Inspection of STF Baseline cavity #5 and #6

2008/9/3　K.Watanabe

Note：These cavities are still no Vertical Test yet !!!!

History of the STF Baseline cavities #5 and #6

2008/6 : STF Baseline cavities #5 and #6 are fabricated by MHI.

First inspection by using Kyoto camera was done after fabrication.

2008/7 : Pre-EP (5 um) and EP-1 (20 um), Total removed about 25 um.

Second inspection by using Kyoto camera was done after Pre-EP

and EP-1)

2008/8 : EP-1 (100 um), Total removed about 25 um + 100 um.

Third inspection by using Kyoto camera was done after 2nd-EP-1(100um).

Measurement and Analysis of the cat eye pits for STF Baseline #6 cavity.

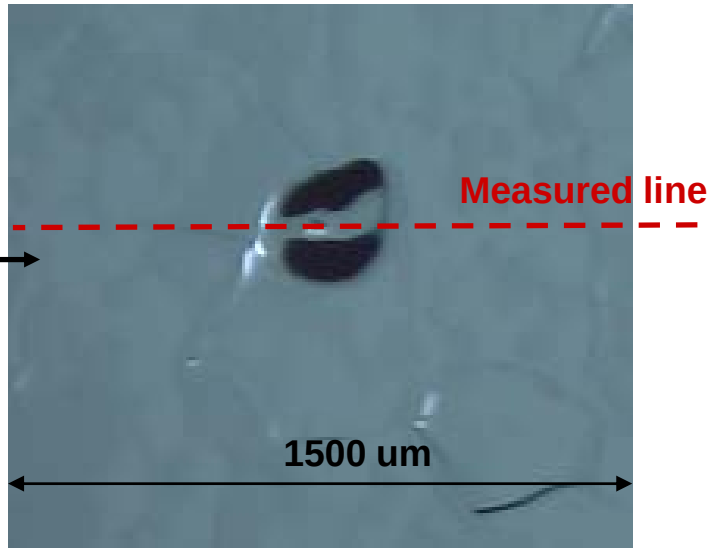
Five cat eyes were found at equator,

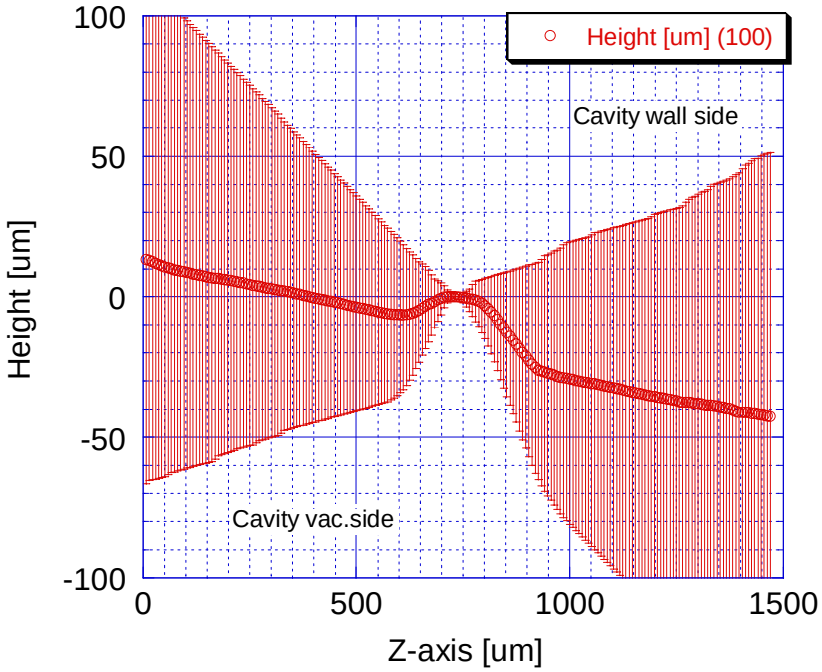
and Three cat eyes found at iris of STF Baseline #6 cavity.

STF Baseline #5 cavity will be in inspection from Sept. 15.

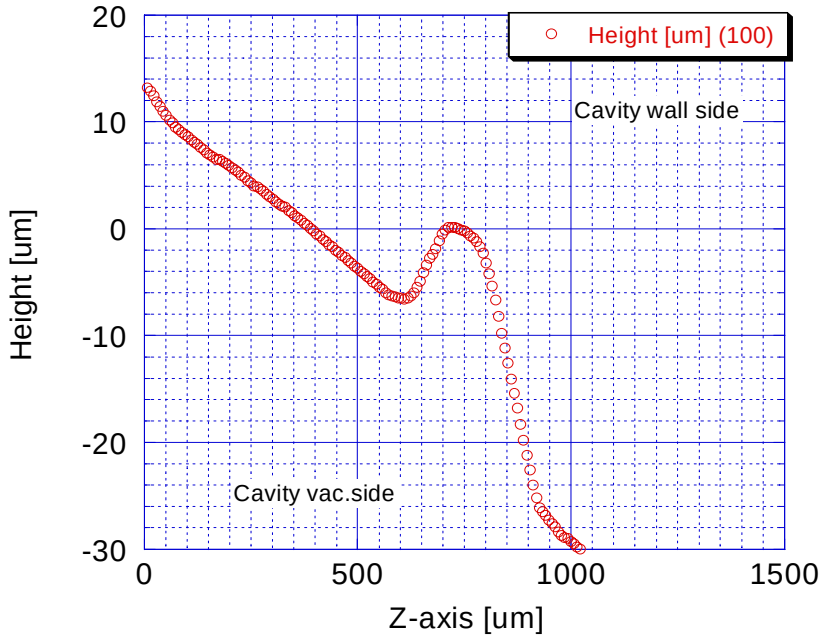
STF Baseline #6 cavity : #3 cell equator, Z=402mm, t=10 deg

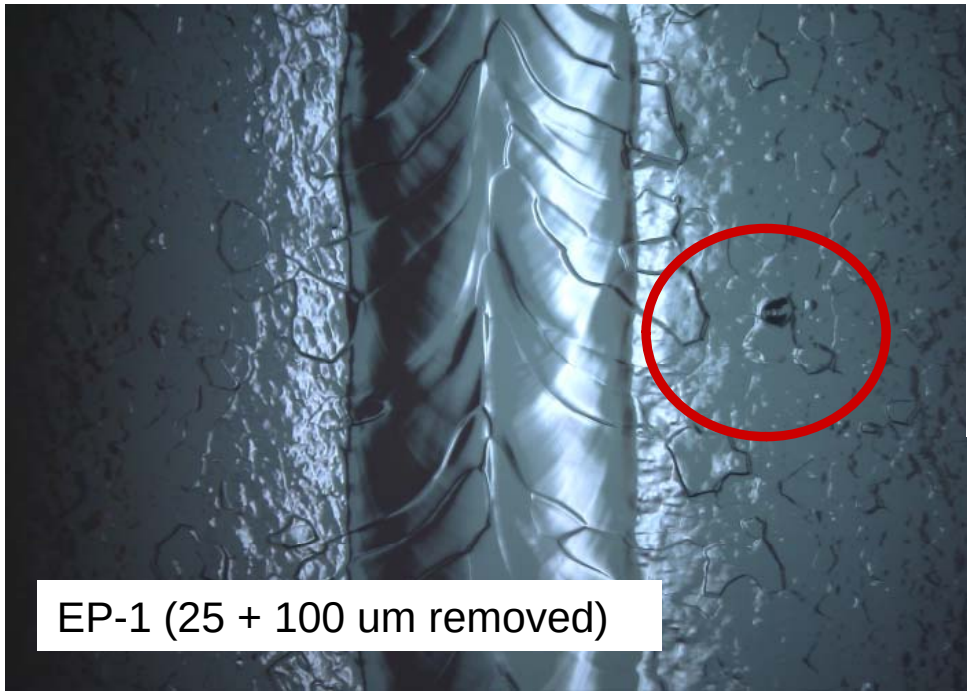
STF baseline #6 cavity
After EP-1 (25 + 100 um removed)
#3 cell equator Z=402mm t=10deg



