

Cavity status; recent KEK activities

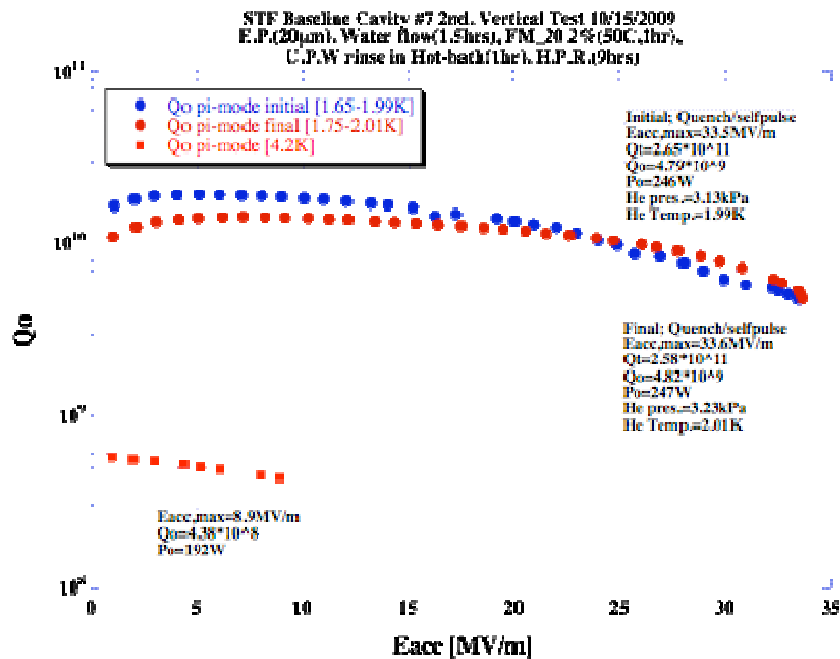
- (1) MHI-07 was vertical tested on Oct. 15.
→ 33MV/m, stopped by field emission and quench.
Heating at #9cell equator and strong radiation observed.

- (2) AES-003 cavity was treated by guided repair and 50um EP, degreaser rinse, HPR.
It is in transporting back to FNAL, now in Narita for custom.

- (3) MHI-08 cavity was treated by guided repair on #2cell equator.
It will be tested on Oct. 29, in this week.

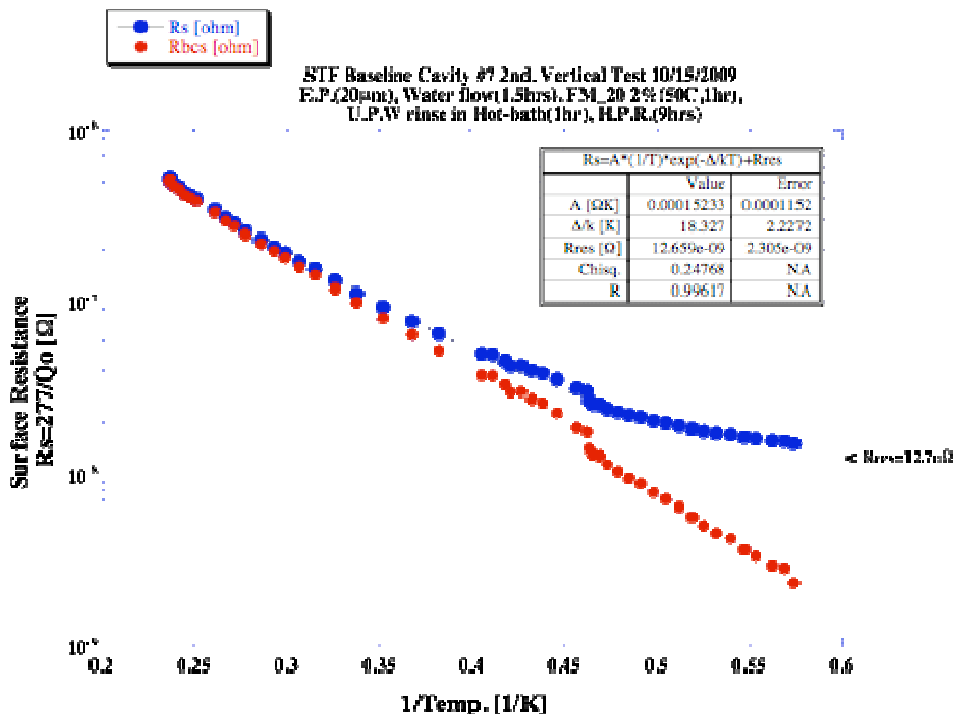
*MHI-05,06,07,08,09 are S1G candidates.

