

Cavity status; recent KEK activities

(1) MHI-06, MHI-7, MHI-8 were vertical tested on June, July.

→ EP acid (1000l) was re-newed on May 15. These cavity was processed by this new EP acid. (MHI-05 was 27MV/m using aged EP acid. Nb~8g/l)

→ MHI-06 22MV/m stopped by RF cable trouble.

→ MHI-07 16MV/m stopped by field emission.

→ MHI-08 16MV/m stopped by cell heating. (under analysis)

After VT, inspection camera found many brown spot and traces.

The EP process using new acid is suspected. EP process are under examination.

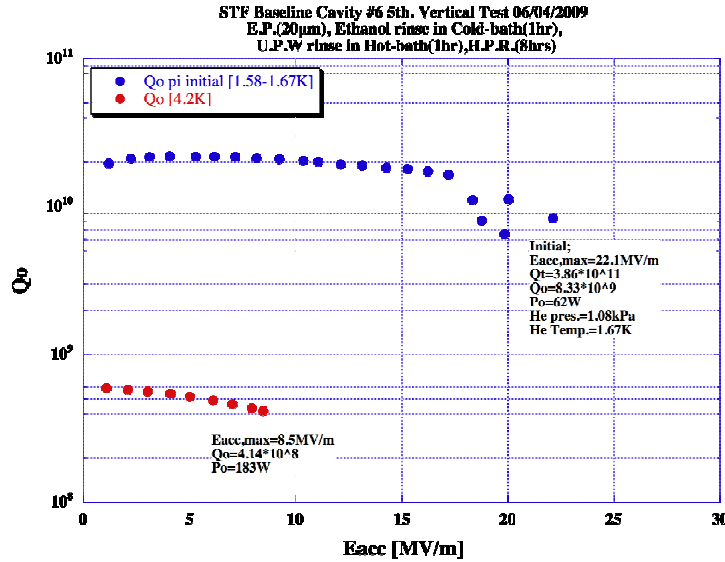
Cavity process was suspended for a while.

(2) AES-003 cavity was arrived, on loan from FNAL. Inspections were underway.

Purpose of this loan is to test guided repair of KEK local grinding machine.

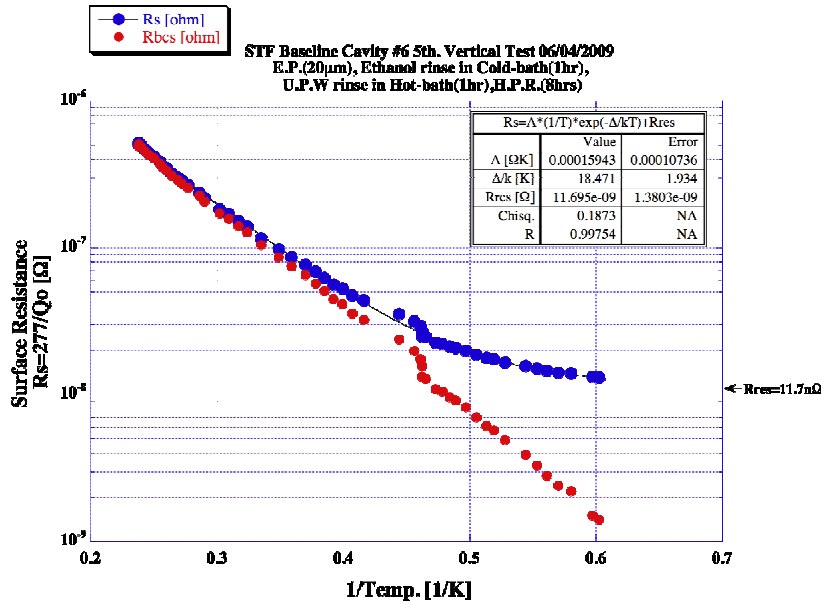
*MHI-05,06,07,08,09 are S1G candidates.

MHI-06 cavity : 5th VT (3rd 20 μ m EP + Ethanol(US))