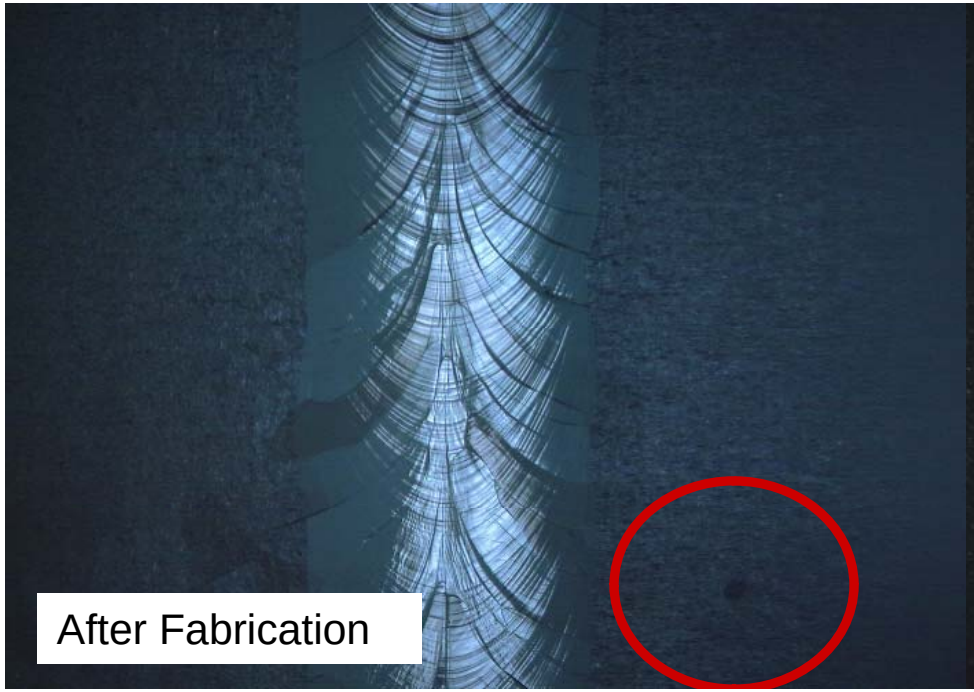


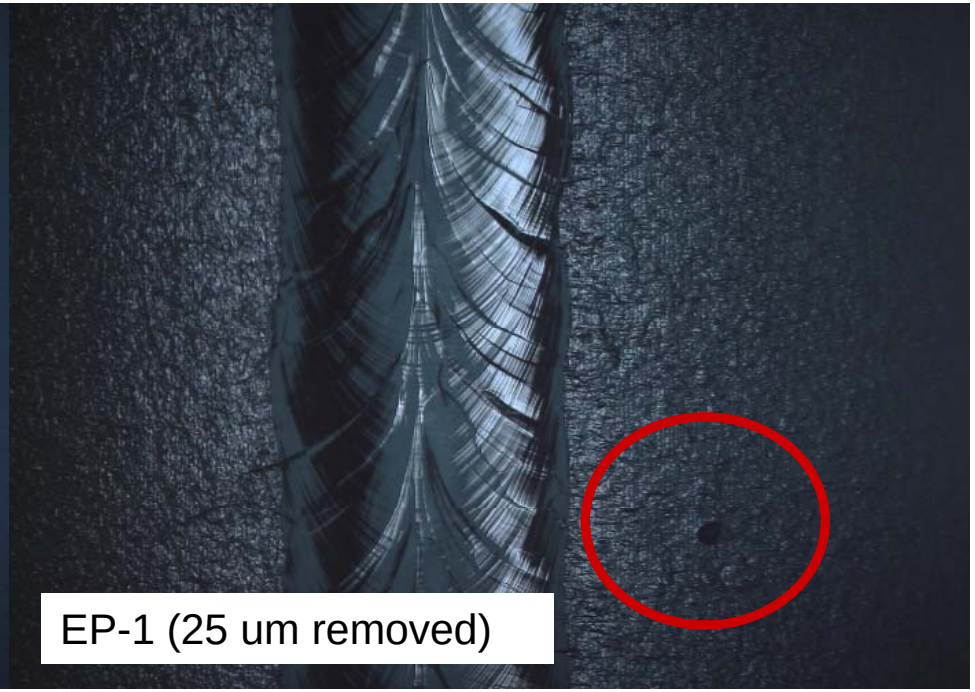
STF baseline #6 cavity
After EP-1 (25 + 100 um removed)
#3 cell equator Z=402mm t=10deg