MHI-07

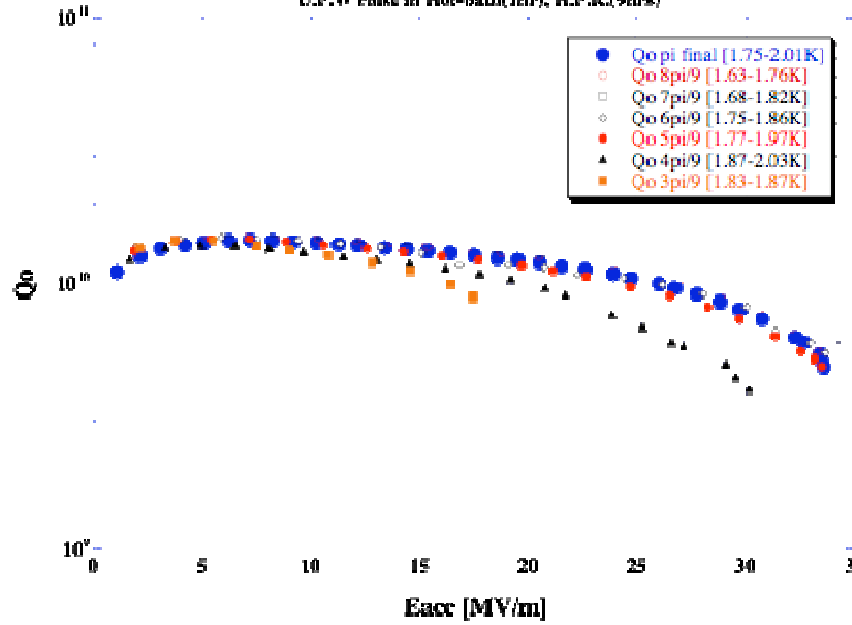


MHI-07 cavity : 2nd VT
 (20µm EP + Degreaser (with U.S.))

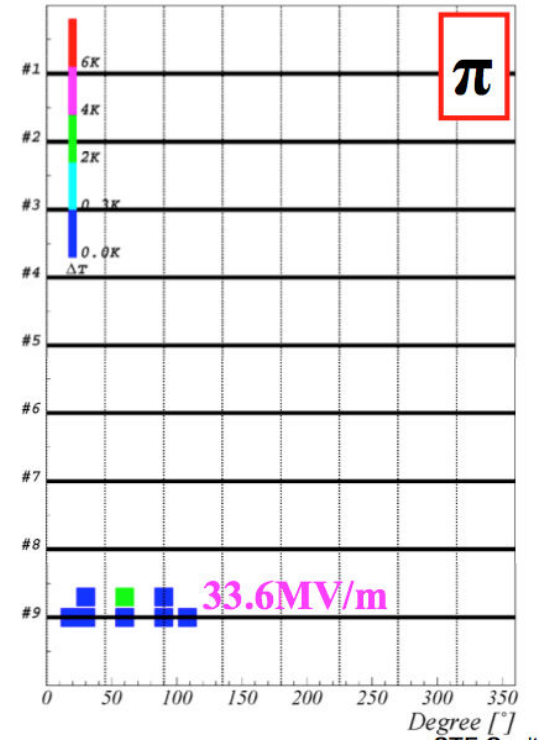
Final power rise Max: 33MV/m
 strong field emission