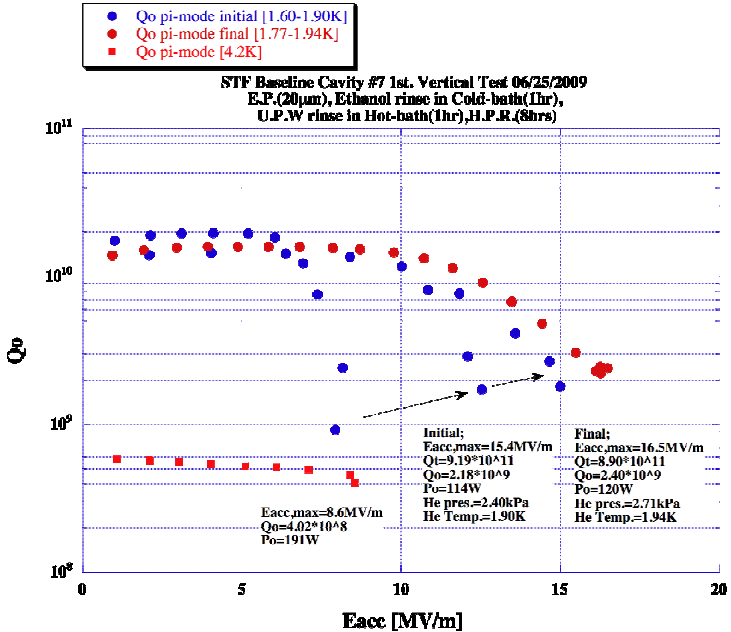


radiation start at 10MV/m
measurement was suspended by RF Cable Trouble

Max: 22.1MV/m

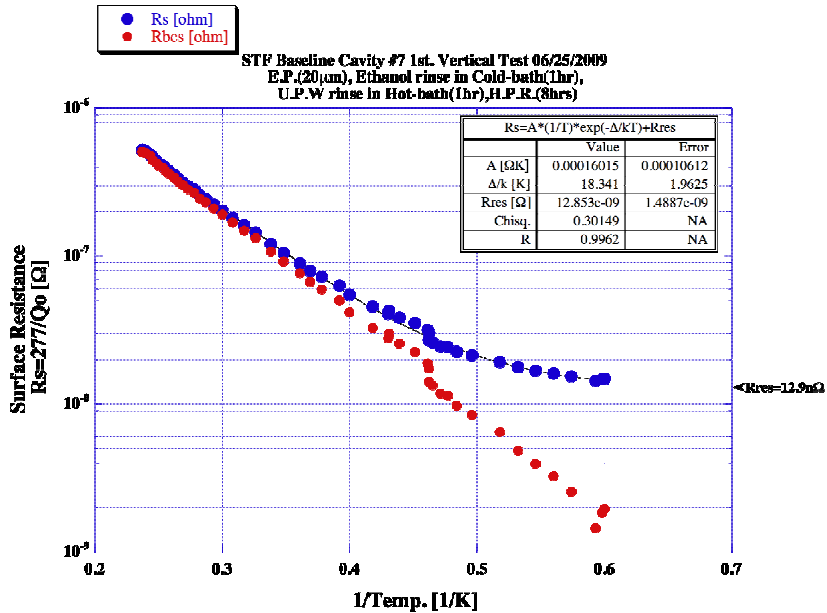


MHI-07 cavity : 1st VT (1st 20 μ m EP + Ethanol(US))