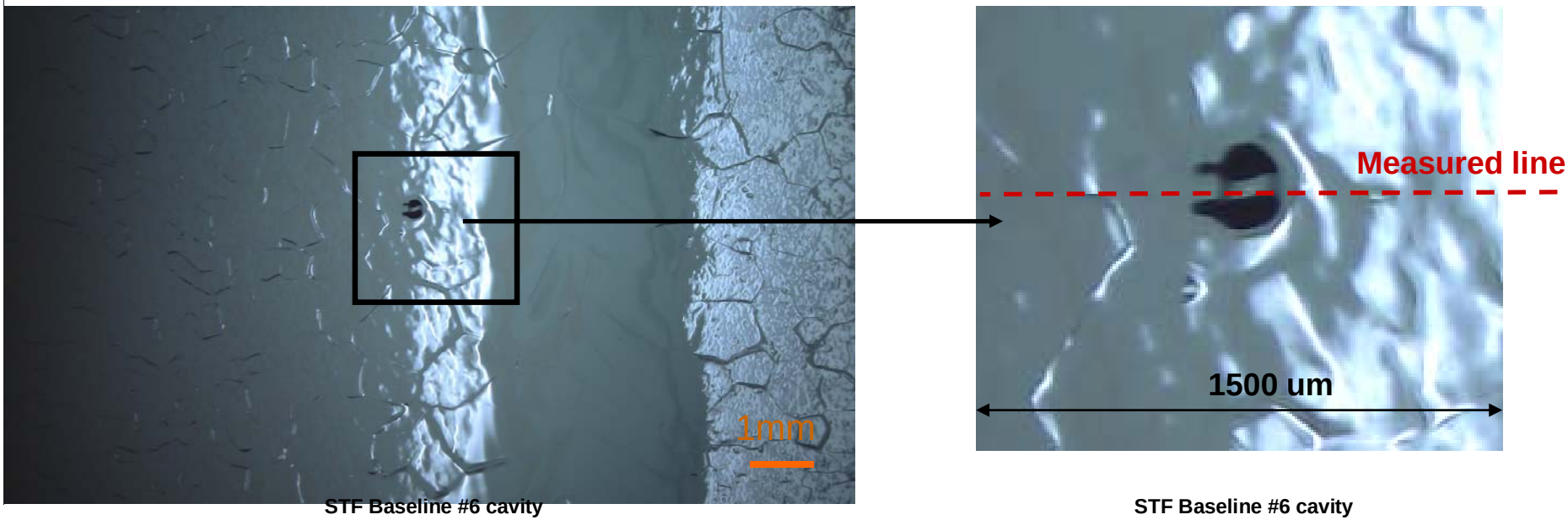


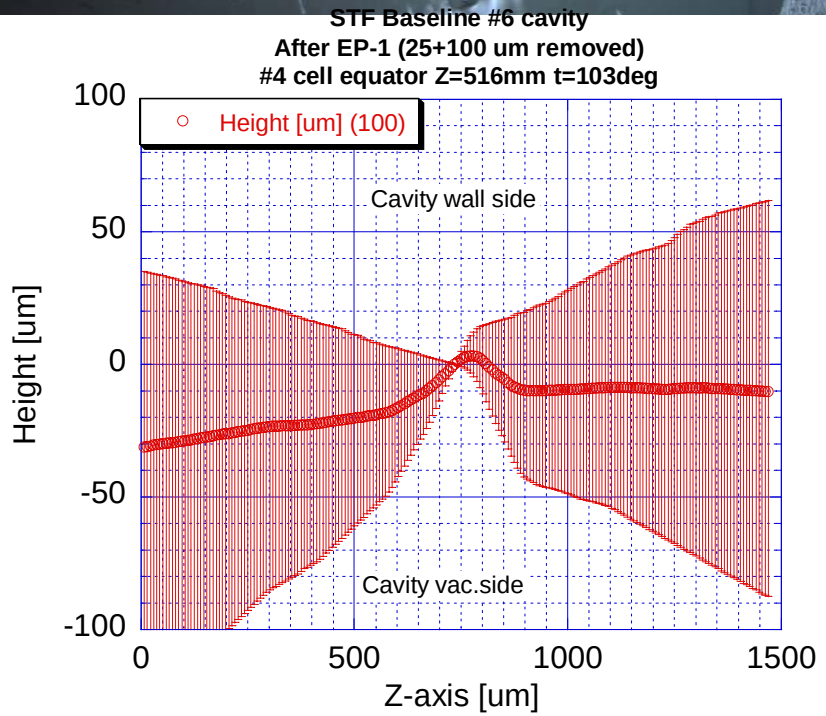
Comparison with each treatment
#3 cell equator, Z=402mm, t=10 deg