STF Baseline Cavity #7 2nd. Vertical Test 10/15/2019
 E.P.(20µm), Water flow(1.5hrs), FM_20 2% (50C,1hr),
 U.P.W rinse in Hot-bath(1hr), H.P.R.(9hrs)



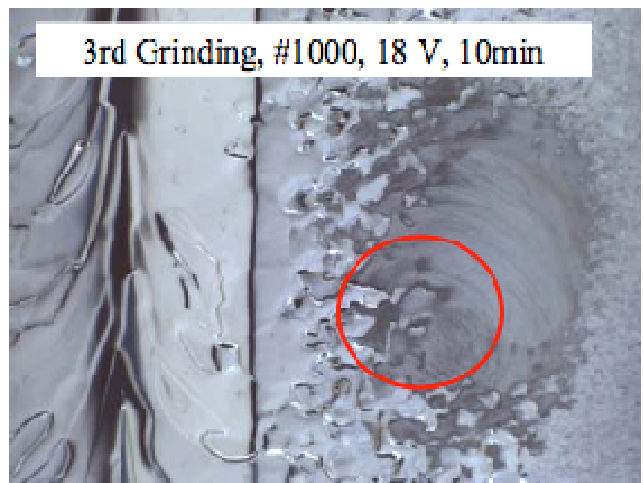
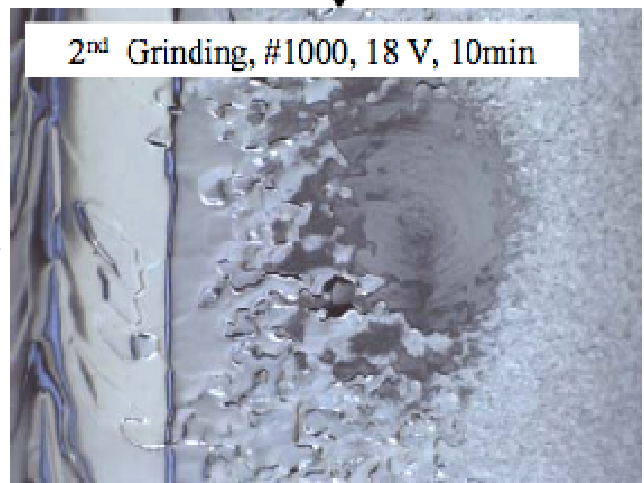
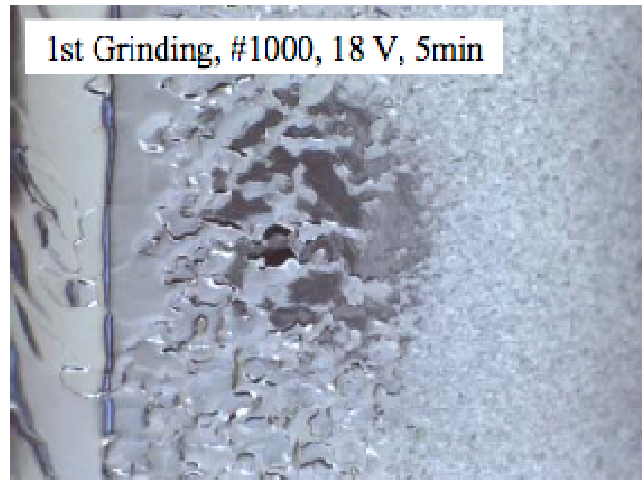
	Cell 1&9[MV/m]	Cell 2&8[MV/m]	Cell 3&6[MV/m]	Cell 4&6[MV/m]	Cell 5[MV/m]	Comment
π Initial	33.47	33.47	33.47	33.47	33.47	Radiation Limit: Heat@9cell Q=4.79E9, P=246W X-ray over range
Final	33.59	33.59	33.59	33.59	33.59	Radiation Limit: Heat@9cell Q=4.82E9, P=247W X-ray over range
8pi/9	33.32	29.65	21.99	12.32	0	Overrun half pulse: Heat@9cell Q=5.51E9, P=103W X-ray 4.28ms@sh
7pi/9	34.19	18.12	6.84	26.33	36.58	Overrun half pulse: Heat@9cell Q=5.78E9, P=114W X-ray 0.61ms@sh
6pi/9	33.67	0	33.67	33.67	0	Overrun half pulse: Heat@9cell Q=5.42E9, P=136W X-ray 0.62ms@sh
5pi/9	33.51	22.79	39.54	6.70	42.56	Overrun half pulse: Heat@5cell Q=4.82E9, P=191W X-ray 0.23ms@sh
4pi/9	30.14	39.48	17.18	43.70	0	Power Limit: No heat Q=3.86E9, P=260W X-ray 0.55ms@sh
3pi/9	17.45	34.90	17.45	17.45	34.90	Overrun half pulse: Heat@5cell Q=4.76E9, P=65.7W X-ray 0.05ms@sh
Eacc,max	34.2	39.5	39.5	43.7	42.6	Avg. 39.6MV/m



