

SCRF Meeting

2008-07-09

Agenda

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1. Reports from PMs/APMs (10 min.)

- EPAC talk (A. Yamamoto)
- ASC talk: ASC presentation (2 min.)
- "Towards a Minimum 500 GeV Machine Definition" (N. Walker/M. Ross)

2. Reports from GLs (15 min.)

- MLI: Progress in a prototype Q. test (C. Adolphsen)
- Cavity: Guide-line for fabrication/process/test; Updated "tight-loop" plan (L. Lilje)

3. Discussions (30 min.)

- 1) Plug-compatible design/interface (interim summary)
- Cavity envelope (H. Hayano)
- Cryomodule (N. Ohuchi)
- 2) Post-TTC ILC-SCRF meeting at Delhi, Oct. 24.
 - proposal to focus on the R&D programs of Indian laboratories with global cooperation (Europe, Americas, Asia) for ILC.

4. Plan for the next meeting (3 min.)

- Propose, August meeting to be skipped 8/6, and
- the next meeting to be on 9/3.

Reports from PMs

- EPAC
 - AY's Presentation may be given at
 - http://www-prism.kek.jp/~akira/ILC/EPAC-MOYBGM01_talk.pdf
 - Proceeding draft to be submitted
 - Thanks for various contributions from ILC-SCRF,
- ASC (Applied Superconductivity Conference, Chicago, Aug. 08)
 - Invited talk (A. Yamamoto) titled
 - "Superconducting RF Cavity Development for the International Linear Collider",
 - To focus further research and development with introducing more single cavity study and fundamental research.
- "Towards a Min. 500 GeV Machine Definition"
 - Outline document distributed by N. Walker
 - To be discussed and documented by Nov., 2008
 - Marc will report and explain more including CF&S issues,
- GDE meeting and AAP (interim) review in April, 2009
 - Planned to be held at Tuskuba or KEK on April 20 – 24, 2009.

Minimum Machine Definition

- Physics scope (WWS document)
 - 200-500 GeV centre-of-mass energy range
 - $2 \times 10^{34} \text{ cm}^{-2} \text{ s}^{-1}$
 - polarized electrons
- Identify cost-driving requirements and criteria
 - Push back on them to acceptable minimum
 - CFS will be primary target
 - Underground volume and construction
 - Process cooling water
- Definition document due late 2008
 - Led by Project Manager Nick Walker (DESY) and ILC Integration Scientist Ewan Paterson (SLAC)

Minimum Machine Design Plan

- This document will represent one of the primary deliverables for TD Phase 1 in 2008, as described in the TD Phase R&D Plan Release 2.
- The specification document will form the basis of the 'minimum machine studies' in 2009, which are intended to provide quantitative input into the planned review and re-baseline of the machine at the end of TD Phase 1.

Minimum Machine Design

1. General layout considerations (“Integration”) whereby the goal is to reduce overall underground volume by more integrated use of tunnels, shafts and vaults.
2. Technical component specifications, for example water cooling parameters which should be less conservatively defined for individual sub-systems.
3. Accelerator performance specifications, for example reducing the number of individually powered magnets (“stringing”), relaxing alignment stability requirements and environmental specifications (temperature stability).