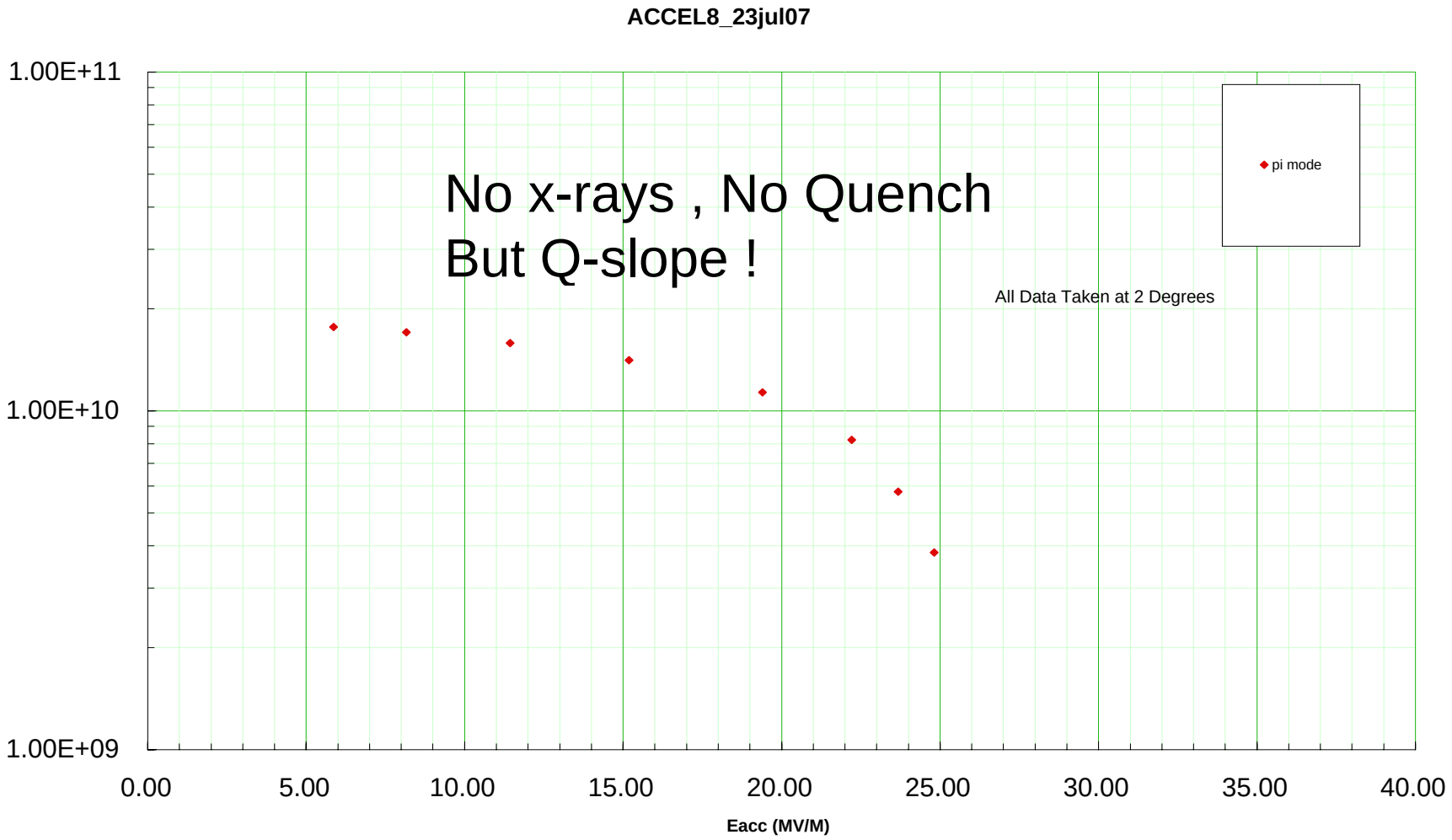
Cornell Status, Aug 07

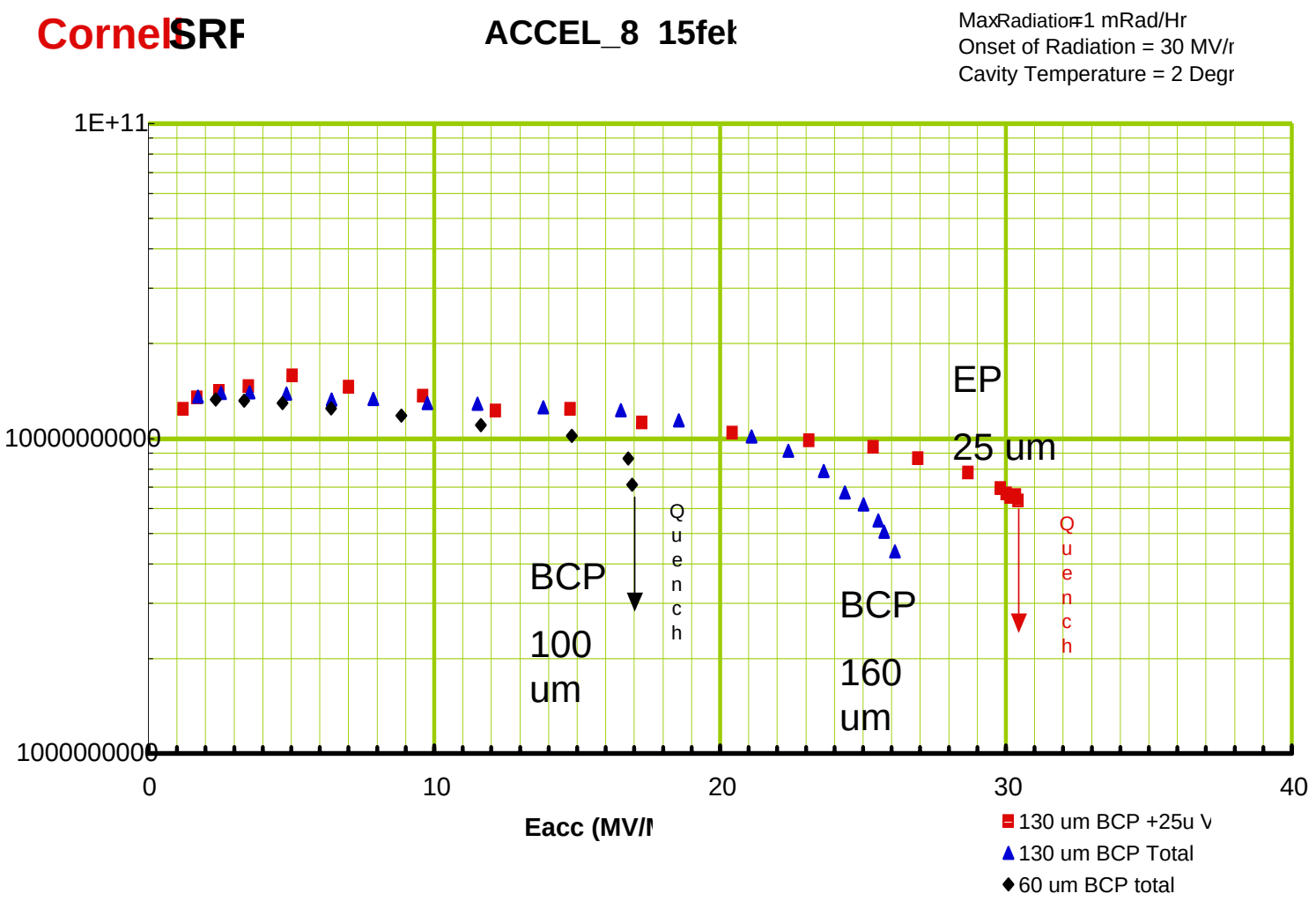
Latest Test on ACCEL- 8, July 23, 07

- Aim: To push toward 35 MV/m.
  - Last result was 30 MV/m with 160 micron BCP plus 25 micron Vertical EP
- New treatment
  - Vertical EP 120 microns
  - Jlab H degassing, 600 C for 10 hours
  - Tuned field flat
  - Vertical EP 25 microns
  - HPR 18 hours, HPR 2 hours
- Bake at 120 C for 48 hours
- Test
- Sent to Jlab

ACCEL-8


ACCEL8_23jul07
1.00E+11
1.00E+10
1.00E+09
No x-rays , No Quench
But Q-slope !
All Data Taken at 2 Degrees
pi mode
0.00
5.00
10.00
15.00
20.00
25.00
30.00
35.00
40.00
Eacc (MV/M)

Old (Feb) ACCEL- 8 Results (For Reference)



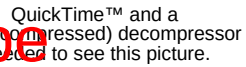
Look for Cause of New Q-slope with EP

- Our V- EP conditions had changed from previous successful test (30 MV/m)
- Temperature was changed from 30-32 C to 36-40 C
  - Trying to get more uniform up-down EP
- Stirring speed was increased from 1 to 2 Hz
  - Trying to remove H bubbles more effectively
- Check single cell vertical EP conditions and result
  - T was at 30 - 32 C and stirring speed 1 Hz