limited by #9cell

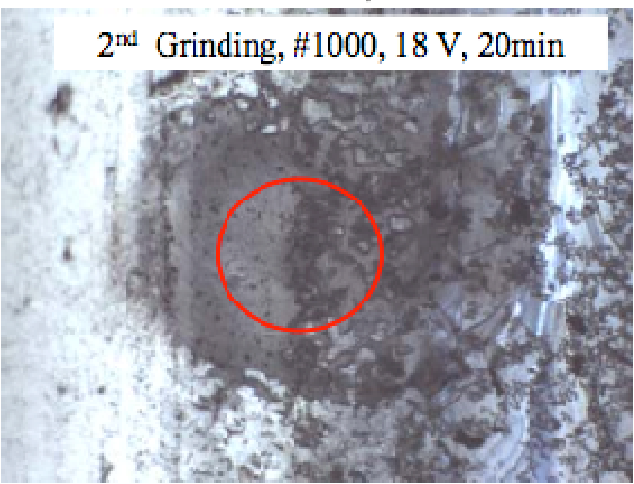
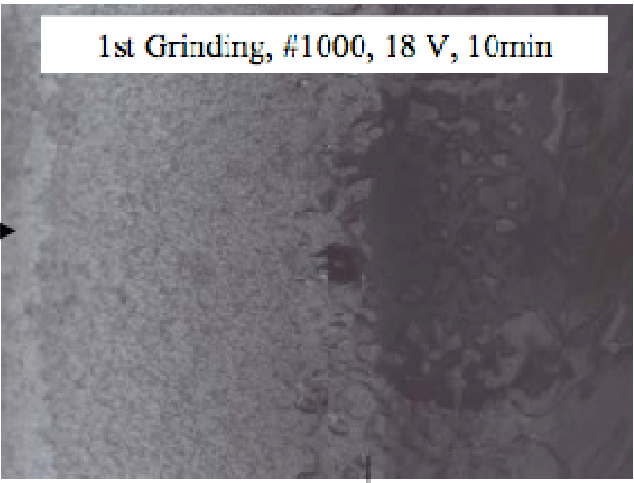
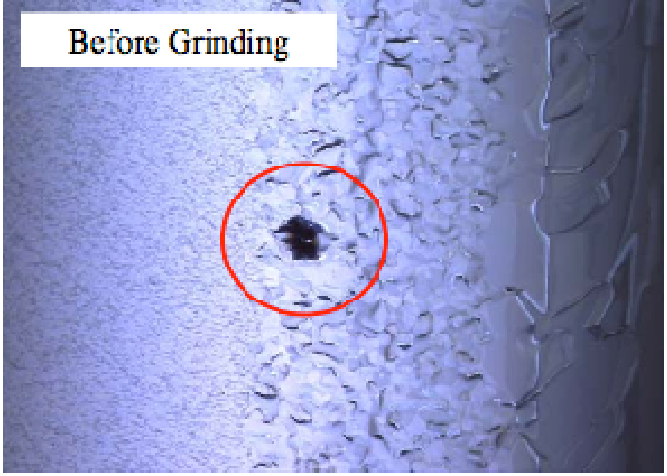
1-cell equator, t=200 degree

