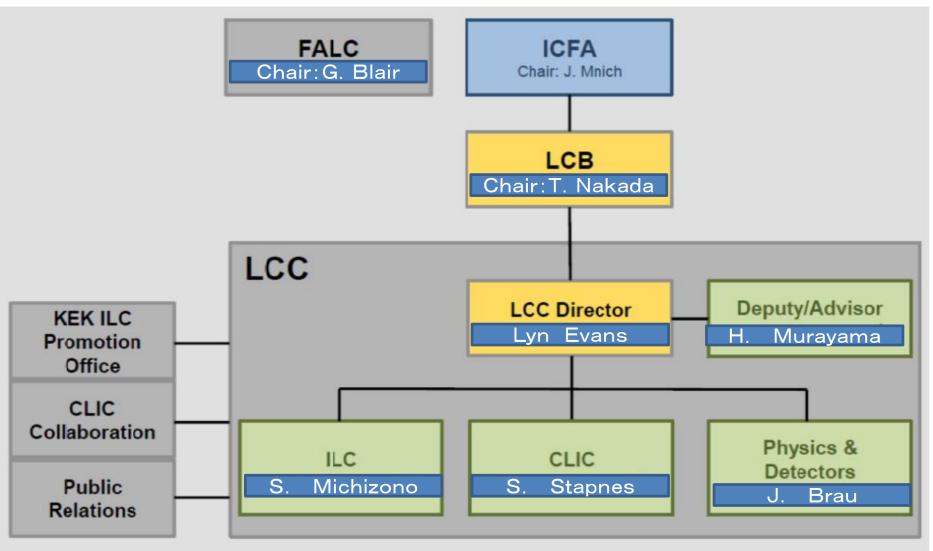
To access the internet connection during the meeting, there are two possibilities:

- to use eduroam.
- to use the local connection.

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For the second option you need to send in advance,

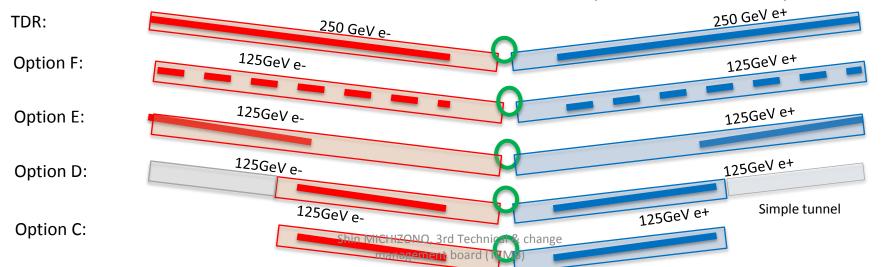
# LCB/LCC structure



## **Preliminary Cost Estimate for the ILC Staging with 250GeV**

	e-/e [GeV]	Tunnel [GeV]	Value Fraction CFS* [GILCU]	Value Fraction SRF [GILCU]	Value Fraction Others** [GILCU]	Value Total (GILCU] (Oku-JY)	Value Total [%]	Reduct. [%]	Cost- Red. R&D Effect [%]	Total Impact to Reduction [mid. %]	Human resources (M p-hr)&(%)
TDR	250/250	500	2.375	2.757	2,855	7.987 (8,309)	100 %	0	- 11.9 % - (13.5-1.6#)	- 11.9 %	23, (0%)
TDR updated	250/250										
Opt. F	125/125	500									
Opt. E	125/125	500									
Opt. D	125/125	500									
Opt. C	125/125	250									
WG2 WG1 WG3										WC3	

## It is recommended to evaluate 350GeV tunnel (250GeV beam) version.





## LCC and CLIC



### ILC and CLIC: cost comparison for 250 GeV requested (in 6 months)

- From summary of Nakada (ICFA-LCB meeting in Valencia):
  - Work for the August LCB meeting
  - Cost of Phase-one 250 GeV machine:
    - Based on the "ILC technology" (with some options) and a normal conducting technology version for a comparison purpose
  - Re-assessing physics of a 250 GeV machine
  - Further dialog with the community on a staged approach
  - Try to understand vary carefully and realistically what means "affordable"
     ⇒ For defining "the Phase-one machine"
  - and LCC budget
- This study will be done (was anyway foreseen for 380 GeV machine so will be the same) but we will not be able to resolve all details by that date.
- Doing some serious work on the klystron option costing is anyway starting (uncertainties today are very large) and we need this effort to understand minimum and cross-over point (indenpently of LCC)

## 8th (KEK's) linear collider review

Date: March 6<sup>th</sup> (Mon.)

Place: KEK

This is the technical review and so the "staging" was not included in the discussion.

### Aim of the review

- Report the progress from JFY2014 (after 7<sup>th</sup> review committee)
- Include the plan for
  - Cost reduction study with new technology\*
  - Feasibility study with current technology\*

\* ILC advisory panel (in MEXT) pointed out them on July 2016.

Indico: <a href="https://kds.kek.jp/indico/event/23454/">https://kds.kek.jp/indico/event/23454/</a>

Most of materials are in English



#### Monday, 6 March 2017 09:30 - 09:45 委員打合せ Internal (closed) 09:45 - 10:00 全体説明 Overview[道園真一郎 Shin MICHIZONO] Material: slides 📆 10:00 - 10:40 超伝導空洞・カップラーCavity, coupler [山本康史 Yasuchika YAMAMOTO] slides 🔞 📆 Material: 10:40 - 11:10 CFF/Nb材料 Nb material [山中将 Masashi YAMANAKA] Material: 7 slides https://kds.kek.jp/indico/event/23454/ 11:10 - 11:30 High Q High G [梅森健成 Kensei UMEMORI] Material: slides 📆 11:30 - 12:00 STF RF, MARX, Power Distribution [松本利広 Toshihiro MATSUMOTO] slides 🖼 🔻 Material: 12:00 - 13:00 居休み () 13:00 - 13:15 クラブ空洞 Crab cavity [山本康史 Yasuchika YAMAMOTO] Material: slides 😥 13:15 - 13:55 BDS/ATF-2 [奥木敏行 Toshiyuki OKUGI] Material: slides 📆 13:55 - 14:25 陽電子源 Positron Source[大森恒彦 Tsunehiko OMORI] Material: slides 🏗 14:25 - 14:55 CFS [早野仁司 Hitoshi HAYANO] Material: slides 📧 14:55 - 15:10 ビームダンプ Beam Dump [森川祐 Yu MORIKAWA] Material: slides 📆 15:10 - 15:30 休憩 () 15:30 - 17:00 委員議論、答申作成 Internal 17:00 - 17:15 答申案および質疑 Reviewers' comments

# Draft plan of "staging" mini-workshop

		5-Apr	6-Apr	7-Apr
Japan	EU	Wed.	Thur.	Fri.
9	2			Summary (9:00~10:30)
10	3		WG1 e+	Lyn Evans, Benno List, WGs
11	4			
12	5			
13	6	Preparatory work		
14	7		WG2 CFS	
15	8	WG1 e+	Hitoshi HAYANO	
16	9	Kaoru YOKOYA		
17	10			
18	11			

# WG2 (CFS for staging) session plan

(by Hayano san)

April 6 (Thursday) 14:00~18:00

- (1) Hayano; staging plan: strategy and conditions (total 1 hours)
- (2) Nakai: optimum number of cryogenics: cryogenics charge of cryomodule numbers and locations(total 1hour)
- (3) Miyahara: tunnel cost and schedules basement: to calculate cost and schedule of CFS modifications(total 1 hour)
- (4) discussion 1 hour