

## WG3: Main Linac Structure

We all have been delighted to see the collaboration in structure studies has been Real and

Very Important,

Very Active,

Very Successful.

Resolved Issues for RDD1 :

Finalization of standard cell drawing

Pumping cells: cell numbers and tentative dimensions

Requirement and preliminary location for the interface of diffusion bonded body and input coupler assembly: flat, rotational symmetric and enough thickness

Work for SLAC

Detailed mechanical design of front end: input coupler and HOM coupler  
Preliminary drawing to KEK (Middle of February)

Detailed mechanical design of output end, possibility of coupling all cells  
in one plane  
Preliminary drawings to KEK (End of February)

Careful studies of single cell QC set-ups (February 12th)

Dimension calculations for additional six disks (End of February)

Refined studies on dipole modes:  $\Omega$  calculations of dispersion curves  
Perturbation calculation for real profiles  
Sensitivity studies for narrow slots ( $f_0$  also)  
More microwave measurements  
(End of February)

Generate tables for single cell QC:  $f_0$  (0 mode and pi mode) (End of February)  
 $f_1$  (pi mode) (Middle of March)

# ISG report

## DDS3

Refer to LCC-010 (KEK-MI)

Fabrication at SLAC

Brazing

Straightening

RF measurement

ASSET

High power test

## RDDS1

Electrical design

Mechanical design

Microwave measurements

Disks

Input coupler assembly

HOM coupler assembly

Bead pulling

Disk fabrication

Mechanical QC

Frequency control

Stacking

Pre-bonding and **diffusion** bonding

Generate a table (Trial II) for medium machining (-30 microns)  
(End of February)

Generate the final dimension table  
(End of March)

## Work for KEK

Studies of cell profile: precision measurements of five SLAC CMM'ed cells  
Studies of turning speed, tip size, stiffness, etc.  
Adaptive machining correction practice  
NC machine software examination  
(End of February)

Fabrication of 2D-shape 7 disks (Trial I-#102)  
(Middle of February)

Fabrication of 14 test disks (Trial I-#52, #153), 7 disks per type  
just after meeting in end of February  
(Beginning of March)

After receiving SLAC's further study results on single QC set-ups,  
Fabrication of RF QC set-ups from SLAC drawings  
Calibration of RF QC set-ups  
(End of February)

Fabrication of disks of Trial-I #5---#9 and #52---#56, 4 disks for each type  
for confirming frequency control strategy related to fabrication and QC etc.  
(End of March)

Medium machining starts based on Trial-II  
(March)

## Work for KEK and SLAC

Frequency control scheme studies:  
Feed-forward or feed-back?  
What type of profile correction?

Tolerance analysis

Discussion around the beginning of March for RDDS 1 design and fabrication