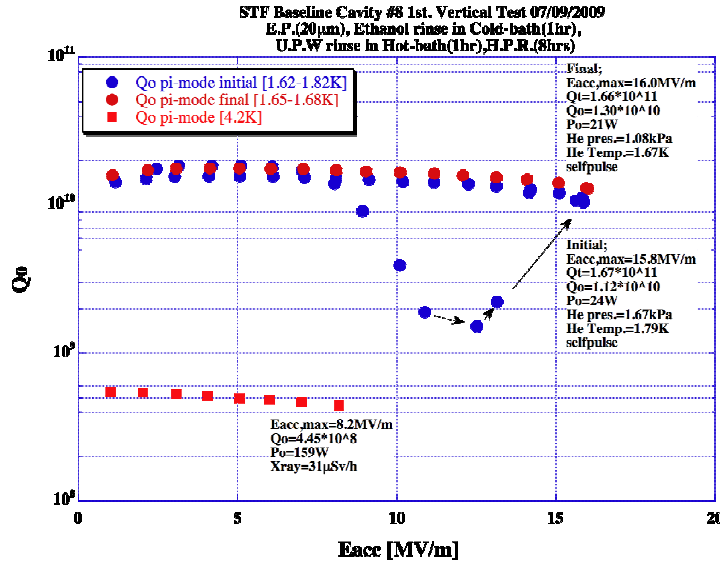


radiation start at 9MV/m
strong field emission

Max: 16.5MV/m

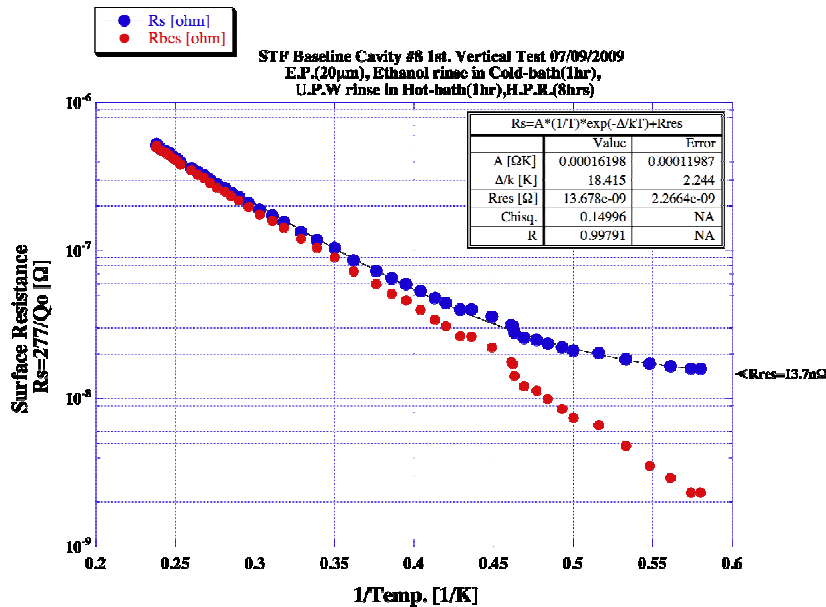


MHI-08 cavity : 1st VT (1st 20 μ m EP + Ethanol(US))



under analysis;
radiation start at low voltage
field is stopped by cell#2 heating

Max: 16.0MV/m



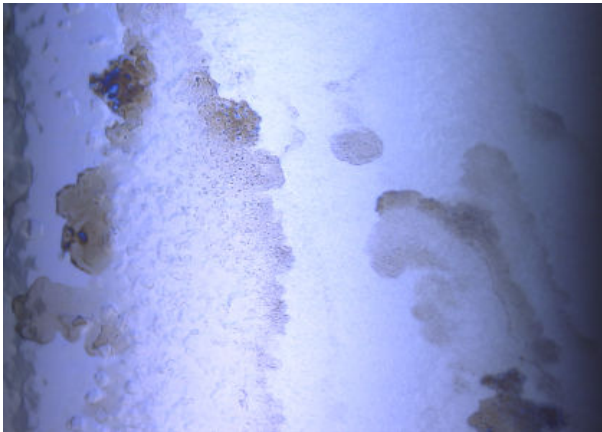
Brown spot and traces;

MHI-06 : spot or traces on BP-#1、 #1、 #2、 #3、 #4、 #8、 #9、 #9-BP (red indicate bad)

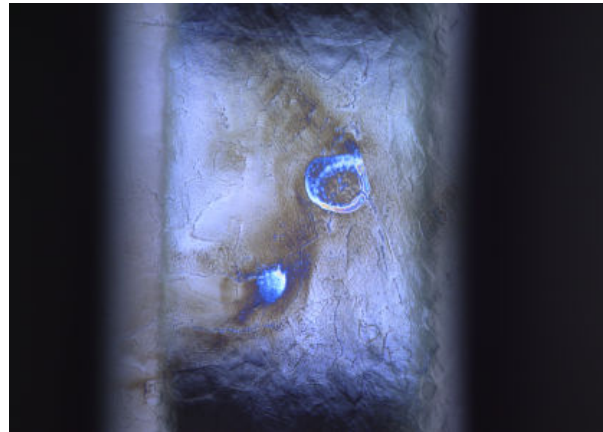
MHI-07 : BP-#1、 #1、 #2、 #3、 #4、 #5、 #6、 #7、 #8、 #9、 #9-BP

Kyoto-camera picture examples using new LED illumination

BL#6 1-cell equator, t = 306 deg.
Downstream : Outside weld area



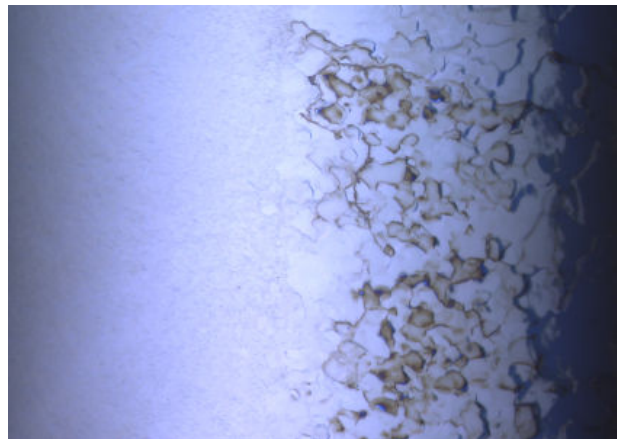
BL#6 #9-BP, t = 241 deg. -1



BL#6 #9-BP, t = 241 deg. -2



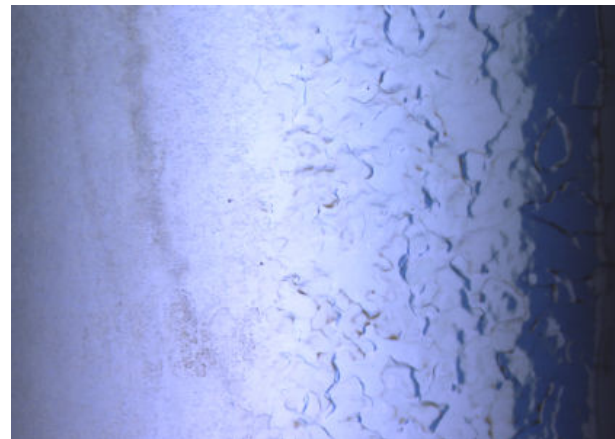
BL#6 9-cell equator, $t = 034$ deg.
Upstream : Outside weld area



BL#6 3-cell equator, $t = 291$ deg.



