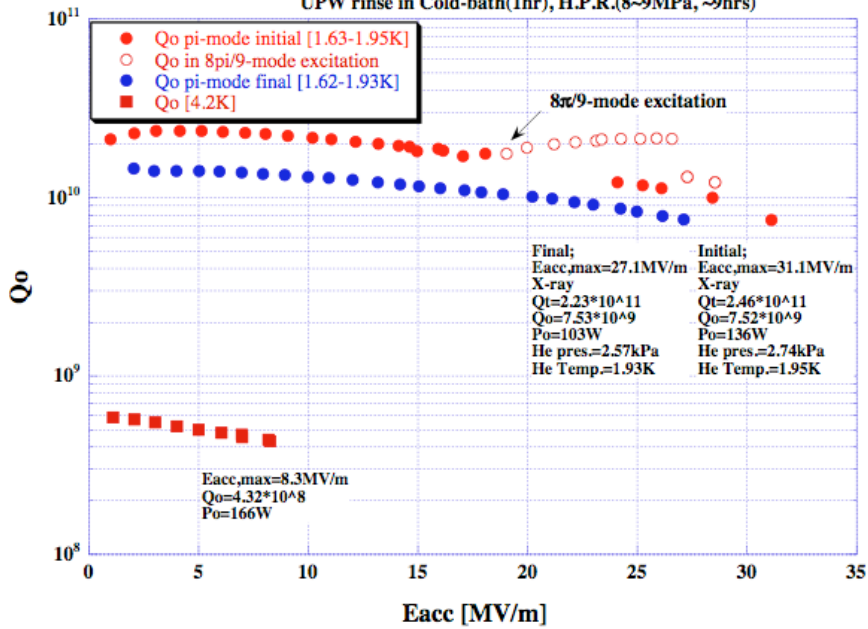


Cavity & Cavity Integration; recent KEK activities

- (1) MHI-05 cavity was 20 μ m EP removal, Ethanol + Ultrasonic rinse and HPR, 100deg baking, vertical tested on April 15 - 17.
→ Max. 27.1MV/m heating at #5 cell equator around EBW.
inspection camera shows EBW seam narrow locally.
- (2) Process of DESY-design TTF-V coupler from LAL was finished up to 1 MW, 1.5ms pulse width. It will be returned to LAL.
- (3) MHI-07,08,09, three cavities (S1G candidates) were processed as followings, as received inspection, pre-EP 5 μ m, EP 100 μ m+HPR, 750deg annealing, inspection, pre-tuning.
- (4) MHI-06 cavity was 20 μ m EP removal, Ethanol + Ultrasonic rinse and HPR, 100deg baking. It will be vertical tested on June 03 - 04.

*MHI-05,06 are also S1G candidate.

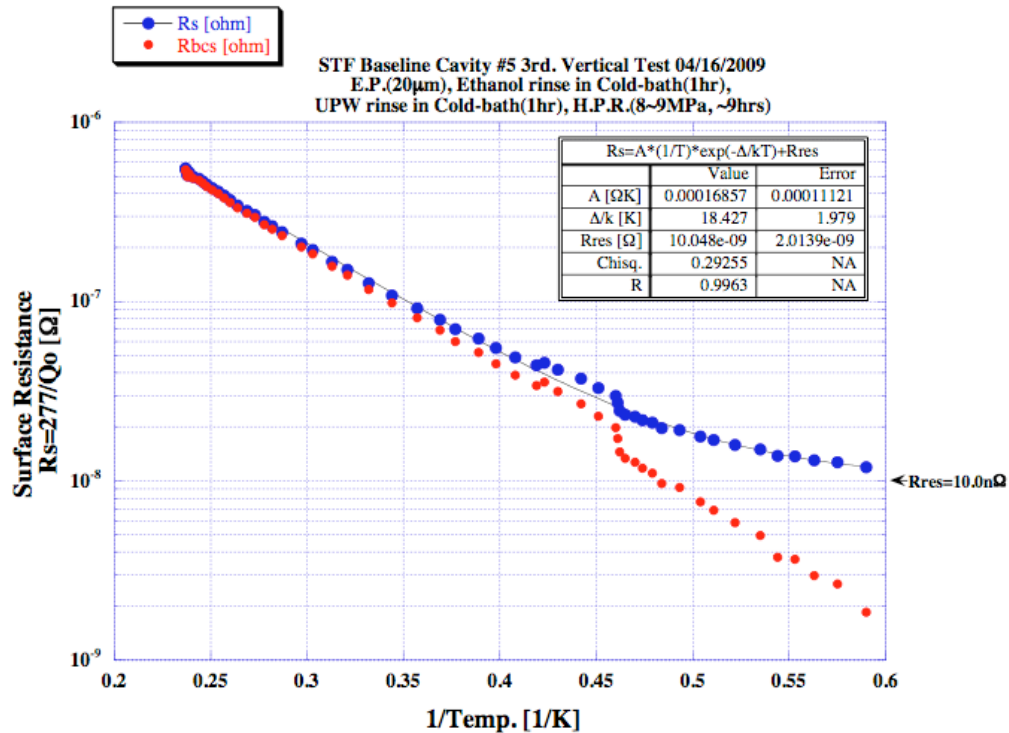
STF Baseline Cavity #5 3rd. Vertical Test 04/16/2009
 E.P.(20 μ m), Ethanol rinse in Cold-bath(1hr),
 UPW rinse in Cold-bath(1hr), H.P.R.(8~9MPa, ~9hrs)



