SCRF Monthly WebEx Meeting
July 28, 2010

Agenda

1. Report from PMs (5 min.)
2. General Report from GLs (15 min.)
3. Special Discussions (40 min.)
    1. BAW-1 Preparation
    2. ILC-CLIC ws at CERN

TDP R&D Plan Rel-5: Draft

ILC Research and Development Plan for the Technical Design Phase

Release 5

July 2010

ILC Global Design Effort

Director: Barry Barish

Draft: TDP-R&D Plan (Release 5)

Preparation for BAW-1 and Requests for Conveners and Key-contributors

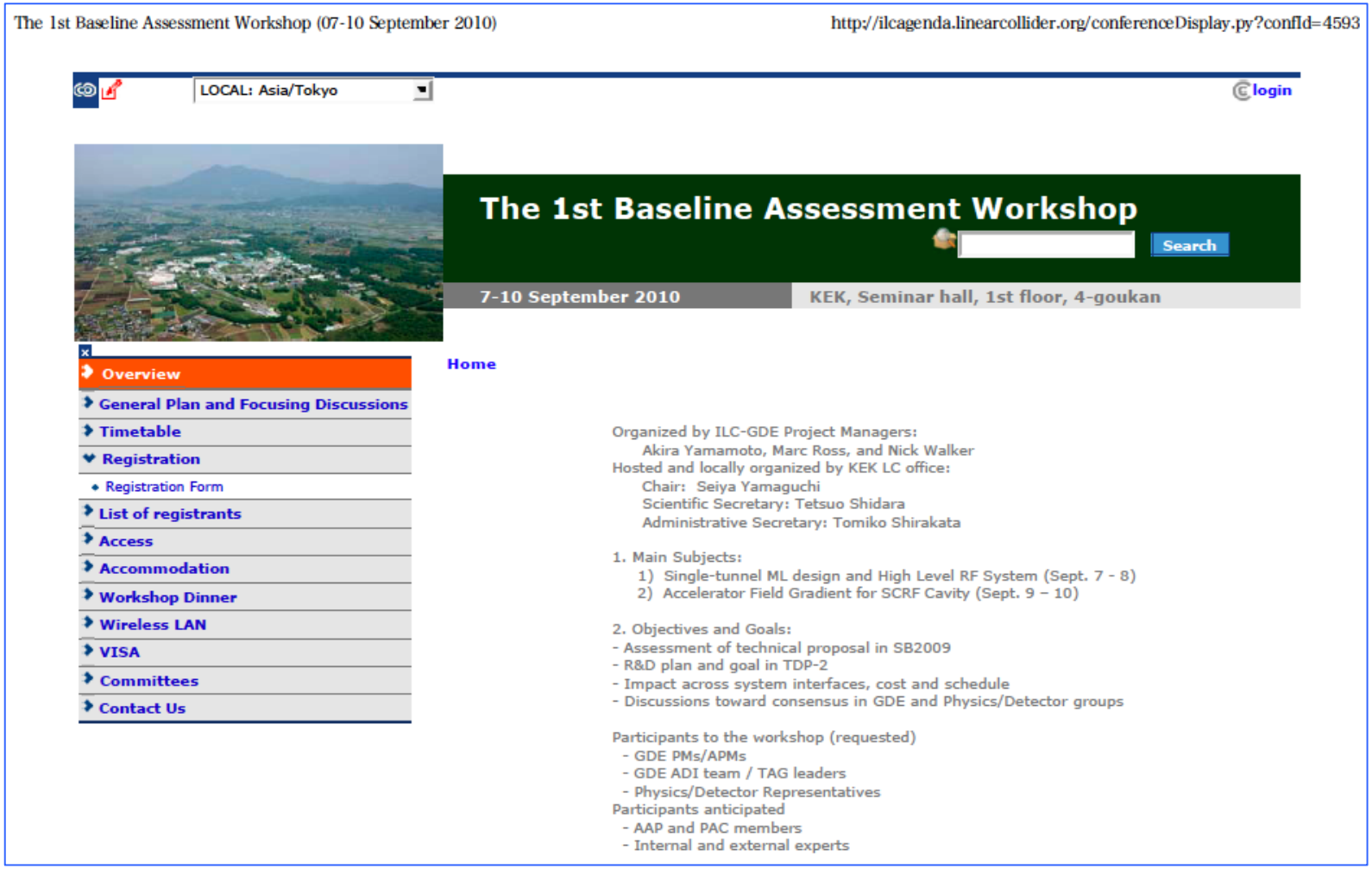
Akira Yamamoto

To be discussed in SCRF webex meeting,

on July 28, 2010

The 1st BAW Announcement

http://ilcagenda.linearcollider.org/conferenceDisplay.py?confId=4593



Time-Table / Agenda (Plan: Sept. 7)

Day	Am/pm	Subject	Convener Session Chair/- presenter
9/7		Single Tunnel ML Design and HLRF -1	S. Fukuda / C. Nantista
	am-1	Opening and Introduction - Opening - Opening address - Report and advice from AAP - BAW1 objectives and goal	S. Yamaguchi - S. Yamaguchi - A. Suzuki/K. Oide - E. Elsen - A. Yamamoto
	am-2	Single tunnel CF design and HLRF design - Single tunnel ML design overview - Single tunnel CF design status - General HLRF design in SB2009	V. Kuchler -C. Adolphsen - A. Enomoto - S. Fukuda
	pm-1	HLRF KCS-1 -KCS design and -R&D issues	S. Fukuda - C. Nantista - TBD
	pm-2	HLRF KCS-2 - Operation, control, and tolerance - Others - Discussion	S. Fukuda -TBD - TBD - ALL

