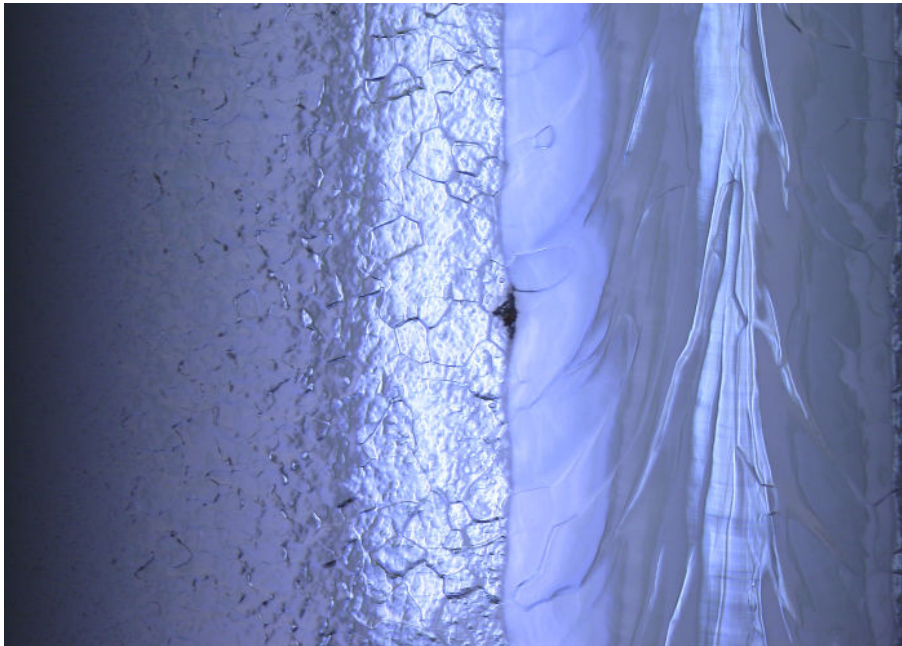


MHI#8 cavity result

- ◆ Brief history
- ◆ New surface treatment
- ◆ Vertical test result including T-mapping

Brief history of MHI#8

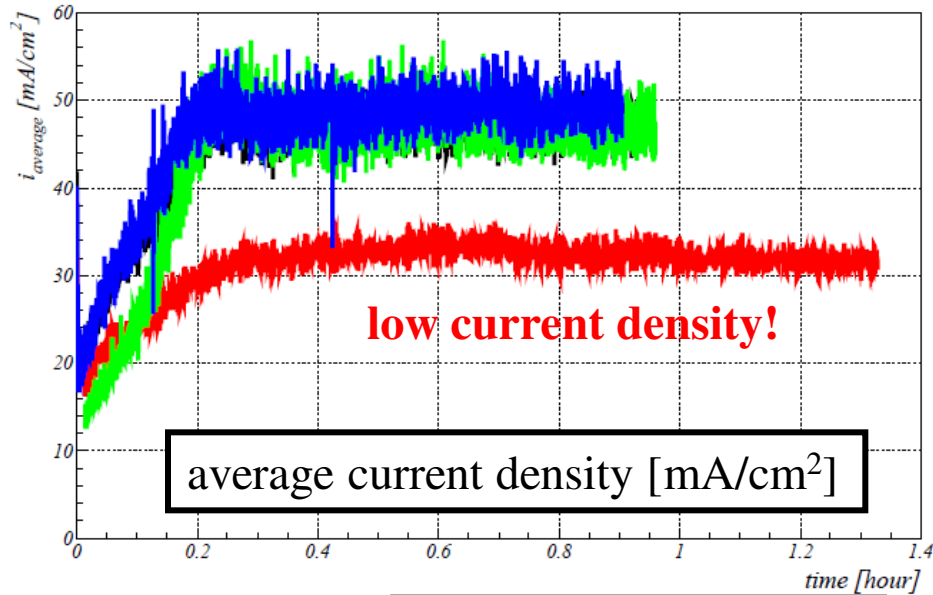
- ◆ 9/Jul/2009 1st V.T. $E_{\text{acc, max}}=16.0\text{MV/m}$
- ◆ Jul/2009 inspection found deep defect at heating location
- ◆ Sep/2009 local grind removal of defect at cell #2
- ◆ 29/Oct/2009 2nd V.T. $E_{\text{acc, max}}=26.8\text{MV/m}$
- ◆ 26/Nov/2009 3rd V.T. $E_{\text{acc, max}}=17.5\text{MV/m}$
- ◆ 18/Feb/2010 4th V.T. $E_{\text{acc, max}}=37.8\text{MV/m}$