BL#6 9-cell equator, $t = 184$ deg.
Upstream : Outside weld area



BL#6 3-4 iris, $t = 055$ deg.



BL#6 8-9 iris, $t = 053$ deg.



BL#6 9 equator, $t = 037$ deg.



FNAL AES003 cavity inspection at KEK

2009.07.05 report

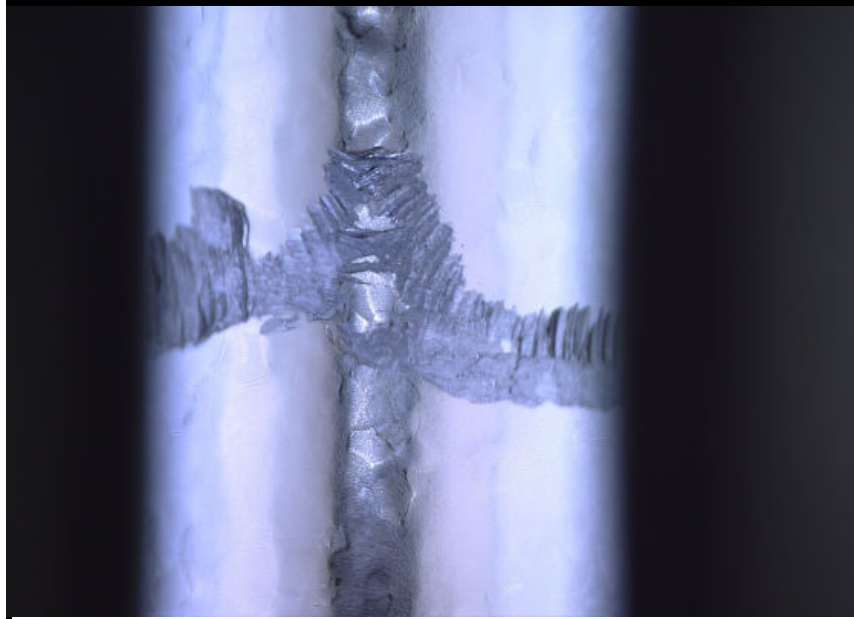
[Selected]

Ken Watanabe, KEK

*AES003 on loan was received at KEK, on June 5 2009.

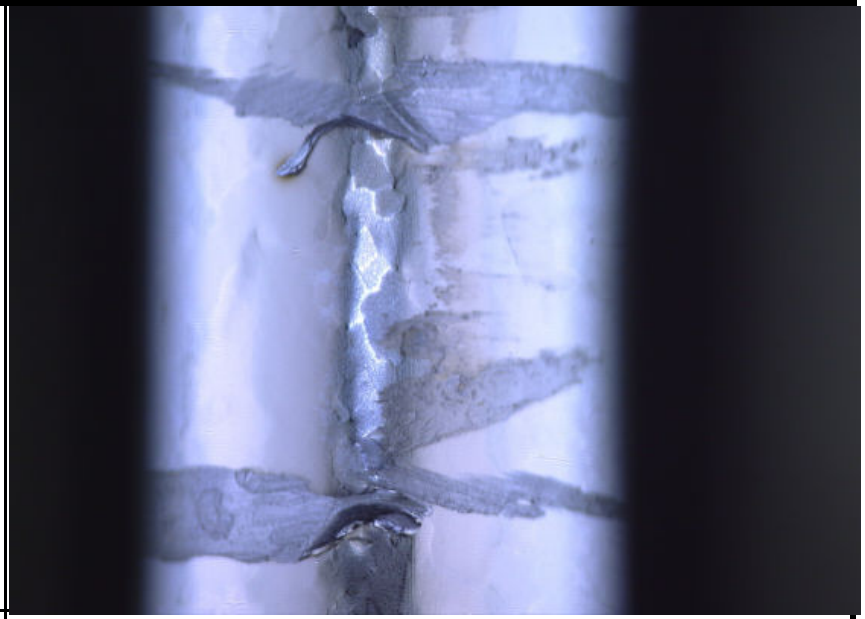
The scratch of the iris parts of one

#1-#2i, $t=106$ deg.