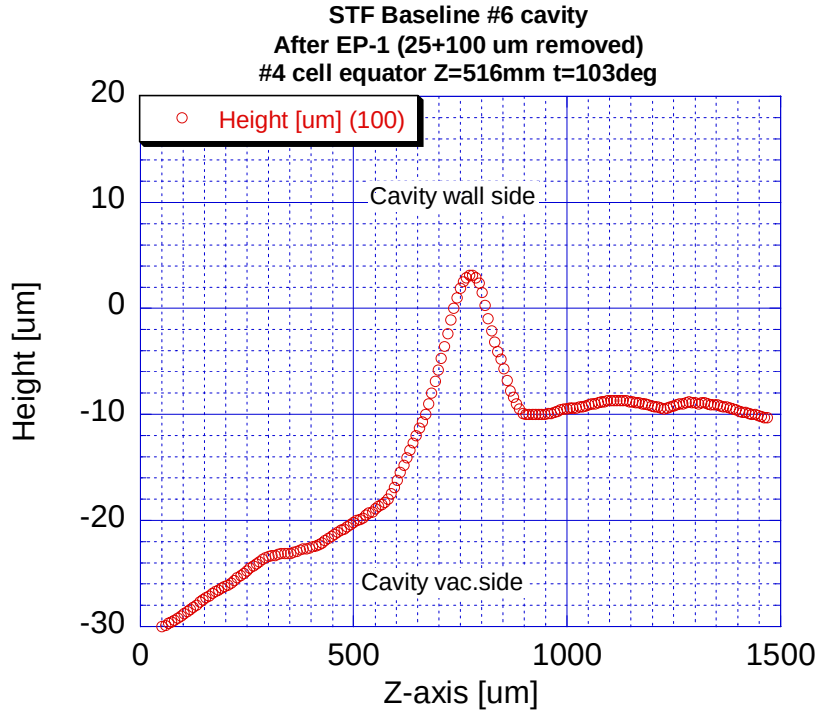


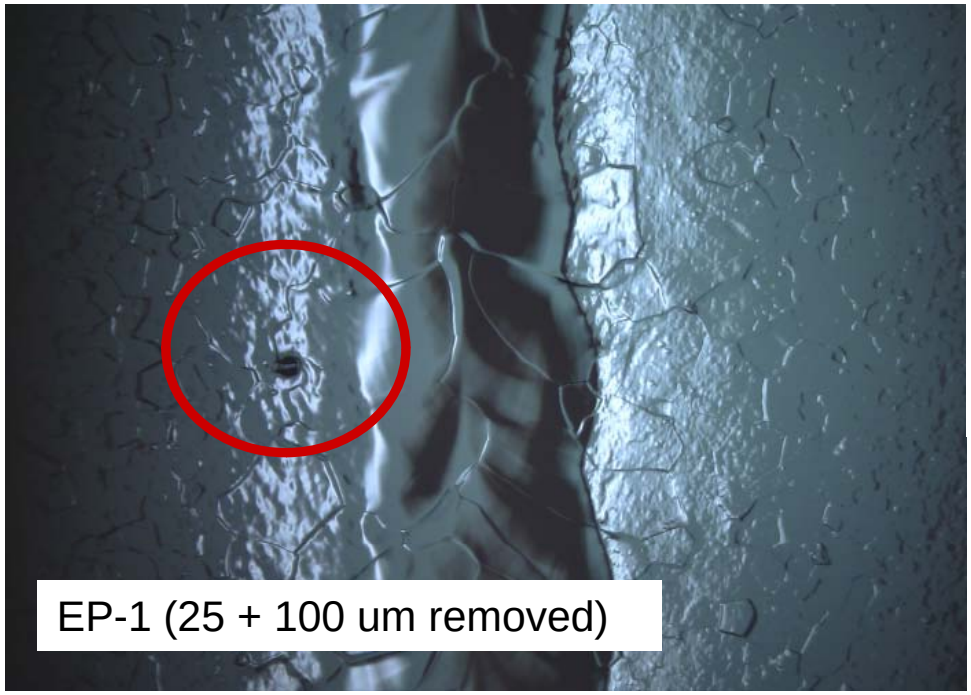


STF Baseline #6 cavity : #4 cell equator, Z=516mm, t=103 deg

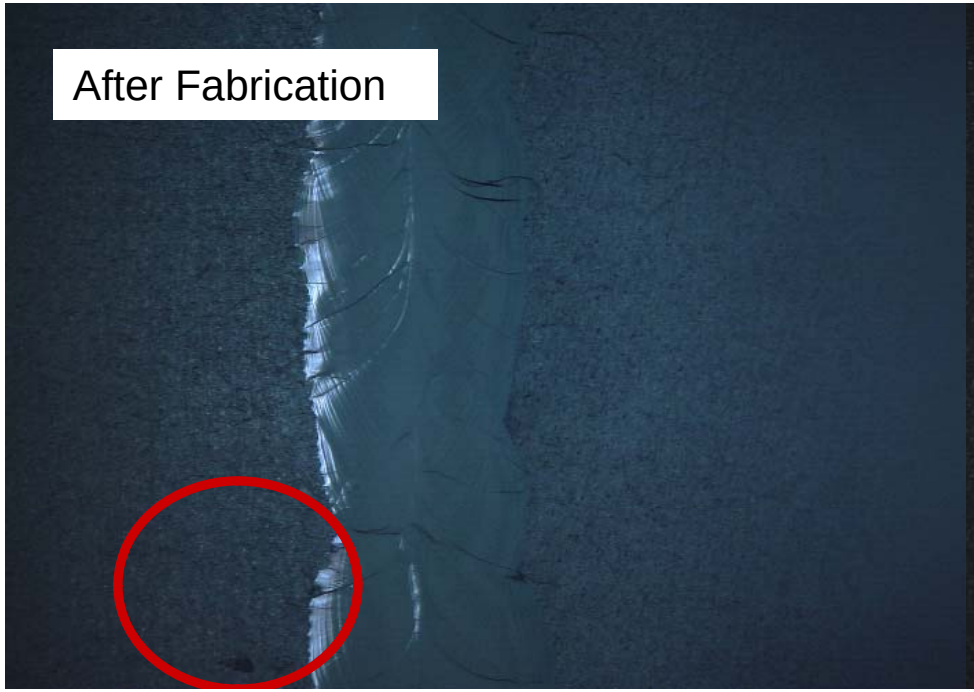








Comparison with each treatment