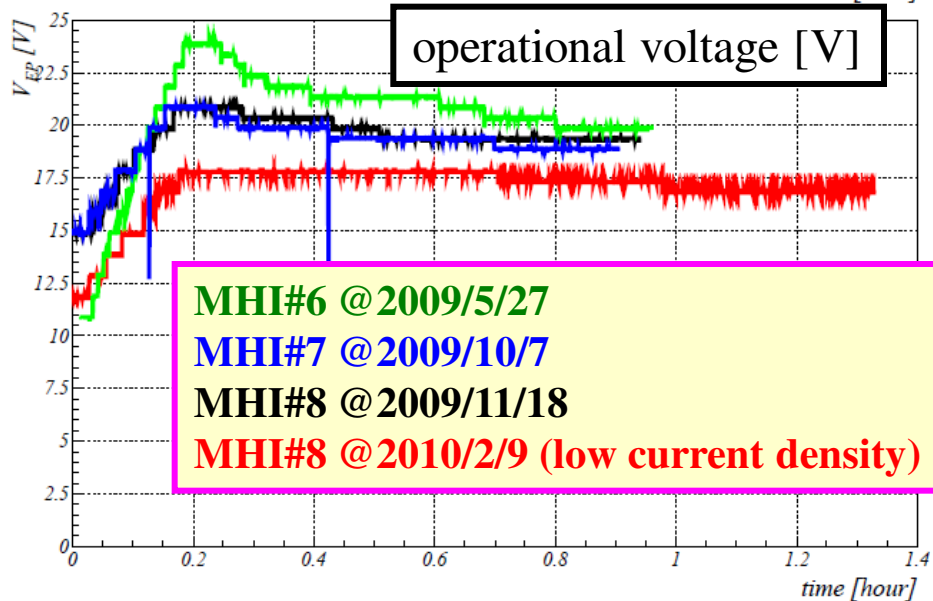
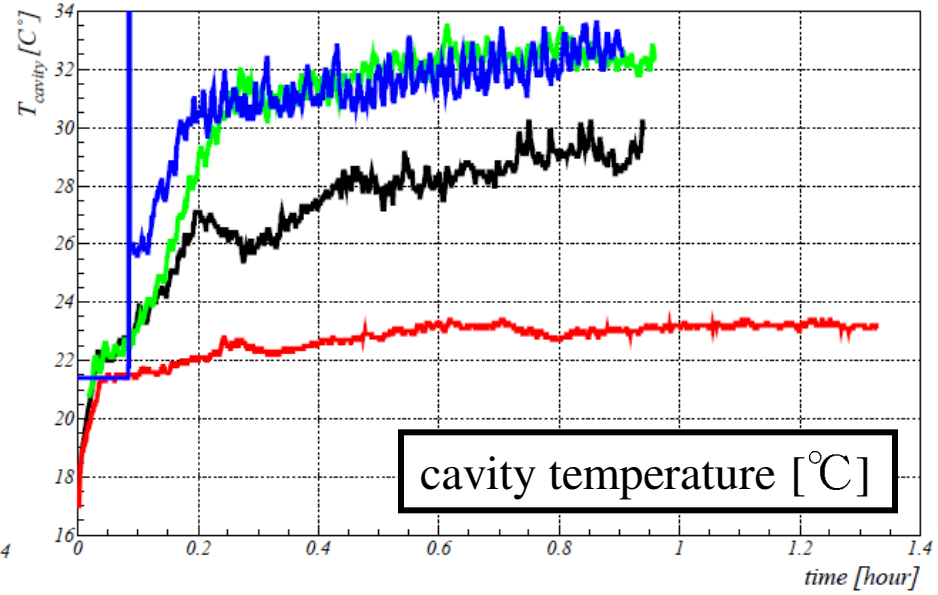
In the inspection after 2nd and 3rd V.T., any defect was not found at heating location. Therefore, the local grinding was not carried out.

