

Report of TTC-TB meeting at CERN

2020, February 07

Co-chairs

Eiji Kako (KEK)

Wolf-Dietrich Moeller (DESY)

Outline

- Current member list
- Report from SPC meeting for TTC at CERN

Discussions

- Comments from TTC-TB members
- Topics for in-depth discussion in the next TTC
- Proposal of WG-organization in the next TTC
- Others

Current TTC-TB member list

Co-chairs

E. Kako (KEK)
W.-D. Moeller (DESY)

Cavity and couplers

S. Calatroni (CERN)
R.L. Geng (JLab)
J. Hao (PKU)
D. Reschke (DESY)
A. Romanenko (FNAL)
K. Umemori (KEK)
J.Y. Zhai (IHEP)
J. Mammosser (ORNL)
D. Longuevergne (IJCLab)
A. Palczewski (JLab)
Z. Conway (BNL)
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C. Pagani (INFN)
M. Ross (SLAC)
O. Napoly (CEA)
H. Padamsee (Cornell)

Regional representative

P. Pierini (ESS)
A. Yamamoto (CERN/KEK)
S. Belomestnykh (FNAL)

Total = 33
(EU=**12**, NA=**13**, Asia=**8**)

TTC@CERN
participation = **23**
absent = 10

Scientific Program Committee meeting by Vidyo meeting system ;

(SPC members; Frank, Hans, Bob, Kako, Wolf-Dietrich, Paolo, Sergey, Akira)

- 1st SPC meeting, 2019' Sept. 27th (Fri)
- 2nd SPC meeting, 2019' Oct. 4th (Fri)
- 3rd SPC meeting, 2019' Oct. 18th (Fri)
- 4th SPC meeting, 2019' Oct. 25th (Fri)
- 5th SPC meeting, 2019' Nov. 7th (Thu)
- 6th SPC meeting with WG conveners, 2019' Nov. 22nd (Fri)
- 7th SPC meeting with WG conveners, 2019' Dec. 4th (Wed)
- 8th SPC meeting with WG conveners, 2019' Dec. 13th (Fri)
- 9th SPC meeting with WG conveners, 2019' Dec. 19th (Thu)
- 10th SPC meeting with WG conveners, 2020' Jan. 17th (Fri)
- 11th SPC meeting with WG conveners, 2020' Jan. 30th (Thu)

Thanks, Frank for strong leadership !!

WG-organization in TTC at CERN

Two parallel sessions: 4 WGs

WG1: Progress on High-Q and high-G

Marc Wenskat (DESY), Ari Palczewski (JLAB), Kensei Umemori (KEK)

WG2: Couplers and auxiliaries

Eric Montesinos (CERN), Naruhiko Sakamoto (Riken), Sang Hoon Kim (FRIB)

WG3: Coating techniques, thin films and new materials

Toby Junginger (University of Victoria/TRIUMF), Guillaume Rosaz (CERN), Teng Tan (IMP)

WG4: New techniques for fabrication of SRF components & CM assembly and design

Hiroshi Sakai (KEK), Stephan Berry (CEA), Tug Arkan (FNAL)

Hot-topic: Processing and testing of large elliptical cavities (<1 GHz) for hadron linacs

Grigory Ereemeev (FNAL), Paolo Pierini (ESS), Sha Peng (IHEP)

Thanks to conveners !!

Schedule of TTC meeting at CERN

Time	Date	February, 4 (Tue)	February, 5 (Wed)	February, 6 (Thu)	February, 7 (Fri)
8:30 - 9:00		Registration			
9:00 - 9:30		Welcome/Introduction Plenary talk 1 Plenary talk 2	Plenary talk 3 Plenary talk 4 Plenary talk 5	WG3 / WG4 (parallel)	Special Seminar 1
9:30 - 10:00	Special Seminar 2				
10:00 - 10:30					
10:30 - 11:00	Coffee Break				
11:00 - 11:30		WG1 / WG2 (parallel)	WG1 / WG2 (parallel)	WG3 / WG4 (parallel)	Summary WG1/WG2 Summary WG3/WG4 TB/CB report Closing
11:30 - 12:00					
12:00 - 12:30					
12:30 - 14:00	Lunch				
14:00 - 14:30		WG1 / WG2 (parallel)	WG3 / WG4 (parallel)	Plenary talk 6 Plenary talk 7 Plenary talk 8	Lab. Tour
14:30 - 15:00					
15:00 - 15:30					
15:30 - 16:00	Coffee Break				
16:00 - 16:30		WG1 / WG2 (parallel)	WG3 / WG4 (parallel)	Hot Topics	
16:30 - 17:00					
17:00 - 17:30					
17:30 - 18:00					
18:00 - 18:30		CB meeting	TB meeting	Dinner	
18:30 - 19:00					
19:00 - 19:30					
19:30 - 20:00					

8 plenary talks: CERN, High-Q/High-G, LCLS-II, Spiral-2, WS reports from ERL2019, Asian SRF projects from China, Korea and India