Time-Table / Agenda (Plan: Sept. 8)

Day	Am/pm	Subject	Convener Session Chair/- presenter
9/8		Single Tunnel ML Design and HLRF -2	S. Fukuda / C. Nantista
	am-1	DRFS - 1 - DRFS design - DRFS R&D status and plan	C. Nantista - S. Fukuda - TBD
	am-2	DRFS-2 - Assembly, sorting, installation strategy - others	C. Nantista - TBD - TBD
	pm-1	HLRF and LLRF -LLRF requirements/issues for KCS -LLRF requiremetns/issues for DRFS	C. Adolphsen - TBD - S. Michizono
	pm-2	Discussions and Recommendations - General discussions - Summary and recommendations	S. Fukuda - TBD - ALL

Discussion Topics: Single-tunnel HLRF system in the 1st BAW, Sept. 7-8, 2010

- KCS: (Convener: Chris Nantista)
  - RF power margin required for cluster operation, including gradient spread, as consistent with cavity production strategy,
  - Tuning and control strategy, including impact on high gradient operation and required gradient operational margin
  - RF amplitude and phase performance tolerance within a cluster; allowed common-mode and normal-mode fluctuations,
  - R&D required, including demonstrations of component performance and demonstrations with small clusters
- DRFS: (Convener: Shigeki Fukuda)
  - Cavity and klystron sorting and resulting required RF power margins
  - Installation strategy; needed tunnel infrastructure and access
  - RF amplitude and phase performance tolerances, including gradient spread, as consistent with cavity production strategy,
  - R&D required in the remaining half of the TDP (and beyond) including radiation shielding, klystron lifetime, redundancy strategies
- Backups: (Convener: Shigeki Fukuda, as SCRF HLRF GL)
  - Original RF system in RDR, in single tunnel, just in case, as a backup,

Time-Table / Agenda (Plan: Sept. 9)

Day	Am/pm	Subject	Convener Session Chair/- presenter
9/9		Cavity: Gradient R&D	R. Geng
	am-1	Cavity Gradient R&D - 1 - Technical address for the 2nd part of WS - Overview - Progress of cavity gradient data-base/yield	H. Hayano - A. Yamamoto - R. Geng - C. Ginsburg
	am-2	Cavity gradient R&D – 2 - Regional R&D status and further plan	E. Kako - TBD, from Europe - M. Champion, from AMs - H. Hayano, from Asia
	pm-1	Strategy for cavity gradient improvement - Near-future R&D in TDP-2 - Long-term R&D scoping TeV collider	E. Elsen - TBD - TBD
	pm-2	R&D plan and discussion - General discussions - Summary and recommendations	R. Geng TBD - ALL

Time-Table / Agenda (Plan: Sept. 10)

Day	Am/pm	Subject	Convener Session Chair/- presenter
9/10		ILC accelerator gradient and operational margin	A. Yamamoto and J. Kerby
	am-1	ILC Accelerator Gradient - Overview on ILC gradient specification - Observation on average and spread - Operational experience	C. Adolphsen - A. Yamamoto - J. Kerby - TBD
	am-2	Cryomodule operational margin - Operational experience - Requirements from cavity-string operation - Discussions	M. Ross - TBD - TBD
	pm-1	Accelerator/beam operational margin - Operational experience in accelerators - Requirements from accelerator tuning/op. - Discussions	N. Walker - TBD - TBD
	pm-2	Genearl Discussion and recommendation - General discussions - Summary and recommendations	A. Yamamoto - TBD - All

Discussion Topics: Accelerating Gradient 1st BAW, KEK, Sept. 9-10, 2010

- Gradient Improvement Studies: (Convener: Rongli Geng)
  - Material/fabrication, surface processing, instrumentation and repair
  - Strategy to overcome 'quench', and 'field emission' and to maintain moderate cryogenic load,
  - Strategy to define and specify 'Emitted Radiation', (Radiation that may result in increased cryogenic-load and usable gradient limitations),
  - Improvement of gradient and achievement of adequate yield,

- Strategy for Accelerating Gradient in the ILC: (Convener: Akira Yamamoto)
  - Overview and scope of 'production yield' progress and expectations for TDP, including acceptable spread of the gradient needed to achieve the specified average gradient,
  - Specifications of Gradient, Q0, and Emitted Radiation in *vertical test*, including the spread and yield,
  - Specifications of Gradient, Cryogenic-load and Radiation, including the gradient spread and operational margin with nominal controls, in *cryomodule test*,
  - Specifications of Gradient, Cryogenic-load and Radiation, including the gradient spread and the operational margin with nominal controls in *beam acceleration test*,
  - Impact on other accelerator systems: CFS, HLRF, LLRF, Cryogenics, and overall costs.

Requests for Conveners and Key-contributors

- Communicate with experts and establish the agenda to be reported and discussed,
- Prepare for 'text' documents on the reports and discussions by end of August, prior to the BAW-1 workshop,
- Report the progress and plan for the above preparation in the SCRF webex meeting, on July 28.

- *Your cooperation will be much appreciated.*

Preparation for the 1st BAW

- May 7: SCRF webex meeting and homework assignment

- May 26: AD&I meeting
- June 2: SCRF webex meeting and progress report from each collaborator,

- June 23: AD&I meeting
- June 30: SCRF webex meeting and preliminary draft report to be distributed >>> in progress, assuming R&D plan draft can be partly used.

- July 21: AD&I meeting
- July 28: SCRF meeting and draft report to be distributed,

- Aug. 25: SCRF meeting, the report prior to the 1st BAW to be complete.