#4 cell equator, Z=516mm, t=103 deg

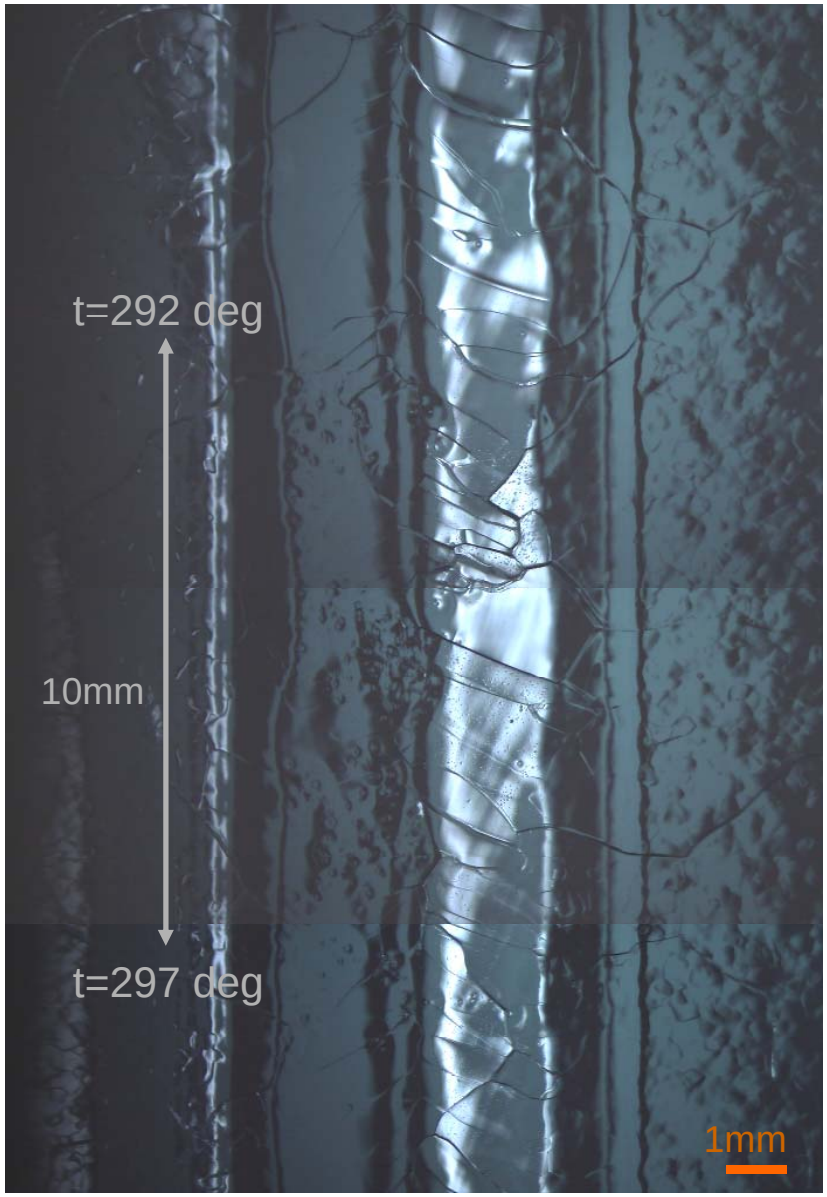


TESLA cavity Z110 and Z111

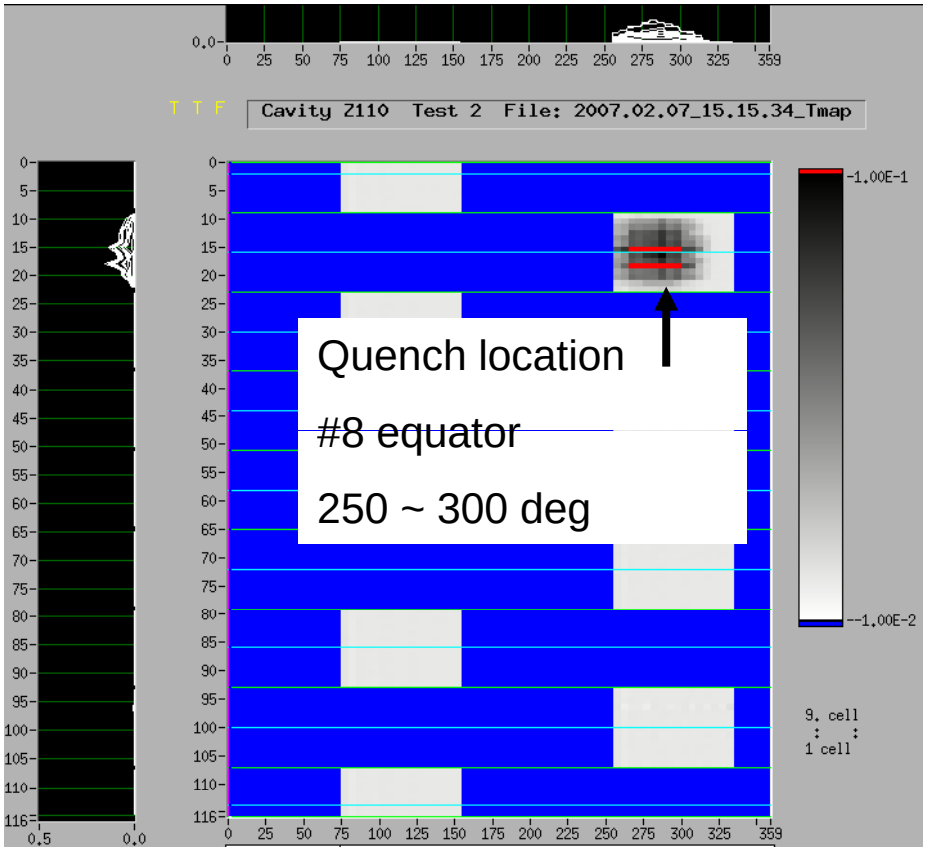
surface gradient analysis for heated spot identified by T-map