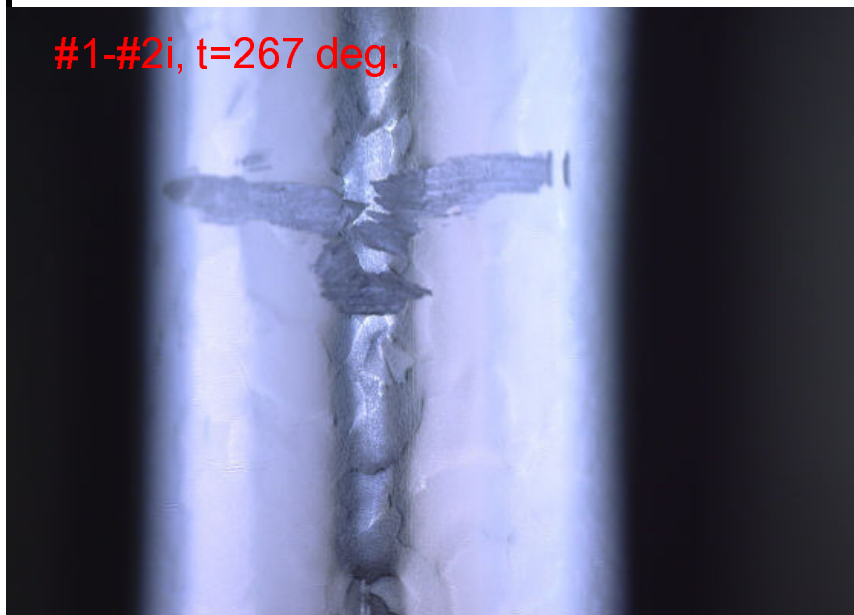


1mm

#1-#2i, $t=249$ deg.



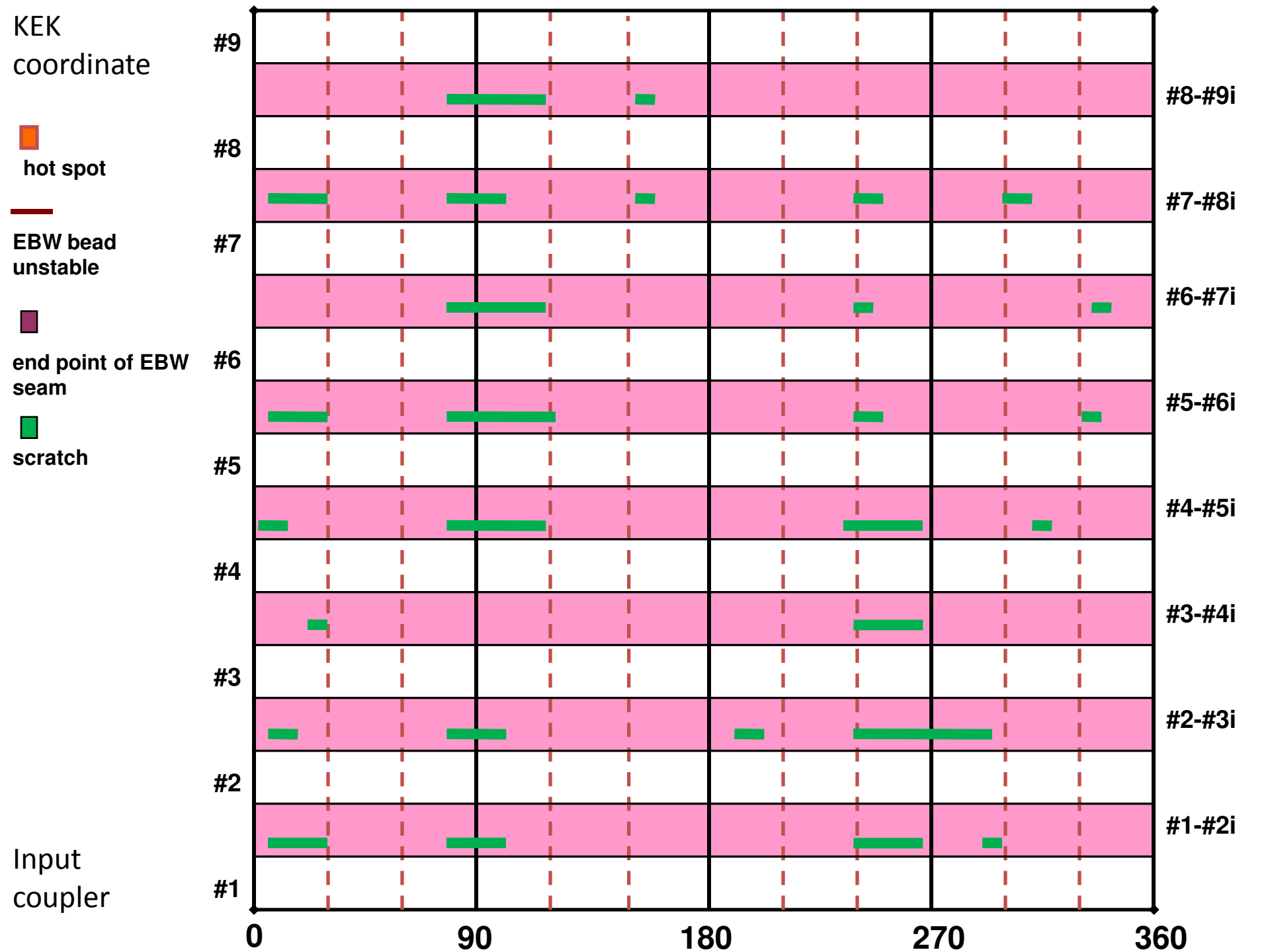
#1-#2i, $t=267$ deg.