Single Cell - No Q-Slope

Eacc = 25 MV/m

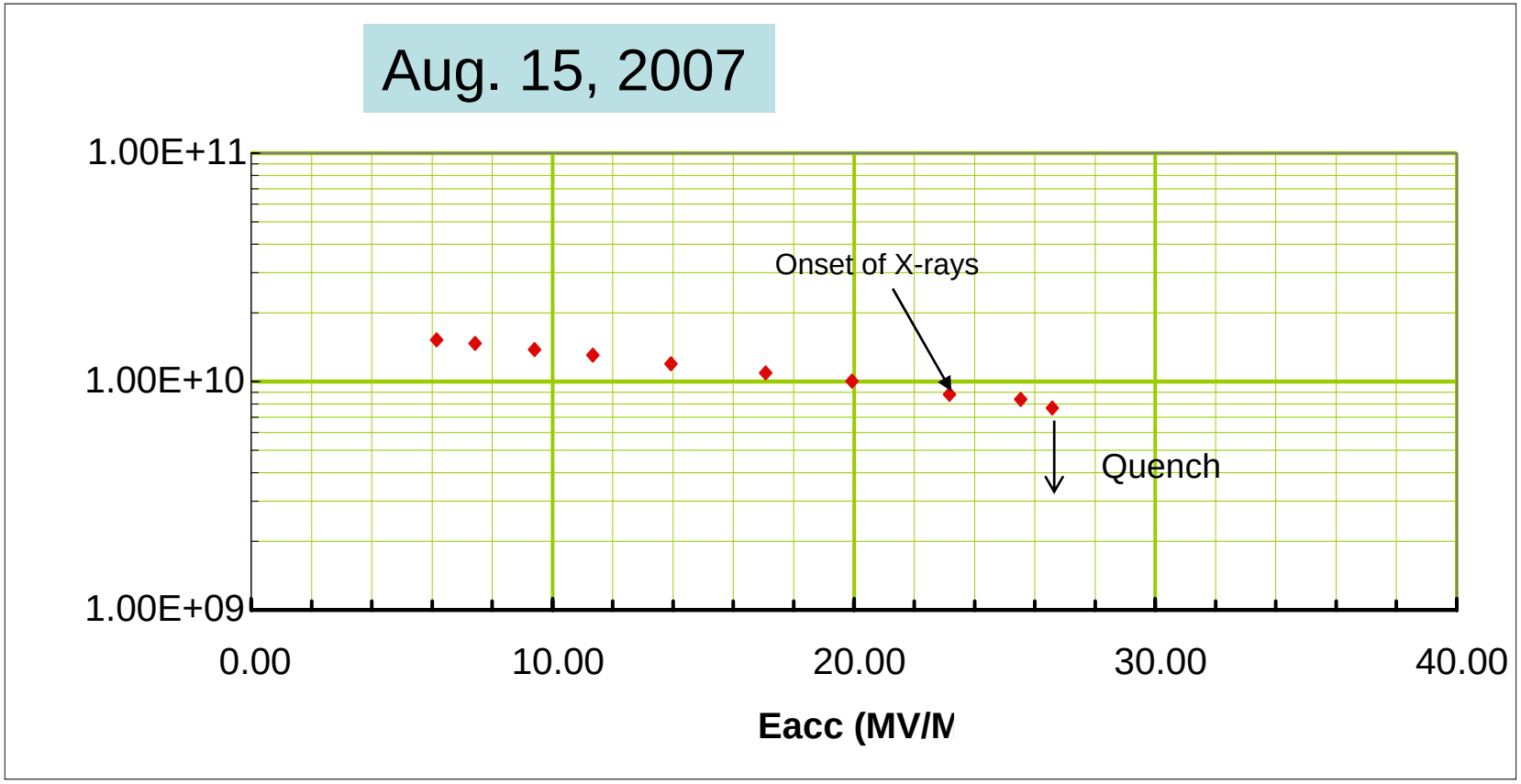
No Q-slope



First Test on ACCEL-9

- Vertical EP 120 microns
- Jlab H degassing
- Tuned field flat to better than 2%
- Vertical EP 25 microns (temperature 38 - 40C, stirring speed 2 Hz)
  - *Already done before EP problem discovered*
- Re-do EP 25 microns
  - Temperature 30 - 32 C, stirring speed 1 Hz
- HPR 18 hours, Bake at 120 C for 48 hours
- Test

ACCEL-9 Result



Summary and Plans

- Don’t fool around with EP parameters, very sensitive
- First test shows ACCEL-9 promises to be a good cavity
- But it is quenching at 27 MV/m
- Plan : EP again 25 microns and re-test before sending to Jlab ?