

# Cavity Package 09032008

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# 1. STF cryomodule ( 4 TESLA-style cavities ) : STF phase 1

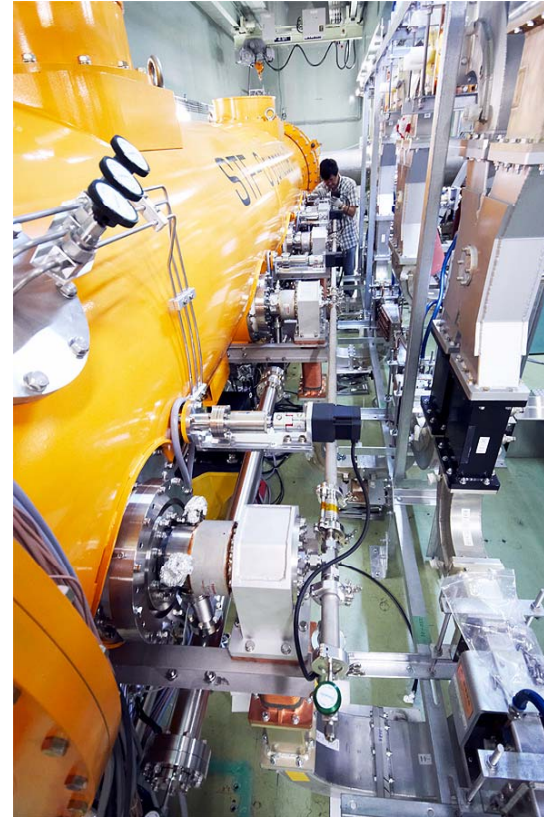
3<sup>rd</sup> cool-down from Sep. 8 – Nov. 28

High Power Test of 4 cavities (20,20,29,20 MV/m)

by connecting tree-distribution WG and linear-distribution WG



WG unit installation.



4 cavities were connected to WG

Lorentz Force detuning and its compensation were as expected.

Reproducibility of frequency tuning by slow tuner and fast tuner is under investigation.

More tests of tuners for 4 cavities are continued in coming 3 months.

## 2. STF phase 2 discussion was started.

### Discussion points now:

1: High Pressure Vessel code clear system.

We already consulted to KHK about application procedure.

2: phase2 cavity design for HPV will be started soon.

3: 28 cavities production, test and dressing are estimated to require 2.5 years.

4: Compton X-ray exp. cut into phase2 construction.

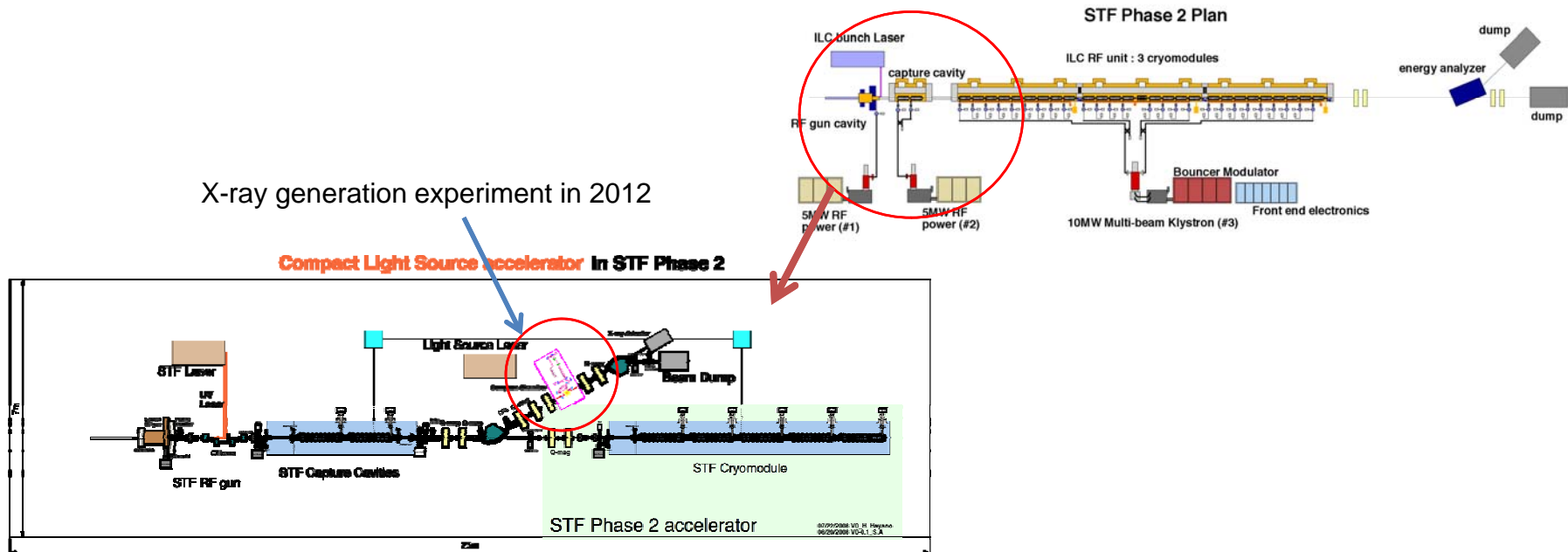
5: Schedule detail and design detail are under discussion.