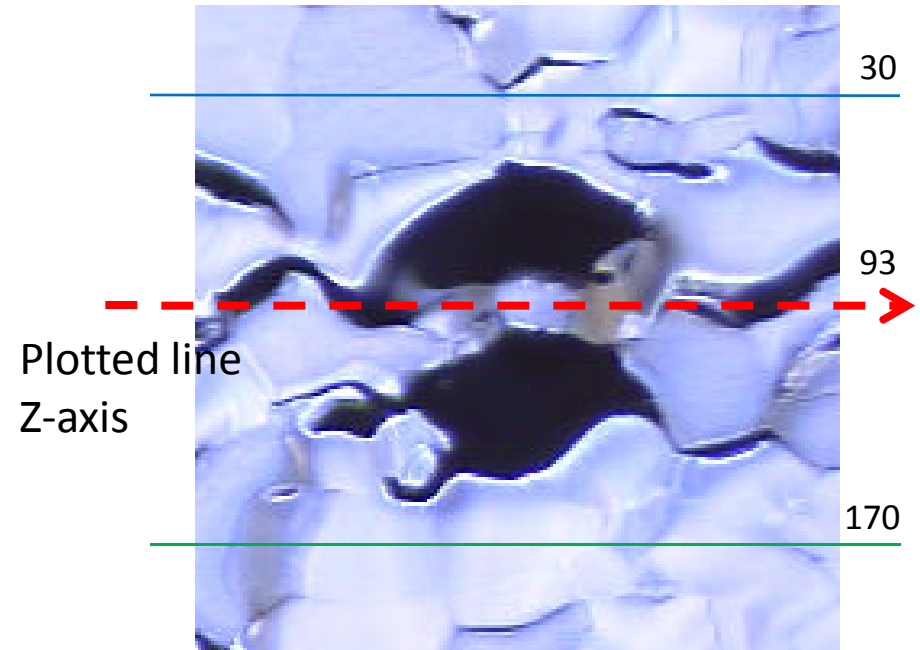
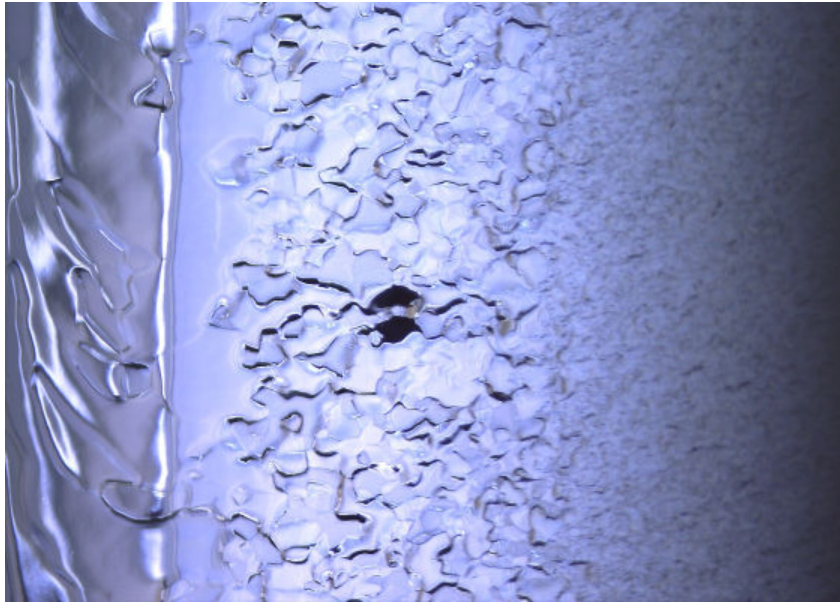
1mm

#5-#6i, $t=072$ deg.