TESLA cavity Z110: #8 cell equator

#8 equator, t=288 ~ 299 deg

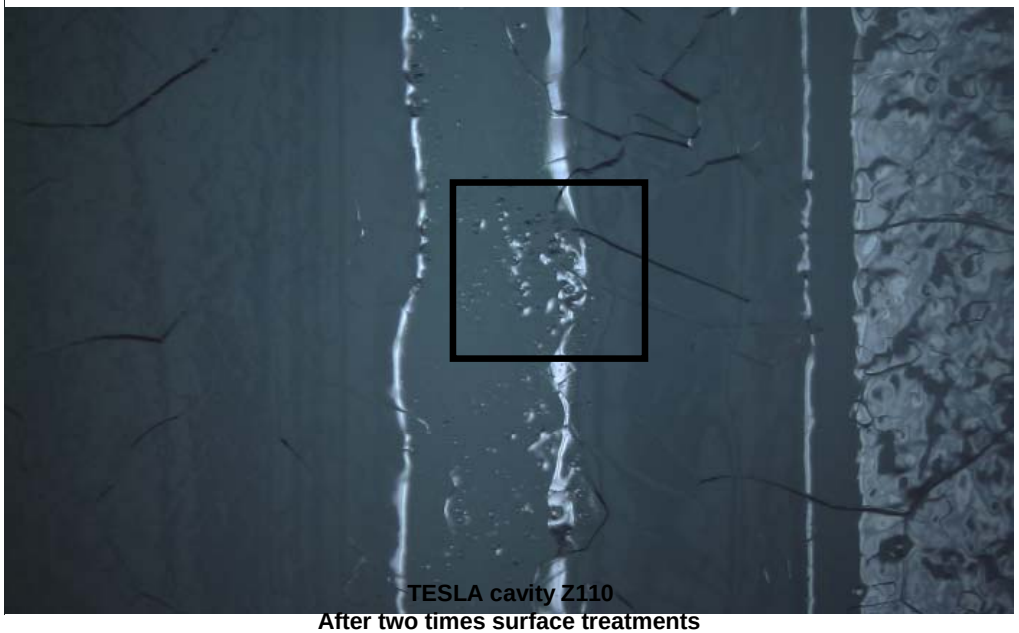


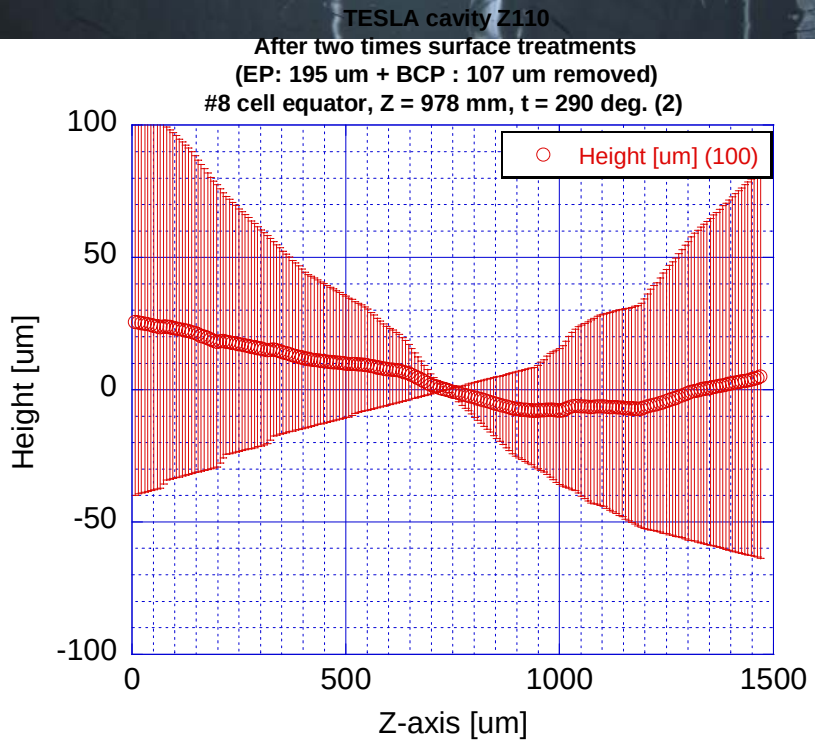
T-map data in test 2, 14.2 MV/m

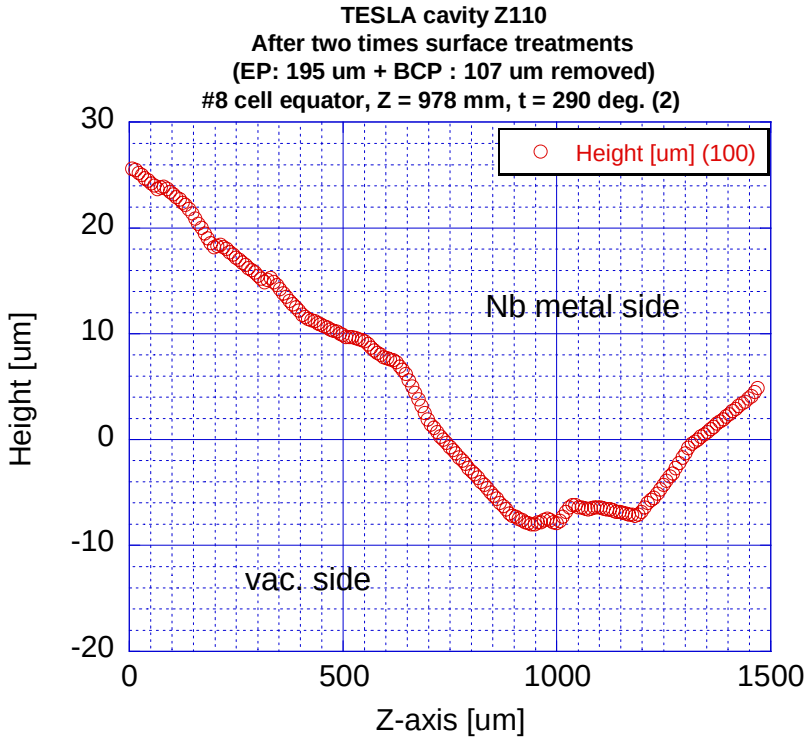


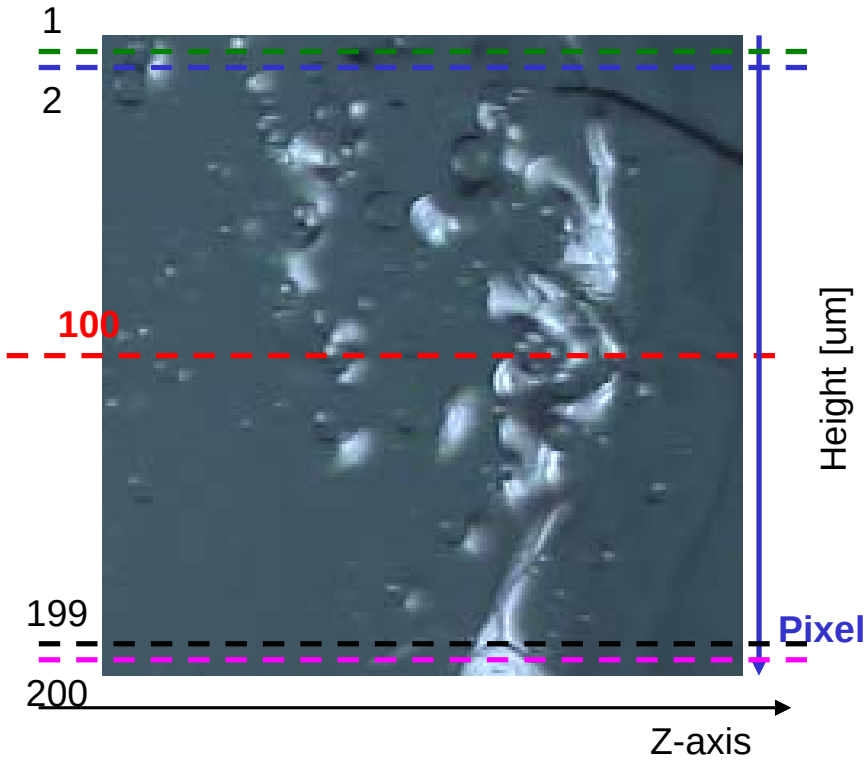
group of spot for 10mm width is correspond to T-map heating location. However, other several group of spot were found in other places.

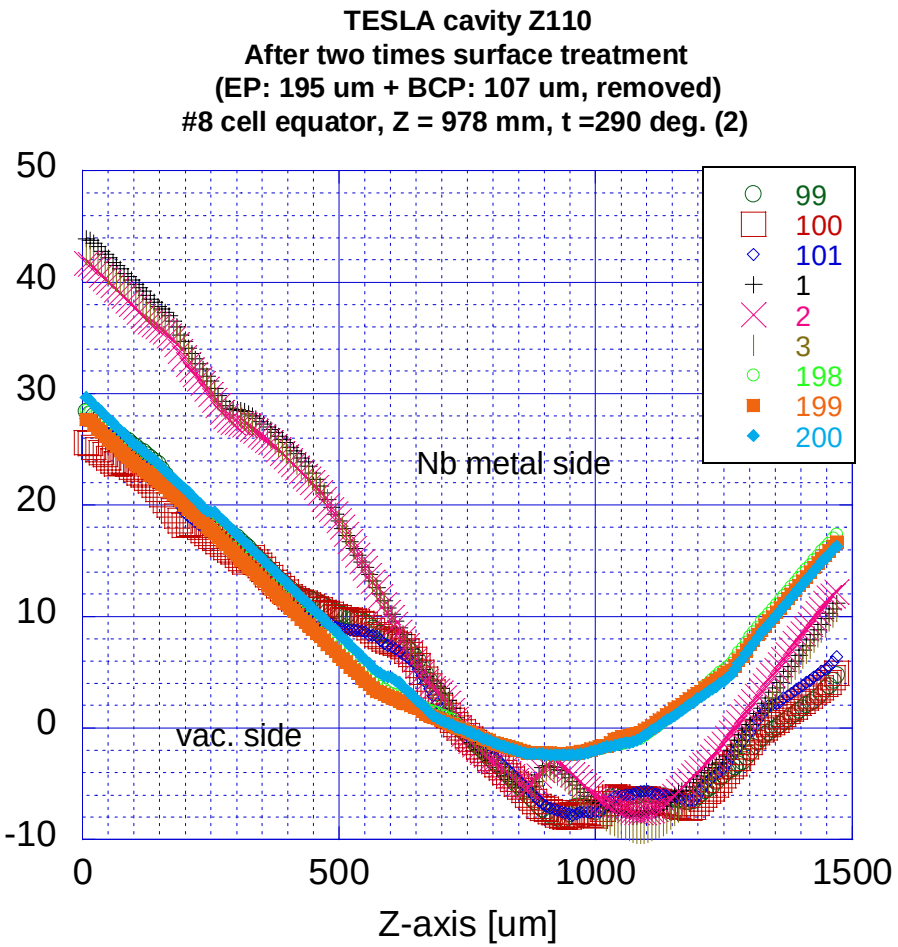
Z110 #8 cell equator Z=977、t=290 (2) heating point