### Next point:

1: Plug compatibility of phase2 cavity system, phase2 cryomodule.

2: New design of cavity package especially tuner location.

3: cavity production and process schedule in detail, including new man power training.



### 3. Cavity production Inspection

New TESLA-shape cavities #5, #6

were deep EP'd (100 $\mu$ m removal) in last week.

EBW seam was inspected for #6 cavity, first.

3 pits were found at equator EBW heat affected region (about 1mm away from seam)  
They were 200 – 300 $\mu$ m diameter and 7-15 $\mu$ m depth.

cell #2 198deg:  $\varnothing$ 200 $\mu$ m 7 $\mu$ m depth

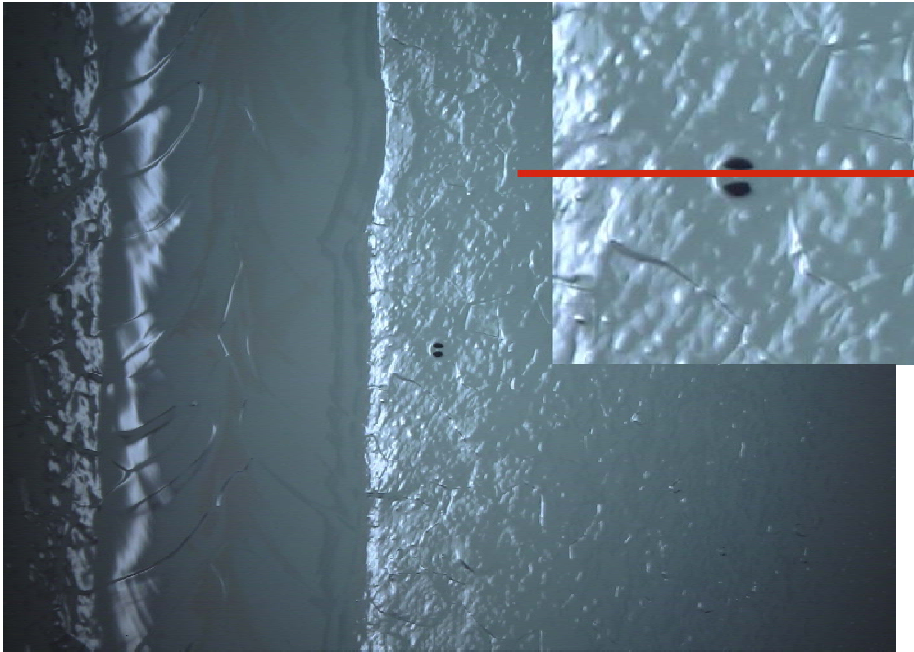
cell #3 10deg:  $\varnothing$ 300 $\mu$ m 15 $\mu$ m depth