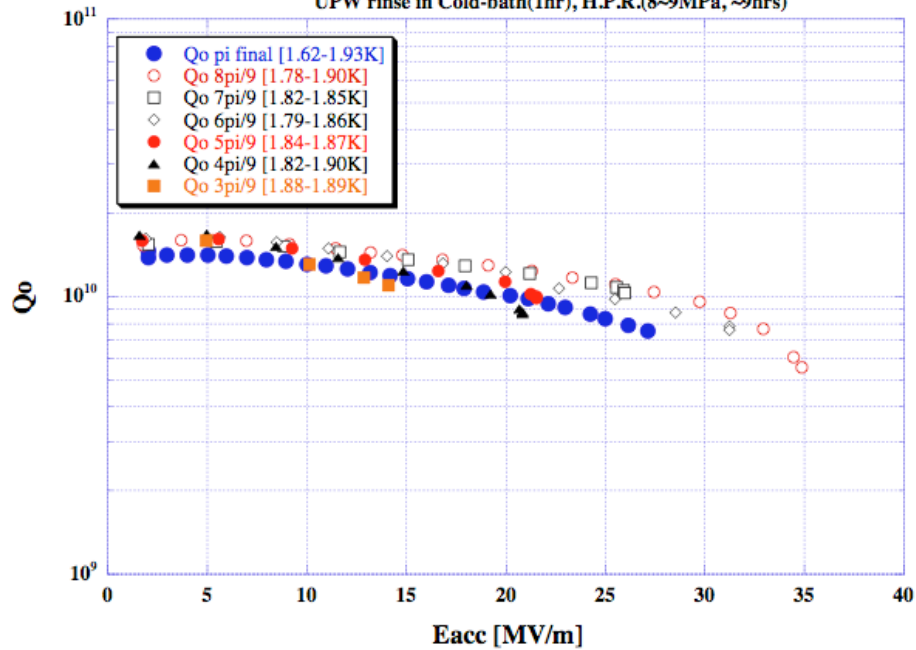
MHI-05 cavity : 3rd VT
 (3rd 20 μ m EP + Ethanol(US))

no radiation
 heating at #5 cell equator

Max: 27.1MV/m



STF Baseline Cavity #5 3rd. Vertical Test 04/16/2009
 E.P.(20μm), Ethanol rinse in Cold-bath(1hr),
 UPW rinse in Cold-bath(1hr), H.P.R.(8~9MPa, ~9hrs)



MHI-05 cavity : 3rd VT
 (3rd 20μm EP + Ethanol(US))

	Cell 1&9[MV/m]	Cell 2&8[MV/m]	Cell 3&7[MV/m]	Cell 4&6[MV/m]	Cell 5[MV/m]	Comment
π Initial	(31.11)28.82	(31.11)28.82	(31.11)28.82	(31.11)28.82	(31.11) 28.82	Quench (5cell)
Final	27.12	27.12	27.12	27.12	27.12	(Qo=7.52E9, Ploss=136W) 8π/9 mode excite
8π/9	34.88	31.04	23.02	12.90	0	Qo=5.5E9, Ploss=124W
7π/9	25.97	13.76	5.2	20.0	27.78	selfpulse/Quench (5cell) Qo=1.03E10, Ploss=37W No X-ray
6π/9	31.22	0	31.22	31.22	0	selfpulse/Quench (6cell) Qo=7.6E9, Ploss=84W, X-ray 4π/9 mode excite
5π/9	21.54	14.65	25.42	4.31	27.36	selfpulse/Quench (5cell) Qo=9.9E9, Ploss=39W No X-ray
4π/9	20.85	27.31	11.88	30.23	0	selfpulse/Quench (6cell) Qo=8.7E9, Ploss=57W 5π/9, π excite
3π/9	14.10	28.10	14.10	14.10	28.10	selfpulse/Quench (5cell) Qo=1.10E10, Ploss=34W
Eacc,max	34.9	31.0	31.2	31.2(6cell)	28.8(5cell)	

Pass-band mode meas.

limiting cell = #5 27MV/m

others = 30 – 34MV/m

MHI-05 2nd V.T. : #5 cell equator, 29.2MV/m @ 7/9

Heating area #5 cell equator : 120°~ 180° : Sensor 120° $\Delta T=1$ K, 150° $\Delta T=10$ K, 180° $\Delta T=5$ K