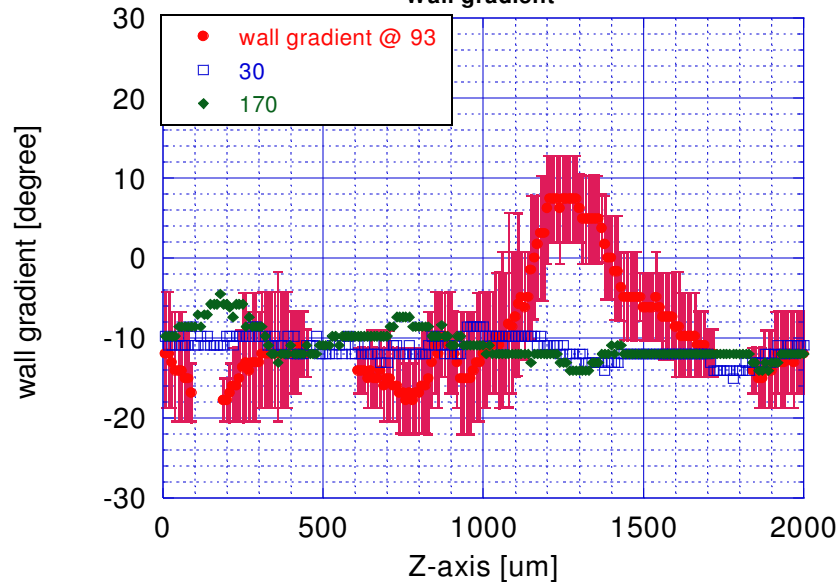




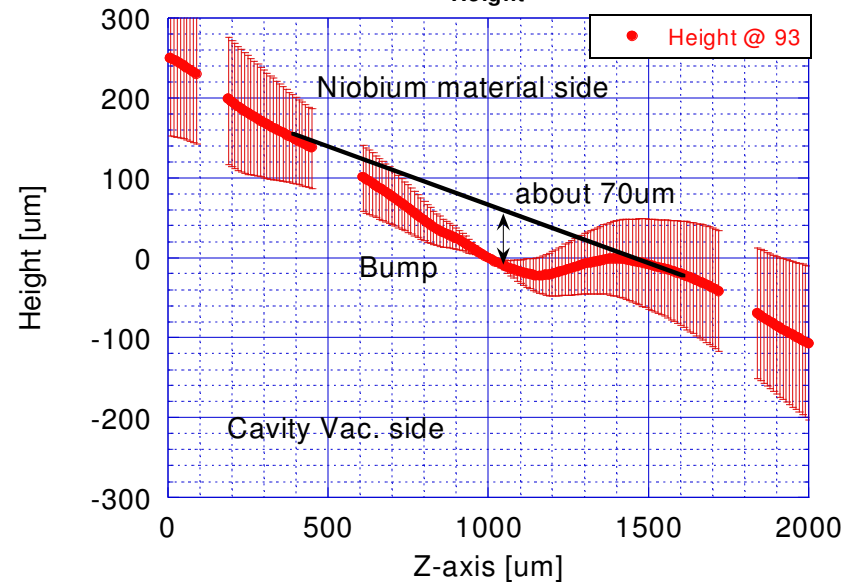
1-cell equator, t=200 degree



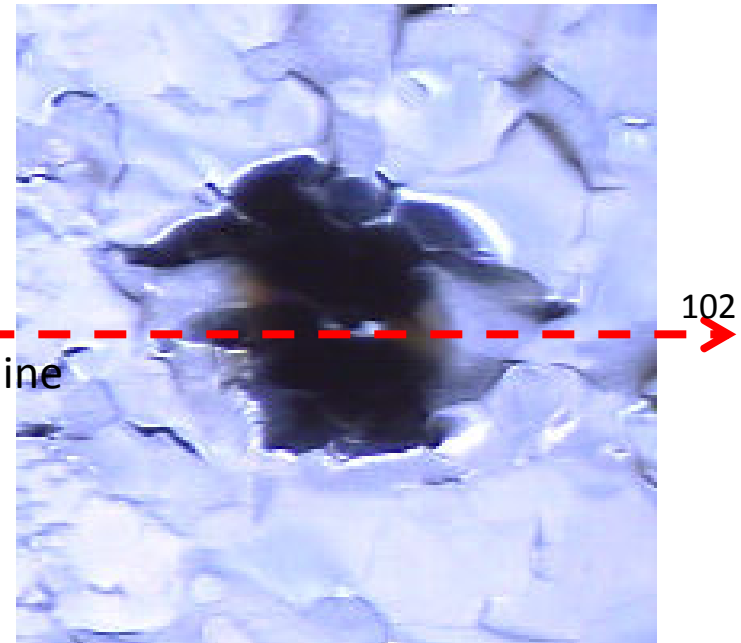
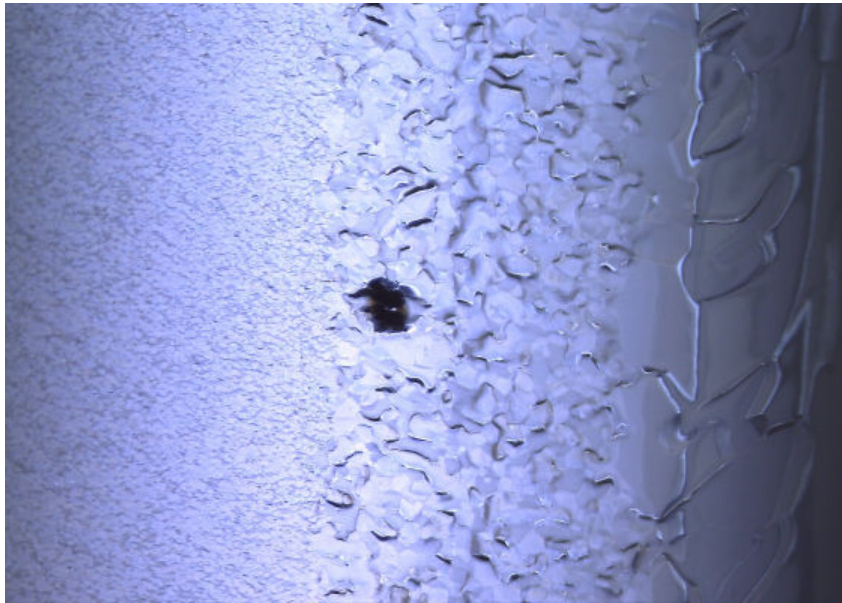
090627 AES#003 cavity
#1 cell equator, t=200 degree
Wall gradient