2 special seminars: HIE-ISOLDE at CERN, LBNF-Dune at FNAL

Participants and WG-organization

Location	Date	Participants	Parallel	WGs
CERN	2020, Feb.	187	2-para	4 WGs
TRIUMF	2019, Feb.	108	2-para	4 WGs
RIKEN	2018, June	140	2-para	4 WGs
INFN-Milano	2018, Feb.	178	2-para	4 WGs
MSU	2017, Feb.	123	2-para.	4 WGs
CEA-Saclay	2016, July	127	2-para.	4 WGs
SLAC	2015, Dec.	130	2-para.	4 WGs
KEK	2014, Dec.	108	2-para.	6 WGs
DESY	2014, Mar.	129	3-para.	9 WGs
JLab	2012, Nov.	154	plenary	4 WGs
IHEP	2011, Dec.	96	plenary	3 WGs

Discussion on impact of novel Coronavirus

Since some of the most important features of the TTC meeting are “live presentations and face-to-face discussions”, remote presentations should be avoided.

Frank’s proposal in Jan. 31 (Fri.)

CERN management is saying that no restrictions will be imposed on the TTC meeting and they **highly encourage to offer videoconferencing** for those who cannot or do not want to attend. The CERN safety unit is asked to provide hand sanitizers at the entrances to the conference rooms, which will be used by the meeting.

The CERN management is preparing a message, which I will post later today to all meeting participants, which also talks about setting up video conferencing facilities.

Considering that these colleagues are staying at home in order not to potentially endanger anyone at the TTC meeting, I strongly support **the use of video links for these exceptional cases** (one request from Tongming so far). I also support a streaming option for the other colleagues who decide not to travel because of the virus outbreak.

Please let me know if you agree with this approach. I repeat that the **CERN management very much encourages the use of video conferencing** to make scientific exchange still possible.

Then, all TTC-SPC members agreed with the use of video conference except the hot-topic session, as an exceptional case in the TTC meeting.

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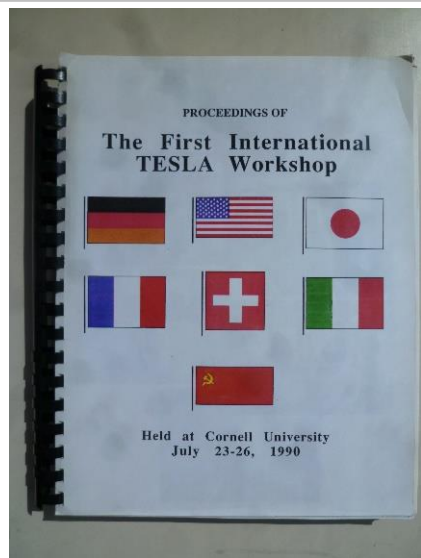
[E-mail from Marc Ross of SLAC in Jan. 29 \(Wed.\)](#)

Dan Gonnella will represent LCLS-II-HE at next week's TB meeting, please excuse my absence.

I have asked him to briefly present for discussion, if time allows,

- 1) ongoing studies of long-term radiation exposure due to dark current
(CEBAF experience)
- 2) possible multi-energy operation of the CW SRF linac using detuned cavities
(see attached), [PhysRevAccelBeams.22.110702](#): (Multienergy operation analysis in a superconducting linac based on off-frequency detune method)
- 3) how to take best advantage of exciting new high Q results, especially keeping high gradient performance of un-doped cavities.

Proposals of discussion topics from your labs are very welcome.



Celebration of 30' years anniversary, since 1st TESLA workshop at Cornell in 1990'

- Opening plenary session: 2 talks (30 min.)
- Special seminar: 1 or 2 talks (45 min.)
- Banquet speech
- Invite former TTC Chairs

- Report from Nb₃Sn workshop at Cornell in March, 2020'
- IFMIF and Nuclear Fusion
- Beam operation in SC heavy ion machines (RIKEN, FRIB)
- Multi-turn beam operation in CBETA
- First results on cryomodules in ESS
- PIP-II cryomodule tests
- SRF for EIC project at BNL/Jlab

Proposal of WG topics for in-depth discussion (2)

- Dark current and radiation damage (LCLS-II)
- Possible multi-energy operation of the CW SRF Linac
- How to take best advantage of exciting new high Q results
- High current cavities and CW machines (e.g. IFMIF)
- Progress of High Q/High Gradient
- Calibration of gradient in the machine
- Dynamic heat load measurements
- Machine protection during beam operation in SRF accelerators
- Reconditioning needed?
 - Warm up – how often?
 - Safety arguments?
- Hot topic: contracts and specifications
- China and India: New SRF infrastructures
- ILC?

- keep 2 parallel session and 4 WGs
- recommend closer two meeting rooms for WGs
- recommend less number of talks, more discussion time
- recommend more small rooms (without a microphone)

- SPC meeting for the next TTC will start in the end of March

Thanks, Wolf-Dietrich



TTC-TB deputy chair
since 2011' Dec. (TTC@IHEP)
for about 10 years

New TTC-TB member list

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Thank you for your attention.

