

8th meeting of SRF subgroup in IDT/WG2

- ✓ New member
- ✓ International review
- ✓ Detailed Explanation on cost estimation based on TDR
- ✓ Discussions on crab cavity workshop
- ✓ Others (if any)

Attendees: A. Yamamoto, S. Michizono, H. Hayano, K. Umemori, N.C. Lasheras, D. Delikaris, S. Posen, S. Belomestnykh, R. Rimmer, R. Geng, M. Liepe, E. Cenni, L. Monaco, P. Burrows, P. McIntosh, L.G. Tabares, A. Faus-Golfe, B. List, A. Lankford, S. Stapnes, Kirk

<https://agenda.linearcollider.org/category/256/>

<https://agenda.linearcollider.org/event/9047/>

You can download 2nd version of the draft

Kirk

IDT-WG2 organization

Bi-weekly **Tuesday** meeting

IDT WG2
Shin Michizono (Chair)
Benno List (Deputy)

Charges of Sub-groups

- Discuss and coordinate the topics for
 - technical preparation (remaining topics) at Pre-lab
 - preparation for mass production at Pre-lab
 - possible schedule at Pre-lab
 - international sharing candidates of these activities
 - **final technical design and documentation**

- Report to the IDT-WG2

Bi-weekly Tuesday

SRF

Bi-weekly Tuesday

DR/BDS/Dump

Yasuchika Yamamoto	KEK
Sergey Belomestnykh	FNAL
Nuria Catalan	CERN
Enrico Cenni	CEA
Dimitri Delikaris	CERN
Rongli Geng	JLAB
Hitoshi Hayano	KEK
Bob Laxdal	Triumf
Matthias Liepe	Cornell
Peter McIntosh	STFC
Laura Monaco	INFN Milano
Olivier Napoly	CEA
Sam Posen	FNAL
Robert Rimmer	JLAB
Marc C. Ross	SLAC
Luis Garcia Tabares	CIEMAT
Kensei Umemori	KEK
Hans Weise	DESY
Akira Yamamoto	KEK

Toshiyuki Okugi	KEK
Karsten Buesser	DESY
Philip Burrows	U. Oxford
Angeles Faus-Golfe	LAL
Kiyoshi Kubo	KEK
Jenny List	DESY
Thomas Markiewicz	SLAC
Brett Parker	BNL
Ivan Podadera	CIEMAT
David L. Rubin	Cornell
Nikolay Solyak	FNAL
Nobuhiro Terunuma	KEK
Glen White	SLAC
Kaoru Yokoya	KEK
Mikhail Zobov	INFN LNF

CRAB

Dump

Nobuhiro Terunuma	KEK
Toshiyuki Okugi	KEK
Chris Densham (STFC)	
Marco Calviani (CERN)	
Yu Morikawa (KEK)	
Fernadno Sordo (ESS Bilbao)	
Peter Sievers (CERN)	

Bi-weekly Monday

Sources

Kaoru Yokoya	KEK
Jim Clarke	STFC
Steffen Doeber	CERN
Joe Grames	JLAB
Hitoshi Hayano	KEK
Masao Kuriki	U. Hiroshima
Benno List	DESY
Gudrid Moortgat-Pick	U. Hamburg

Peter Sievers (CERN)
Sabine Riemann (DESY)

Civil engineering

Nobuhiro Terunuma	KEK
John Andrew Osborne	CERN
Tomoyuki Sanuki	U. Tohoku

International (internal) review on SRF technology

- Date/time: Feb. or Mar. (2~3 hours) after workshop of crab cavity
- Organizer: IDT Executive Board
- Reviewers: Three experts from three regions (Asia, Americas, Europe)
- Contents: Overview (Kirk)
 - WP-1 (FNAL)
 - WP-2 (Kirk)
 - WP-3 (UK, or US? Presenter to be discussed in the crab workshop)
- Each talk has 30 min incl. questions
- Important points:
 - Are there any items missing from the table of budget request?
 - Contents of WP-1, -2, and -3 are valid?
 - Only proposal will be presented, not recent status of R&Ds
- Material concerns (background for each item should be presented):
 - Recipe of surface treatment
 - Nb material
 - Design of Tuner/Coupler/SCQ-Magnet

Workshop of crab cavity

- Date/time: 18/Feb? (not fixed yet) before international review
- Organizer: IDT WG2 SRF subgroup (chair person is Kirk)
- Expected attendees: Members of SRF subgroup
 - G. Burt, A. Wheelhouse, S. Pattalwar from UK
 - R. Calaga from CERN
 - J. Delayen from ODU
 - S. Yakovlev from FNAL
- Contents: Overview/history (if necessary)
 - Presentation from UK
 - Presentation from CERN
 - Presentation from JLAB/ODU
 - Presentation from FNAL
- Each talk has 30 min incl. questions
- Important points:
 - Who presents at the international review?
 - Who or which lab. organizes the activity of crab cavity after this workshop?
 - Each design is fitted to the installation area?
 - RF property is valid?
 - Timing issues and present achievement to be checked (everyone can gather these information)

18/Feb. is o.k.?