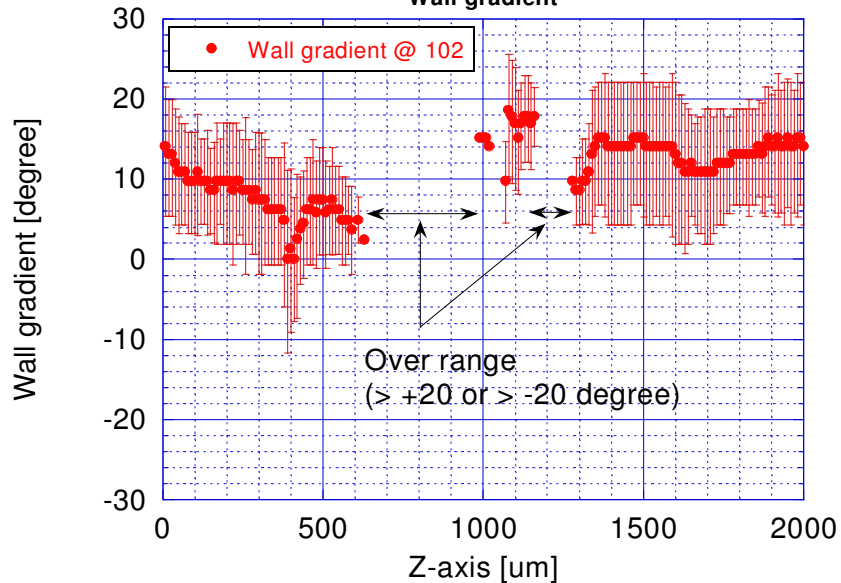
090627 AES#003 cavity
#1 cell equator, t=200 degree
Height



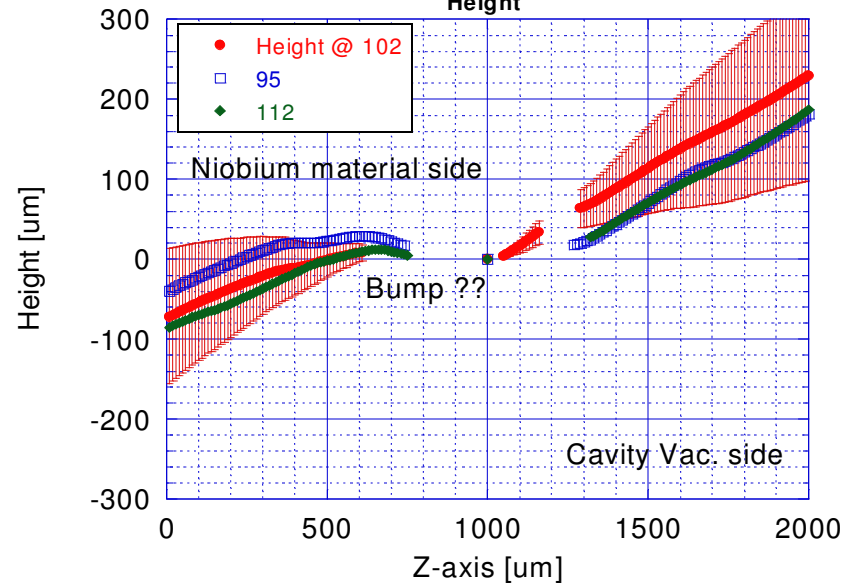
4-cell equator, t=306 degree



090627 AES#003 cavity
#4 cell equator, t=306 degree
Wall gradient



090627 AES#003 cavity
#4 cell equator, t=306 degree
Height



5-cell equator, t=187 degree