New surface treatment at STF

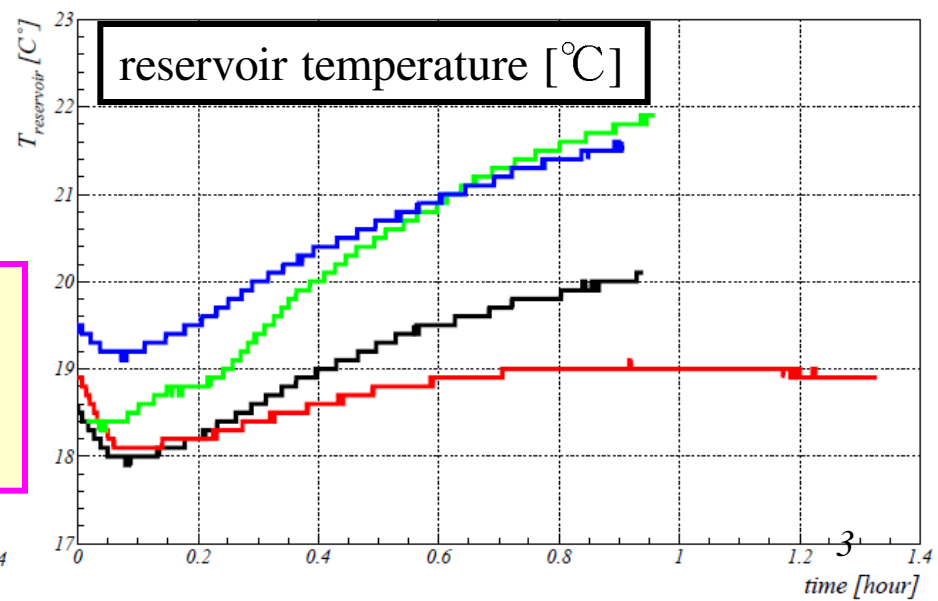
Comparison of EP2 for STF B.L. #6 Cavity



Comparison of EP2 for STF B.L. #6 Cavity

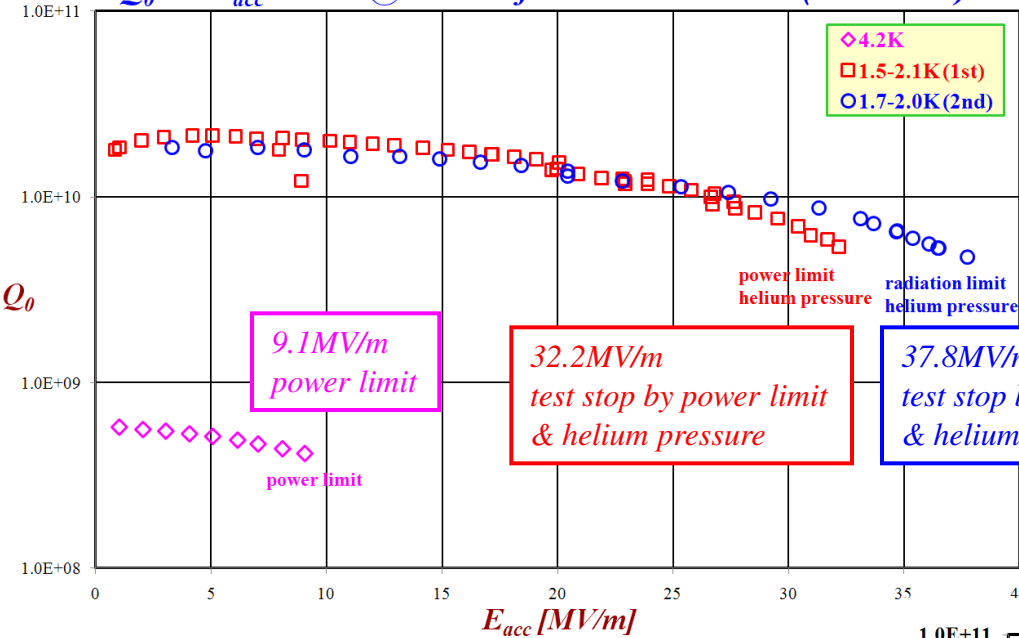


MHI#6 @ 2009/5/27
MHI#7 @ 2009/10/7
MHI#8 @ 2009/11/18
MHI#8 @ 2010/2/9 (low current density)