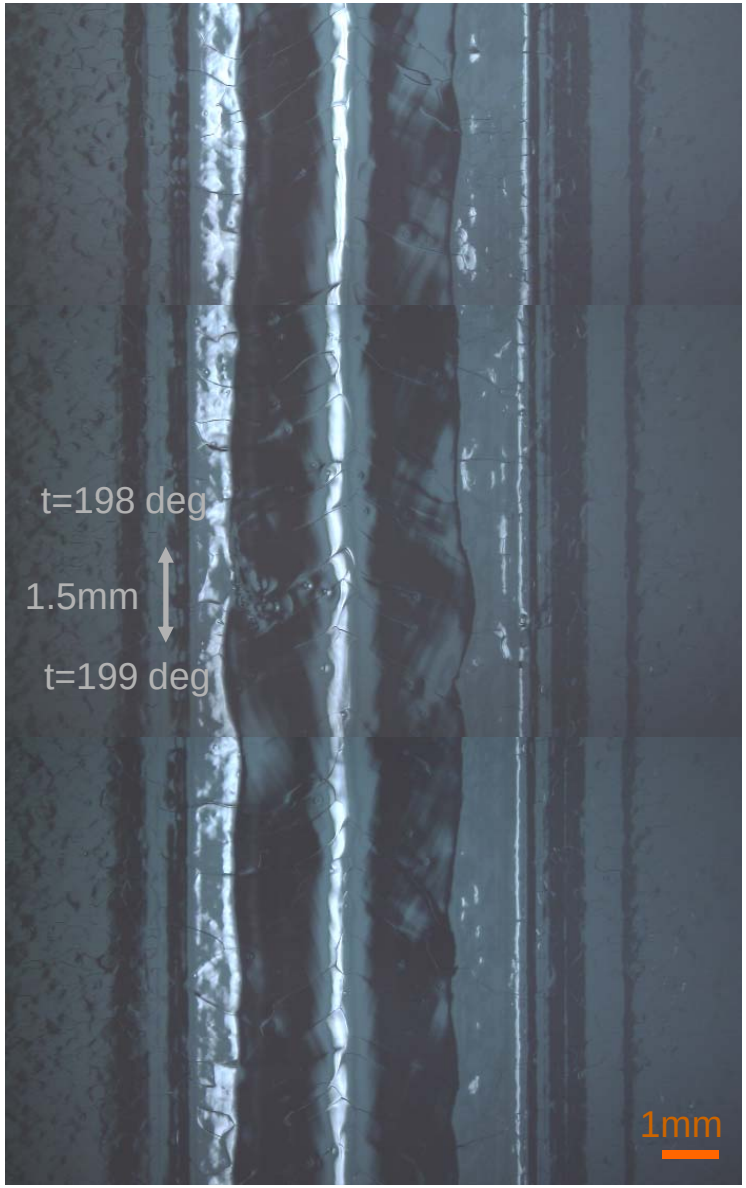




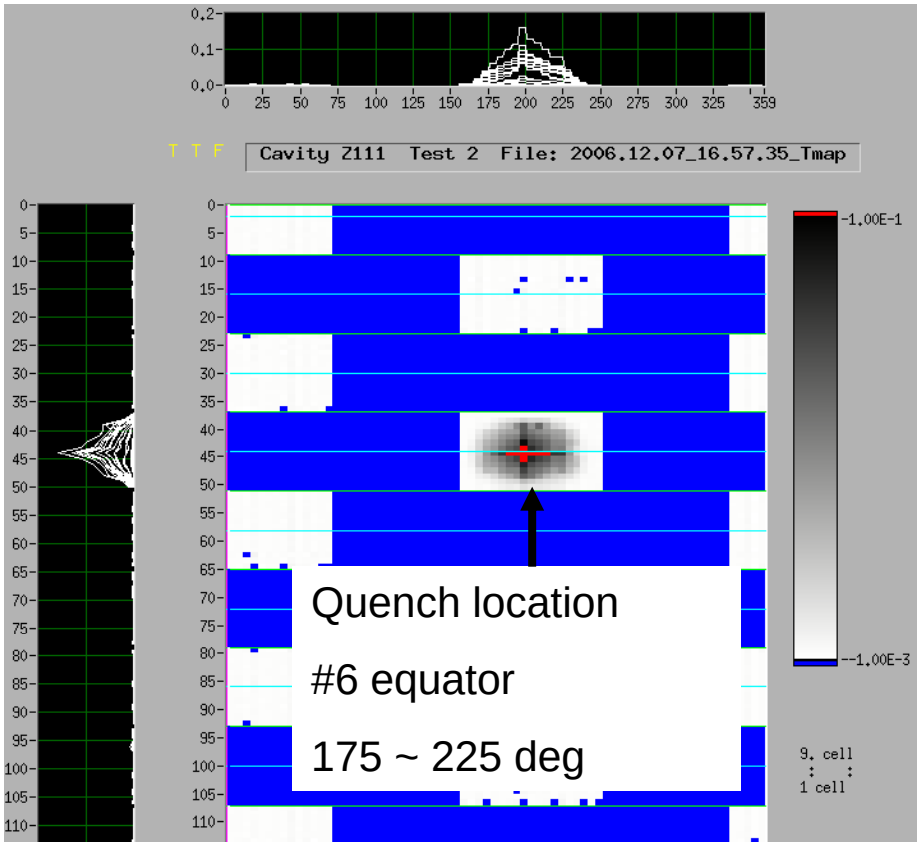
surface analysis along several horizontal lines.

TESLA cavity Z111: #6 cell equator

#6 equator, t=193 ~ 204 deg



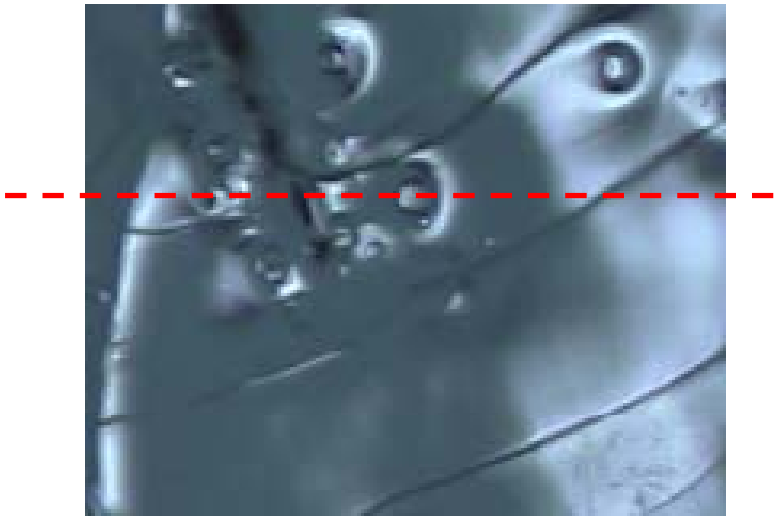
T-map data in test 2, 16.0 MV/m



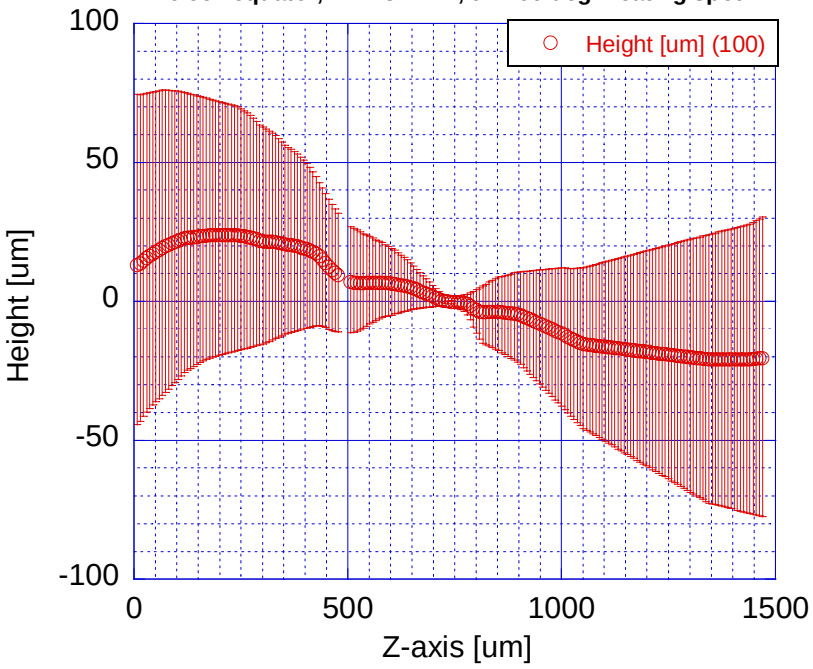
group of spot for 1.5mm width is correspond to T-map heating location. However, other several group of spot were found in other places.

