

Summary and Outcome Cavity Gradient

ADI Meeting

May 29, 2009

Cavity Gradient: Discussed

- The cavity preparation recipe has been changed not to repeat too many cycles,
- Insufficient guide line for the gradient evaluation with the yield, and the yield value can be easily scattered, (35 MV/m at 15 – 50 % yield), depending on the 'cut' , 'plot binning', or 'filtering' the measured results,
- How to treat cavity with many treatment and measurement ? (the last performance? or the best performance ?)
- What is the definition of 'Production yield' and 'Process yield'?
- Cavity gradient and yield criteria needs to be better defined and evaluated, as a starting point for re-baseline,
- It may be important to evaluate the yield based on how much costed/paid, in view of cost effective production and process,
- Production yield based on the number of cavities received from the vender (and paid for) would be important,
- A proposal (by Rongli): plot the yield for the first cycle and second cycle as a main evaluation tool

Cavity Gradient Action Items

- Gradient/yield evaluation:
 - Form task force to provide the yield and the progress, regularly,
 - Camille (Ginsburg) at Fermilab has been assigned to be the principal person in charge, and each lab need to assign the person in charge to cooperate with her,
 - The cavity gradient and yield progress may be informed at a occasion of SCRF webex meetings, and to be further reported at major GDE meetings.
- Re-baseline:
 - Scope the possible improvement by the end of TDP-2, and fix the re-baseline,
 - Need to re-visit and to re-optimize two number of the gradient to reach in the vertical test (currently 35 MV/m) and the operational gradient at ILC (currently 31.5 MV/m) ,
 - Re-visit RDR cost estimate of 80 % success rate (100/125) and fix the re-baseline of yield to be consistent.
 - A possible solution could be 35 MV/m between 80 – 90 % yield,
 - Need to consider the yield of cryomodule assembly (could not be 100 %).