V.T. Results of MHI#8

Q_0 vs. E_{acc} Curve @ π mode for B.L. #8 4th V.T. (2010/2/18)

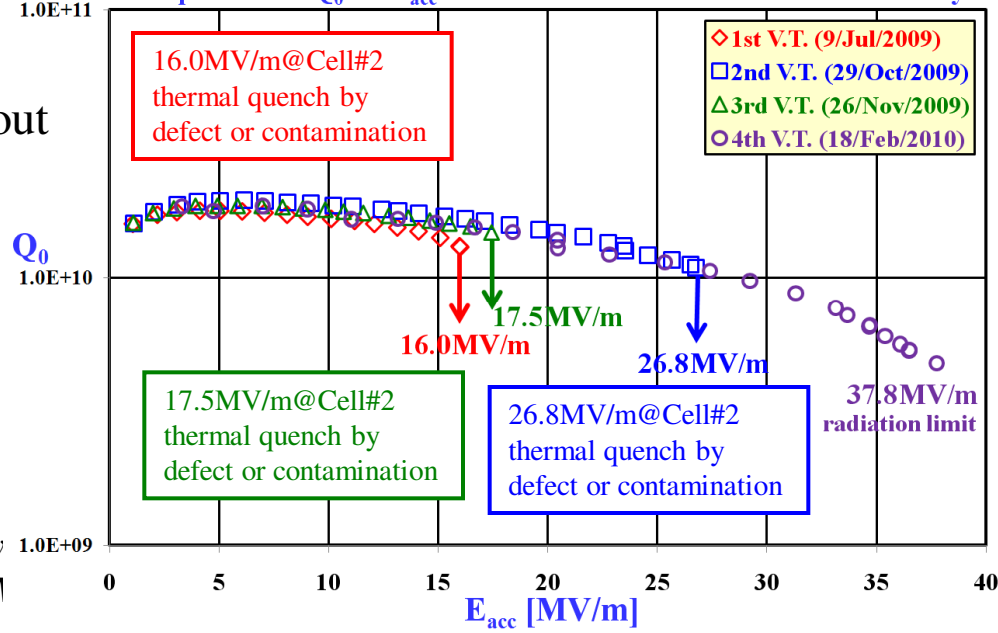


MHI#8 did not have any quench in pi-mode at 2K.

Limitation of RF test was the radiation level and helium pressure.

After the first V.T., local grinding was carried out and the pit at heating location was removed. After the second V.T., no grinding was done.

