

Cornell Progress Report

July 19, 2007

ACCEL- 8

- The last test (in June) was limited by field emission and quench at 25 MV/m
 - not enough material (25 microns only) was removed after H-degassing at Jlab (600 C- 10 hours).
 - Test also showed cavity to be H-free by 100 C cycle
 - => Vertical EP 25 micron H-free
- Another 10 microns of vertical EP (done)
- HPR 18 hours (done)
- Final 2 hour HPR, dry (done)
- Attach to test stand (done)
- Bake at 120 C, 48 hours (in progress)
- Test on July 20 - 23
- July 25: Warm up and Ship to Jlab

ACCEL-9

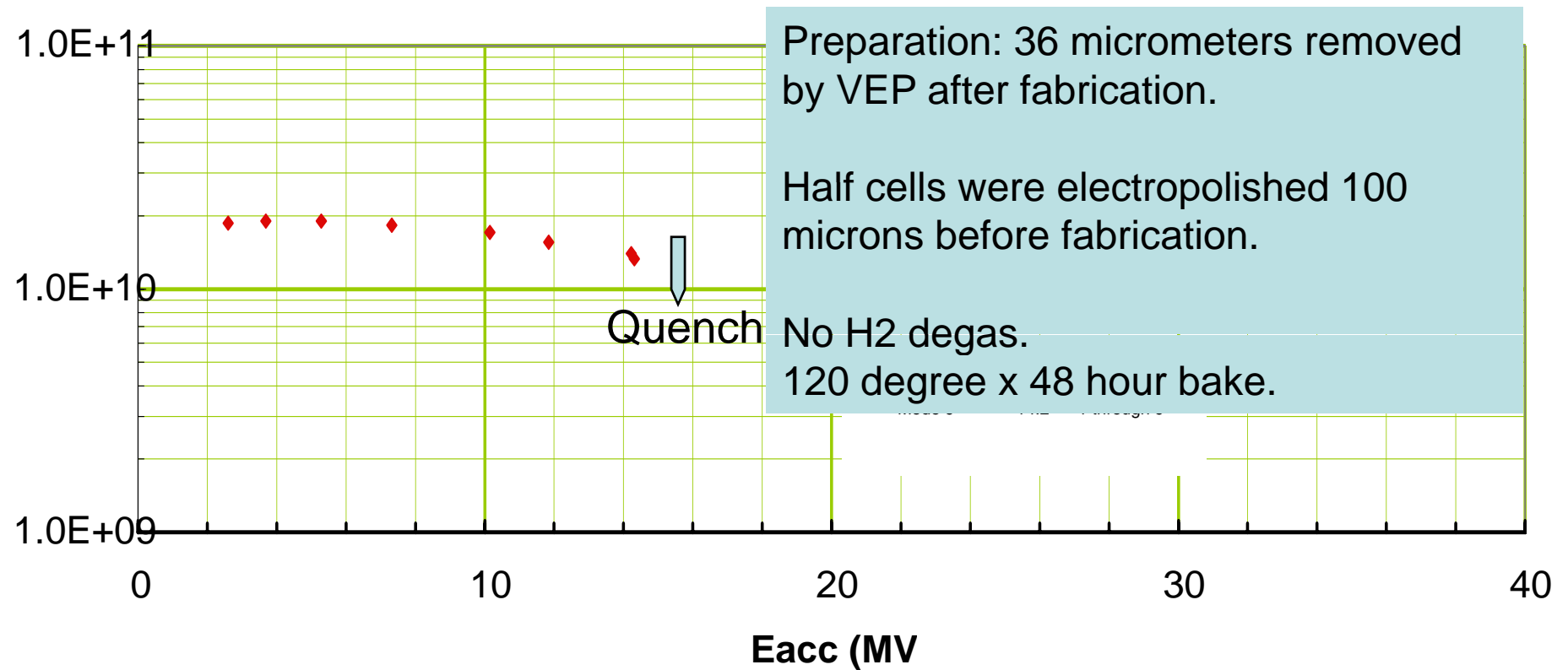
- Vertical EP 150 microns, HPR complete,
- 600 C heat treat at Jlab for H-degassing, complete
- Check field profile, it is not flat (10%)
- Field profile tuning done (better than 2%)
- Vertical EP 40 microns, in progress
- HPR 18 hours, Dry
- July 24- July 30 : Attach to test stand, leak check, bake
- July 30 - 31 test
- Aug 1 - 3: warm up, ship to Jlab.