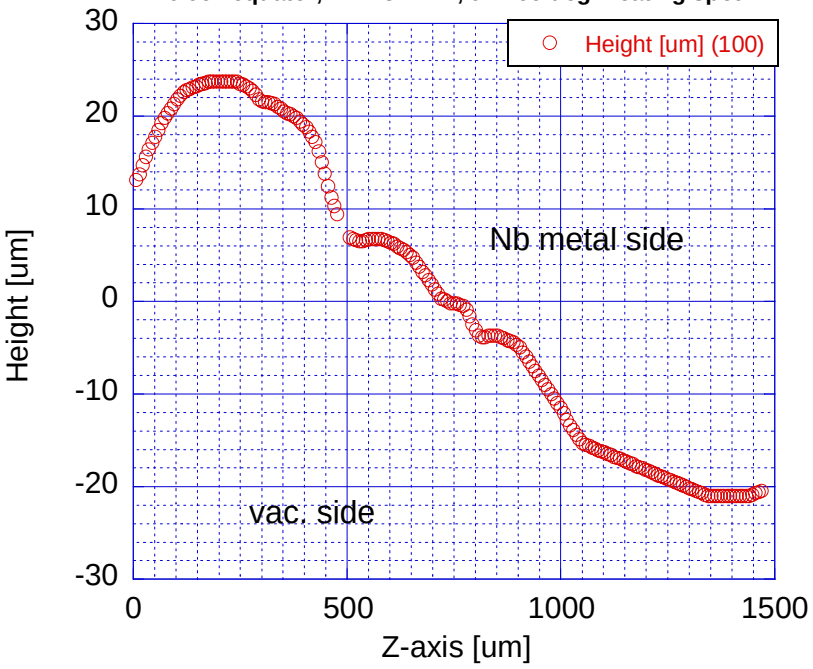
Z111 #6cell equator z=734,t=199, heating spot

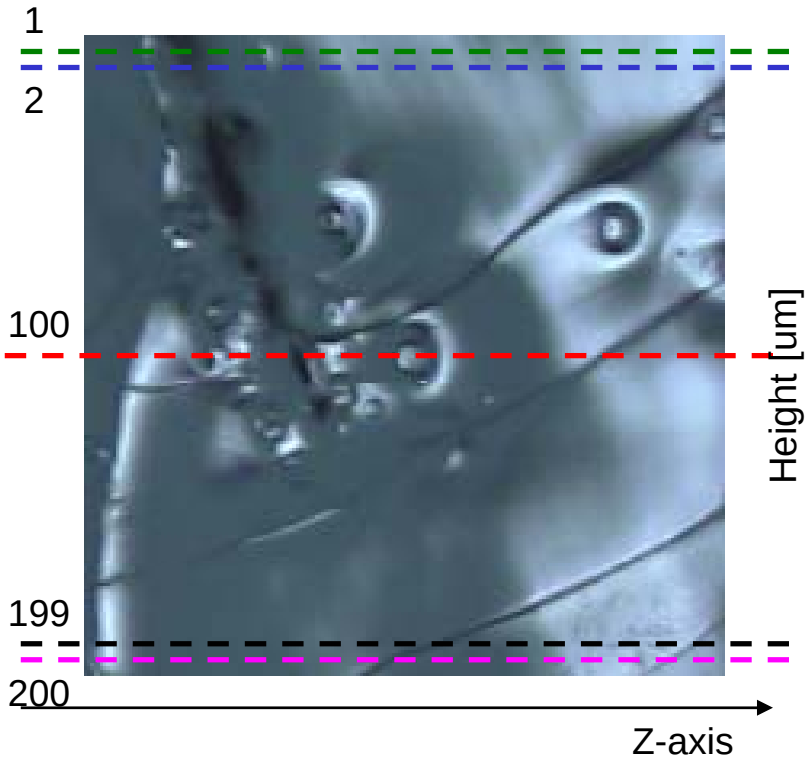
TESLA cavity Z111
After one time surface treatments
(EP: 155 um removed)
#6 cell equator, Z = 734 mm, t = 199 deg. heating spot

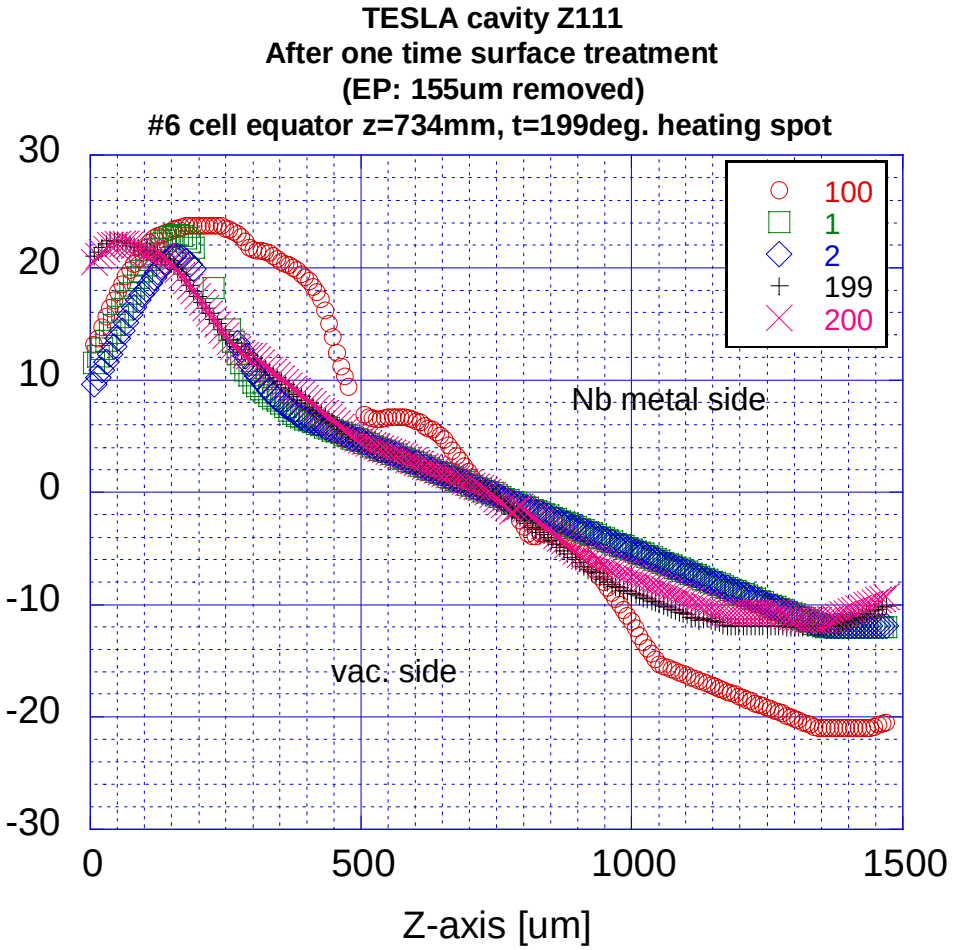


TESLA cavity Z111
After one time surface treatments
(EP: 155 um removed)
#6 cell equator, Z = 734 mm, t = 199 deg. heating spot









surface analysis along several horizontal lines.

End