70um bump



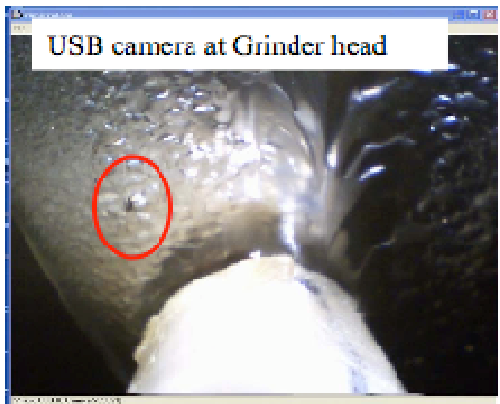
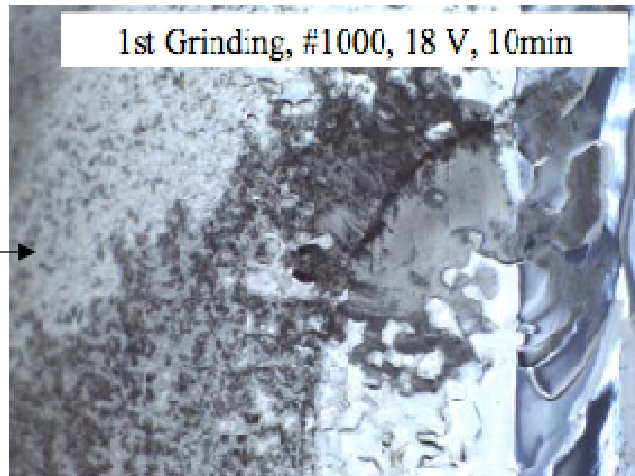
4-cell equator, t=306 degree

40um??
bump

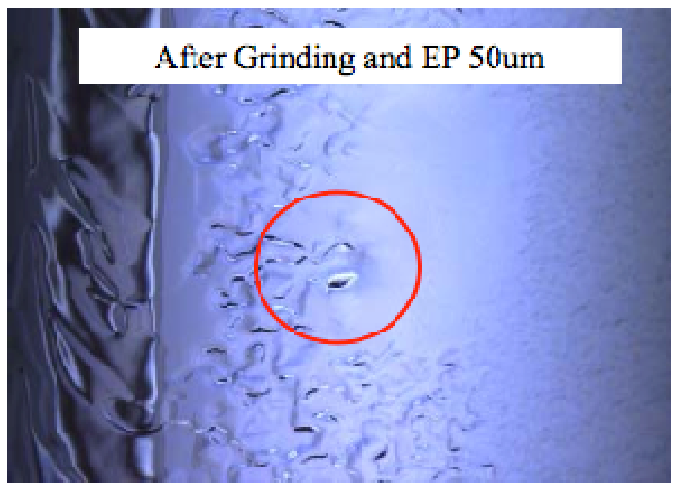


5-cell equator, $t=187$ degree

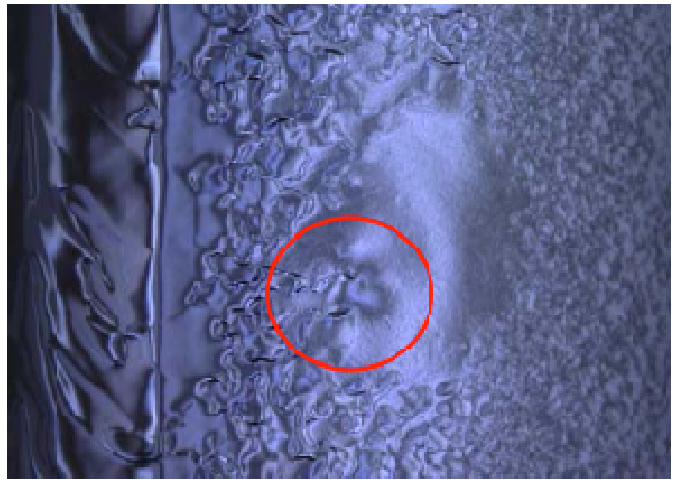
60um bump



1-cell equator, $t=200$ deg.



bright image



dark image

4-cell equator, t=306 deg.



bright image



dark image

5-cell equator, $t=187$ deg.