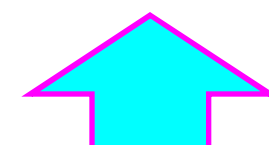
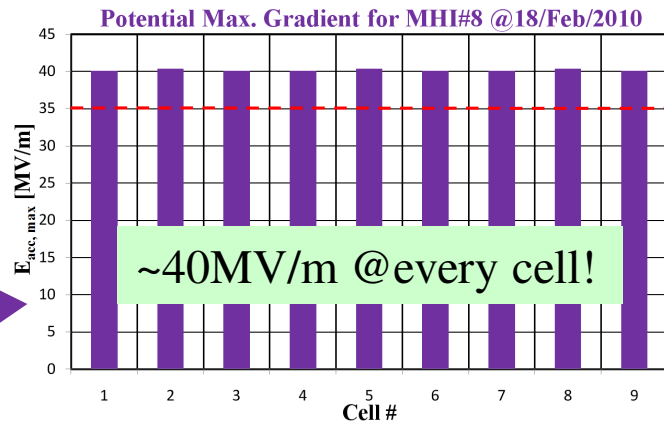
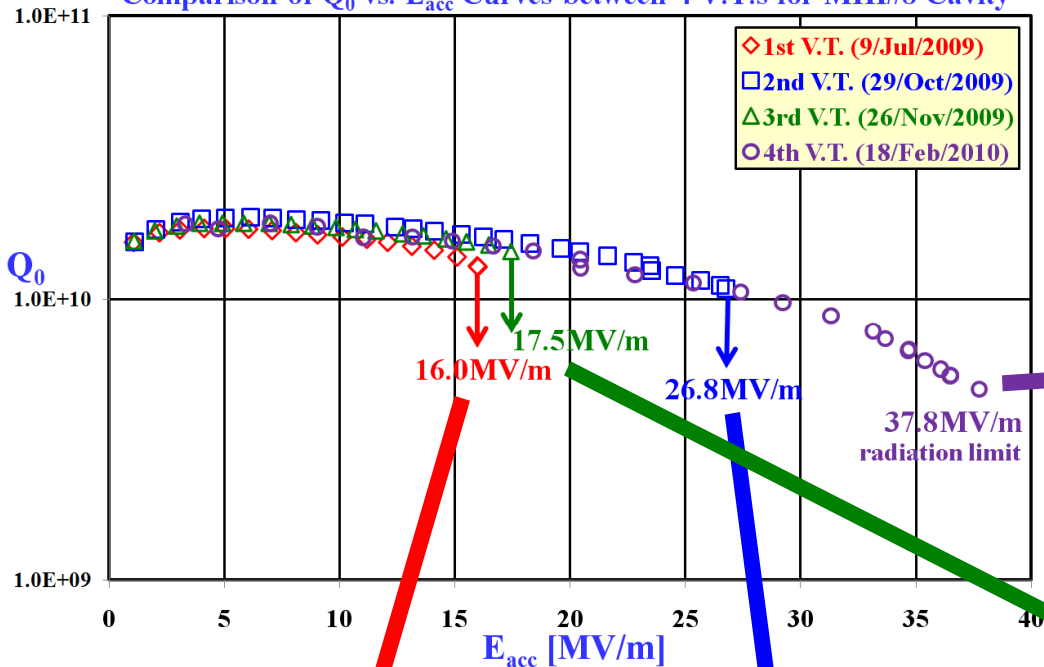
Comparison of Q_0 vs. E_{acc} Curves between 4 V.T.s for MHI#8 Cavity



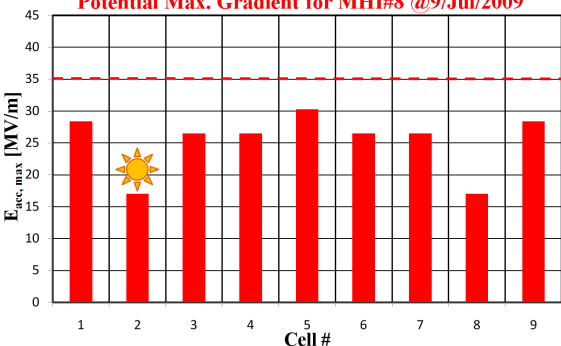
ILC S0 Cavity
(16/λ)

Result of pass-band measurement for MHI#8

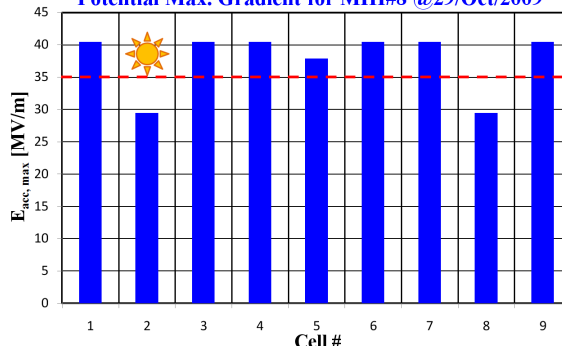
Comparison of Q_0 vs. E_{acc} Curves between 4 V.T.s for MHI#8 Cavity



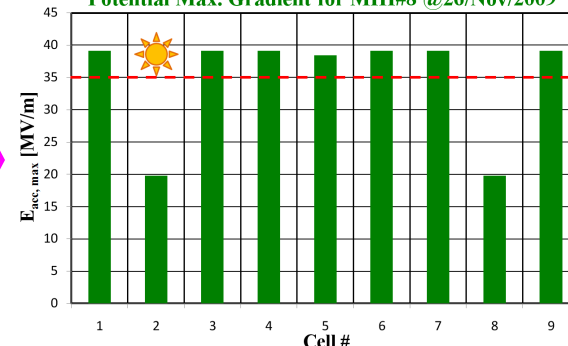
Potential Max. Gradient for MHI#8 @9/Jul/2009