Invitation letter to crab cavity workshop for the ILC

18/Jan/2021

Dear Every expected attendee for this workshop,

The crab cavity workshop for the ILC will take place on virtual (zoom) at **18/February 22:00-25:00 @JST (14:00-17:00 @EU, 13:00-16:00 @UK, 8:00-11:00 @US Eastern, 7:00-10:00 @US Central, 5:00-8:00 @US Pacific) (not fixed yet)**. All members of the IDT WG2 SRF subgroup, and some important experts from Americas and Europe will join this workshop. The goals of this workshop are the following, and we will not fix any cavity/cryomodule design in this workshop. Only proposals and capability of each laboratory will be presented.

- Proposal from each laboratory interested in the crab cavity system for the ILC
- Items to be decided
 - Who presents at the international review?
 - Who or which laboratory organizes the activity of crab cavity after this workshop?
- RF Timing issues and present achievement to be checked, and discussed
- Discussions next stage

Following proposals from the SRF subgroup, we have the pleasure of inviting you to make a 30-minute presentation (including 5 minutes for questions) from each laboratory. The program of this workshop is tentatively scheduled in the following.

- Overview/history (if necessary)
- Presentation from Europe (UK, CERN (separately presented))
- Presentation from Americas (JLAB/ODU, FNAL, TRIUMF (separately presented))
- Discussions
- Summary

The workshop will finish within 3 hours including the discussions and the summary.

If you have any questions concerning the contents of your presentation, please do not hesitate to contact the chair of the workshop, Yasuchika (Kirk) Yamamoto.

We hope you will accept this invitation to participate at the workshop, and thereby personally contribute to the success of this workshop. We would very much appreciate a formal reply to Yasuchika Yamamoto by e-mail (yasuchika.yamamoto@kek.jp), as soon as possible.

Yours sincerely,

Yasuchika (Kirk) Yamamoto (Workshop Chair)

Akira Yamamoto, and Shinichiro Michizono (Supervisors)

Schedule of SRF (incl. crab) subgroup meeting in IDT/WG2

Meeting #	Date	Contents
	8/Jan	Submission of budget request to EB
8	12/Jan	International review, Explanation on cost estimation, Discussions on crab cavity workshop plan
	19~21/Jan	TTC meeting 2021 on virtual
9	26/Jan	
10	9/Feb	
	18/Feb (?)	Crab cavity workshop
11	23/Feb	
	Feb or Mar	International review on SRF, BDS, Sources
12	9/Mar	
	16~19/Mar	LCWS 2021 on virtual hosted by Europe
13	23/Mar	
		Preparation for MOU between/among laboratories
	Jun~Jul	Submission of budget request to MEXT, in case of Japan
	28/Jun~2/Jul	SRF 2021 on virtual
	26~29/Oct	International conference related to ILC on virtual hosted by Japan (True name is not fixed yet!)

Questions/Discussions/Comments (memorandum) @8th meeting

Translation by Kirk

- International review
 - Global situation and proposal can be presented, not status of each region and R&D
 - Technology topics are included?
 - The background can be presented
 - Recipe for surface treatment, Nb material, design of tuner/coupler/SCQ-Mag
 - FNAL can present about WP-1
 - After the crab cavity workshop, this review will be held, and someone will present about WP-3 (to be discussed in the workshop)
- Detailed explanation on cost estimation based on TDR
 - MILCU is used up to when?
 - Translation table should be added in the table
 - How much is MILCU expectedly increased in 2022-2025?
 - 20-30%, or 10-15%?
- Crab cavity workshop
 - Should be held before the international review
 - At 17/Feb, Snowmass will be held in US, 18/Feb is much better
 - Kirk is the chair person for this workshop, but after this, we have to discuss who leads the activity of crab cavity?
 - And, also who will present in the international review?
 - Other technical items should be discussed
- LCWS2021
 - Not fixed yet, but there are four parallel sessions incl. CLIC
 - Until the end of Jan, it will be fixed

Requests/Questions from SRF subgroup members

- From Sam (FNAL)
 - In the cost estimation, how do we separate between the property cost and the labor cost?
 - Especially, CM assembly?
- From Enrico (IRFU/CEA)
 - Nomura Research Institute report in English version
- From Peter (STFC)
 - Add UK to WP-2

If you have any other requests or questions, please send us by e-mail!