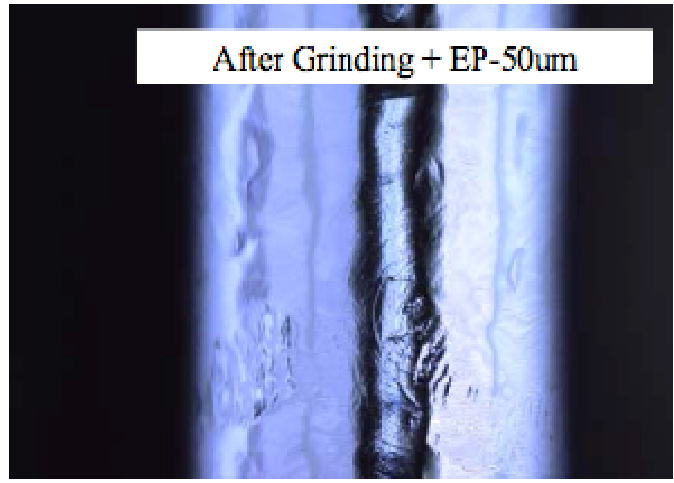
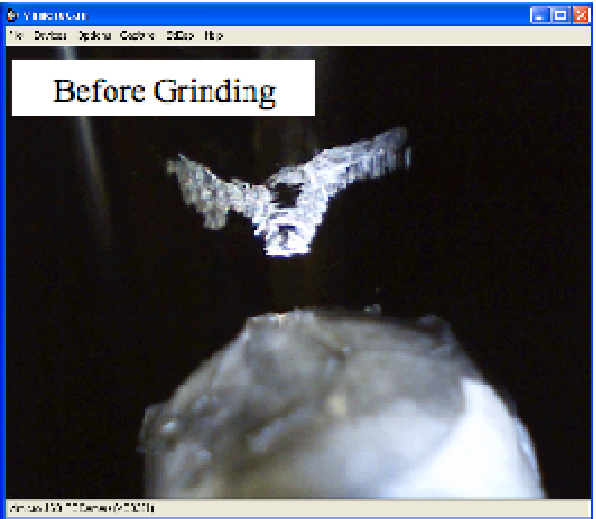
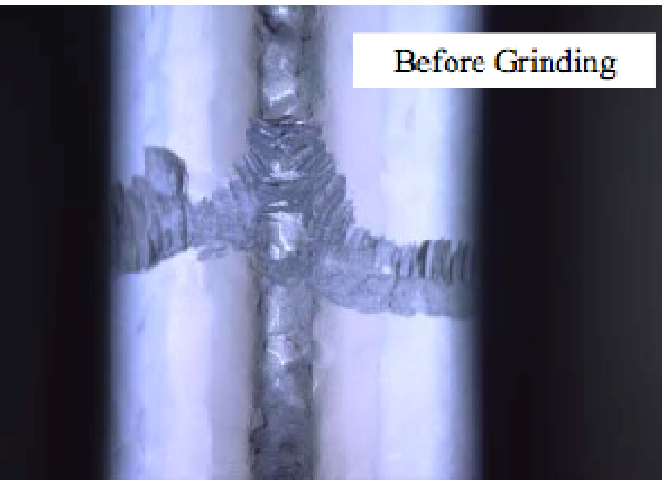
bright image



dark image

Iris repairs were done only heavy scratch

Example: #1-#2iris t=106deg.



end