EDR Cavity KOM summary of 09.19.2007

H. Hayano

09.19 morning session 1

Introduction of EDR Cavity KOM

- Akira Yamamoto, ”ILC-EDR Kick-off Meeting; Cavities; Organization and Charges”

  project management structure,

  regional effort & technical effort vs regional contribution table,

  cavity group organization table to be filled in soon.

  technical efforts and technical driven timeline are shown.

- H. Hayano, “Definition of Work Area; Issues of Cavity and Cavity Package, Work Package discussion”

  16 issues in cavity & treatment,

  12 issues in cavity package,

  5 work packages for cavity, 6 work packages for cavity package are proposed.

  EDR design strategy, technology down selection, plug compatibility qualification, are discussed.

09.19 middle session 1

Review of Baseline, Plans for EDR

- C. Ginsburg, “Gradient Status from the S0 perspective“

  Review of S0 task force work,

  R&D on single cell,

  established cavity vender(DESY and JLAB status),

  S0 production-like process status(qualification new vender;MHI,AES)

  S0 data coordination(global data analysis, material removal, mode analysis)

- L. Lilje, “RDR Cavity System; mandatory and optional changes“

  cavity and cavity system design (XFEL choice vs ILC baseline)

  review of RDR work for cavity system

  cost benefit analysis

- H. Hayano, “Cavity activity at KEK “

  status of cavity R&D (9cell TESLA-shape&LL-shape, single cell, other)

  status of cavity package R&D(module test)

  Facility construction status

  KEK EDR plan (STF phase1, phase2, ??phase3, S0-task)

09.19 middle session 2

Review of Baseline, Plans for EDR

- C. Pagani, “ILC and XFEL cryomodules “
  from type3 to ILC module,
  difference of XFEL module and ILC module
  comment on the cost
  cryomodule assembly study
  cryomodule transportation study
  XFEL status (in-kind contribution from Italy and France)
- S. Mishra, “Cavity R&D activities in US; review of RDR work and plans for EDR“
  FY06-07 activities
  25 from ACCEL, 10 from AES, 4 by Jlab, 12 single cell from AES&ACCEL,
  new vender: PAVAC,
  results of AC6,7, AES1-4, AC5,8, 9&re-entrant,
  Facility: EP,HPR,VT,HT, T-map
  work package of each lab,
  Industrial development
  Plans for FY08-09
  84 cavities planned
- S. Mishra, “ILC research plans: Global Work Package“
  Global work package
  ILC work package agreement
  statement of work for global work package

09.19 discussion session

Discussion of Baseline

- A. Yamamoto, :

What is the functional parameters, What is the realistic baseline parameters?
The most critical parameter is gradient.
How much realistic 35MV/m is, so far?

- L. Lilje, :How much close to ILC gradient goal

4th production 30 cavities: statistical study with alcohol rise -> still spread is big, even fabrication error cavities eliminated, 25-40MV/m spread, average is around 30MV/m.
Best gradient/cell shows more large spread, need more push-up technology.
From vertical to horizontal, degradation still exist. Need more well-controlled assey.

- A. Yamamoto, :

If we fix parameters too much now, we have a risk not to reach the goal. Gradient R&D must
continue through EDR to reach the goal. So, the design should be flexible to accommodate on going R&D. The baseline design is required in EDR, however, a plug-compatibilities is required to push up performance/cost.

09.19 discussion session (cont.)

Discussion of Baseline

- R. Stanick, :process table of plug compatibility

Table to be used for the plug-compatibility discussion is proposed.

(c) There was a similar list discussed in S2 task force.(Marc)

(c) Taking into account the timeline of ILCTA and STF, there is a few chance to verify or demonstrate, not much time for R&D.(Bob)

To provide fundamental parameters in this list as a start of discussion, Akira and Marc asked to Carlo to provide a list to be filled in by tomorrow, such as for cavity, tuner, coupler etc.

(c) Design change of TTF cavity to XFEL cavity (in Lutz's presentation), as an example, we have to accommodate this kind of change from the beginning of EDR work.(Akira)

end