C24 - with He Vessel

- Goal
 - Prove that light (20 microns) EP is possible on cavity with He vessel in case performance improvement is needed in future for a cavity with He vessel attached
- C24 : 19.7 MV/m in last horizontal test at DESY
- Cavity received at Cornell
- Check field profile (20% unflat !)

Re-Entrant 9-cell, First Test

LR9-1 RF Test #1



Multi-Mode Results, Quench in Suspect Cells 3 or 7

	Eacc	Cell #	Comment
Mode 1	20.2	5	-
Mode 2	14.9	3,7	-
Mode 3	21.7	5	-
Mode 4	22.7	4,6	Multipacting
Mode 5	-	-	-
Mode 6	15.0	4,6	-
Mode 7	25.4	5	-
Mode 8	22.3	1,9	-
Mode 9	14.2	1 through 9	-



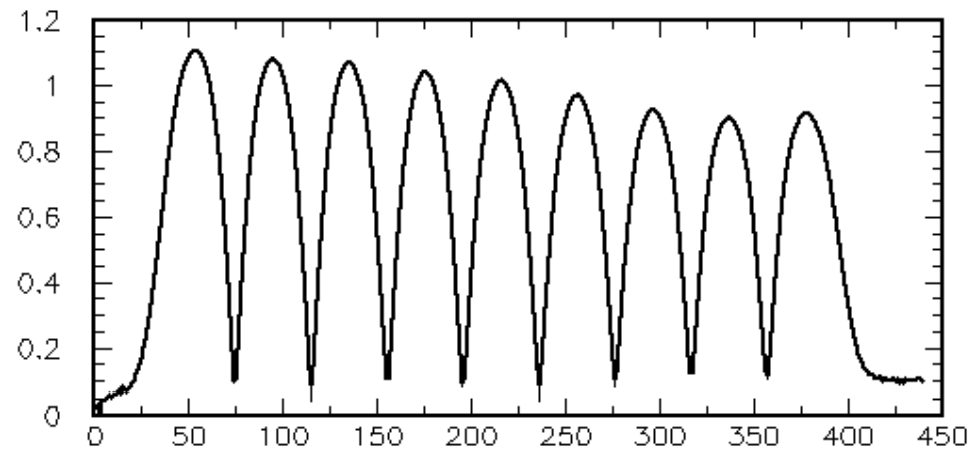
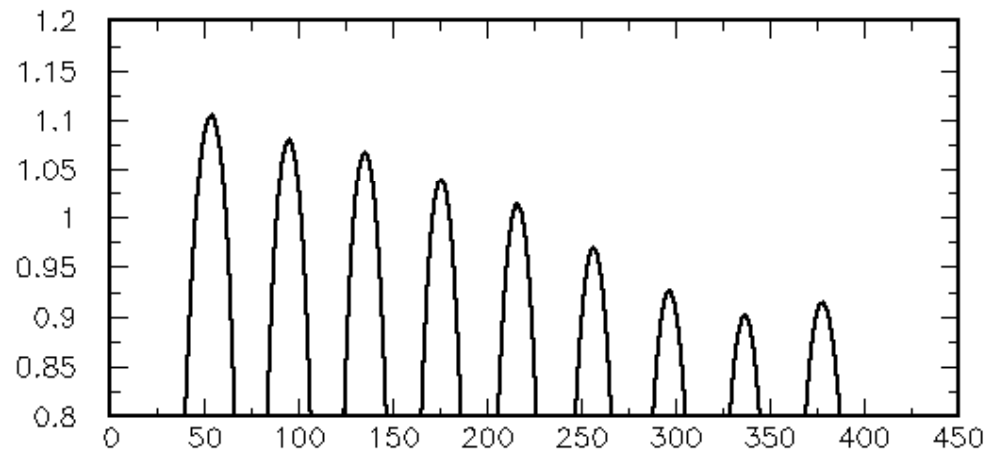
Weld zone

QuickTime™ and a
TIFF (LZW) decompressor
are needed to see this picture.

Weld prep machined a
large region of area
which was EP 100
microns in half-cell
stage

Need more EP !

C24 Field Profile



Possible Plan for C24

- (Light BCP?) HPR, Vertical Test
- Light EP, HPR, Vertical Test
- Need to develop water flow cooling for vertical EP