cell #4 103deg:  $\varnothing$ 300 $\mu$ m 15 $\mu$ m depth

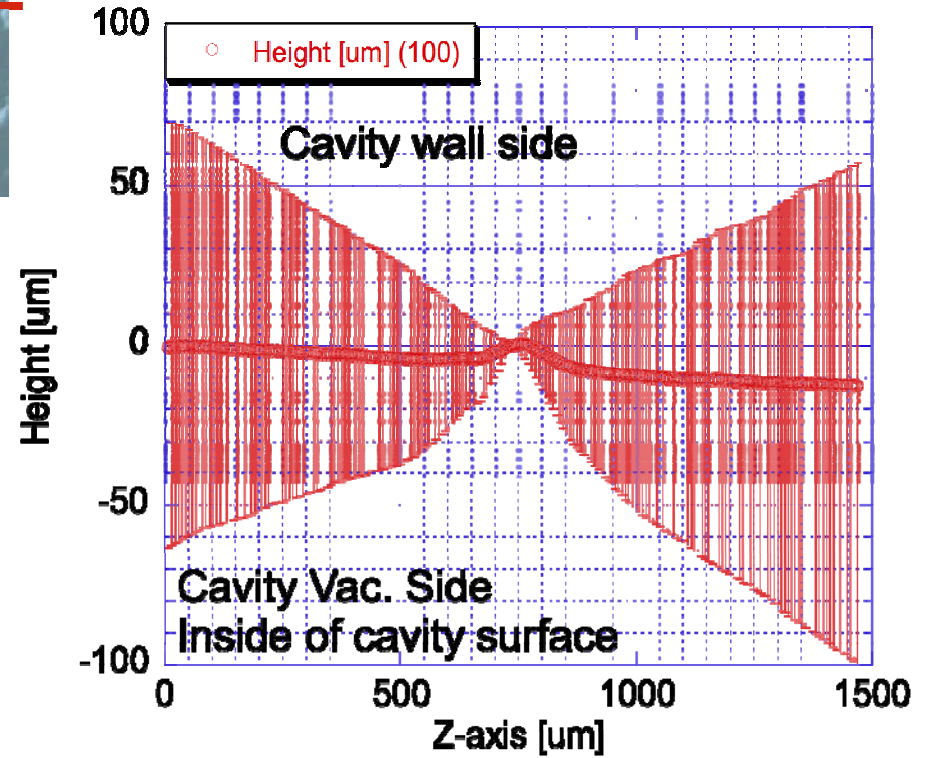
\* These cavities were done careful EBW by MHI.

EBW parameter was determined and set

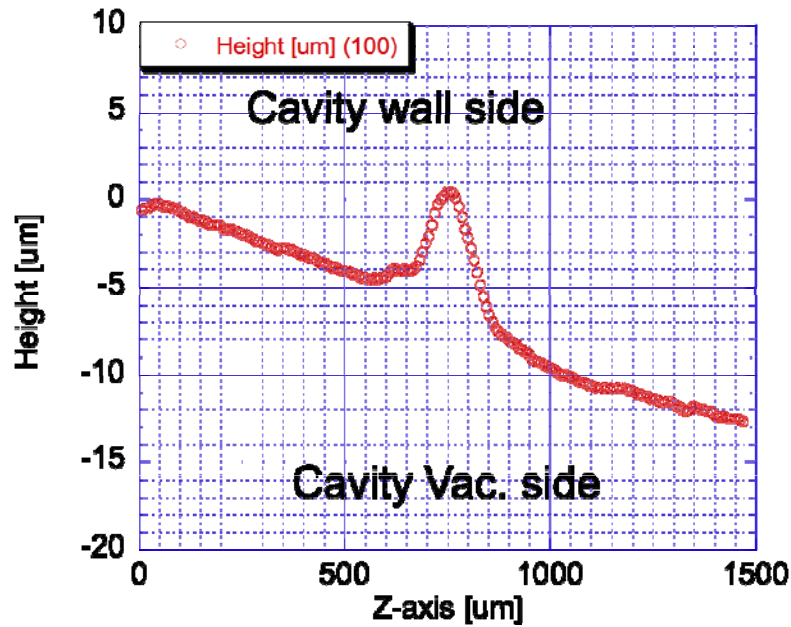
by using sample EBW and inspection camera observation.



STF baseline #6 cavity  
 After EP-1 (25 + 100 um removed)  
 #2 cell equator Z=285mm t=198deg



STF baseline #6 cavity  
 After EP-1 (25 + 100 um removed)  
 #2 cell equator Z=285mm t=198deg



For example;