Potential Max. Gradient for MHI#8 @29/Oct/2009



Potential Max. Gradient for MHI#8 @26/Nov/2009



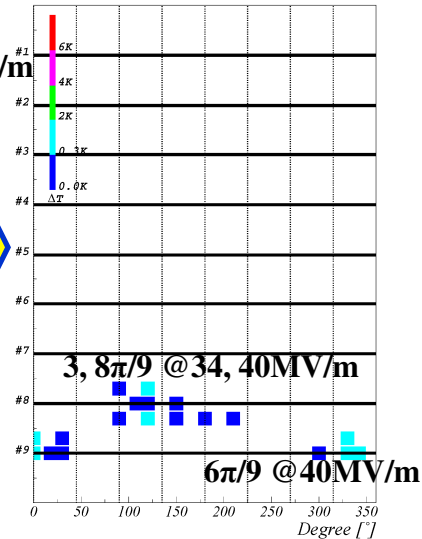
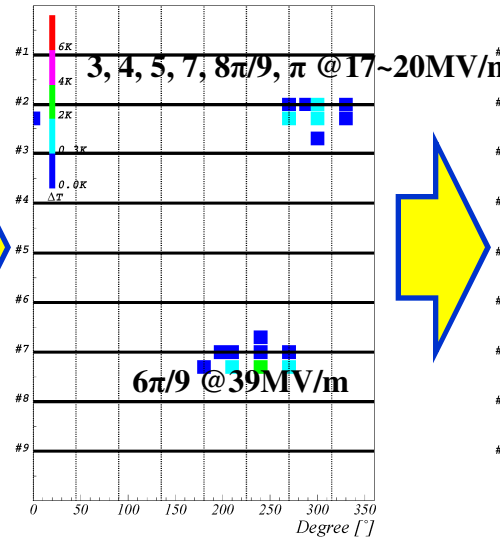
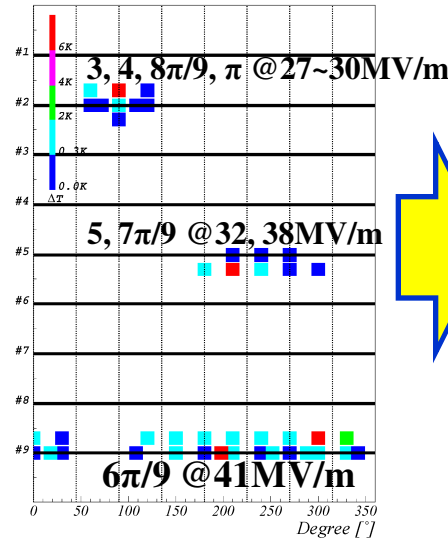
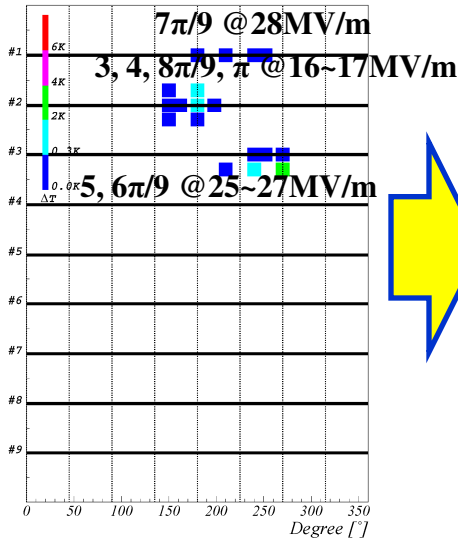
Transition of heating location for MHI#8

1st V.T. @9/Jul/2009

2nd V.T. @29/Oct/2009

3rd V.T. @26/Nov/2009

4th V.T. @18/Feb/2010



pre-EP : 5 μ m
EP1 : 100 μ m
EP2 : 20 μ m

Ethanol+HWR+HPR

EP2 : 20 μ m

Degreasing(FM-20)
+HWR+HPR

EP2 : 20 μ m

Degreasing(FM-20)
+HWR+HPR

EP2 : 20 μ m
(low current density)

Degreasing(FM-20)
+HWR+HPR