

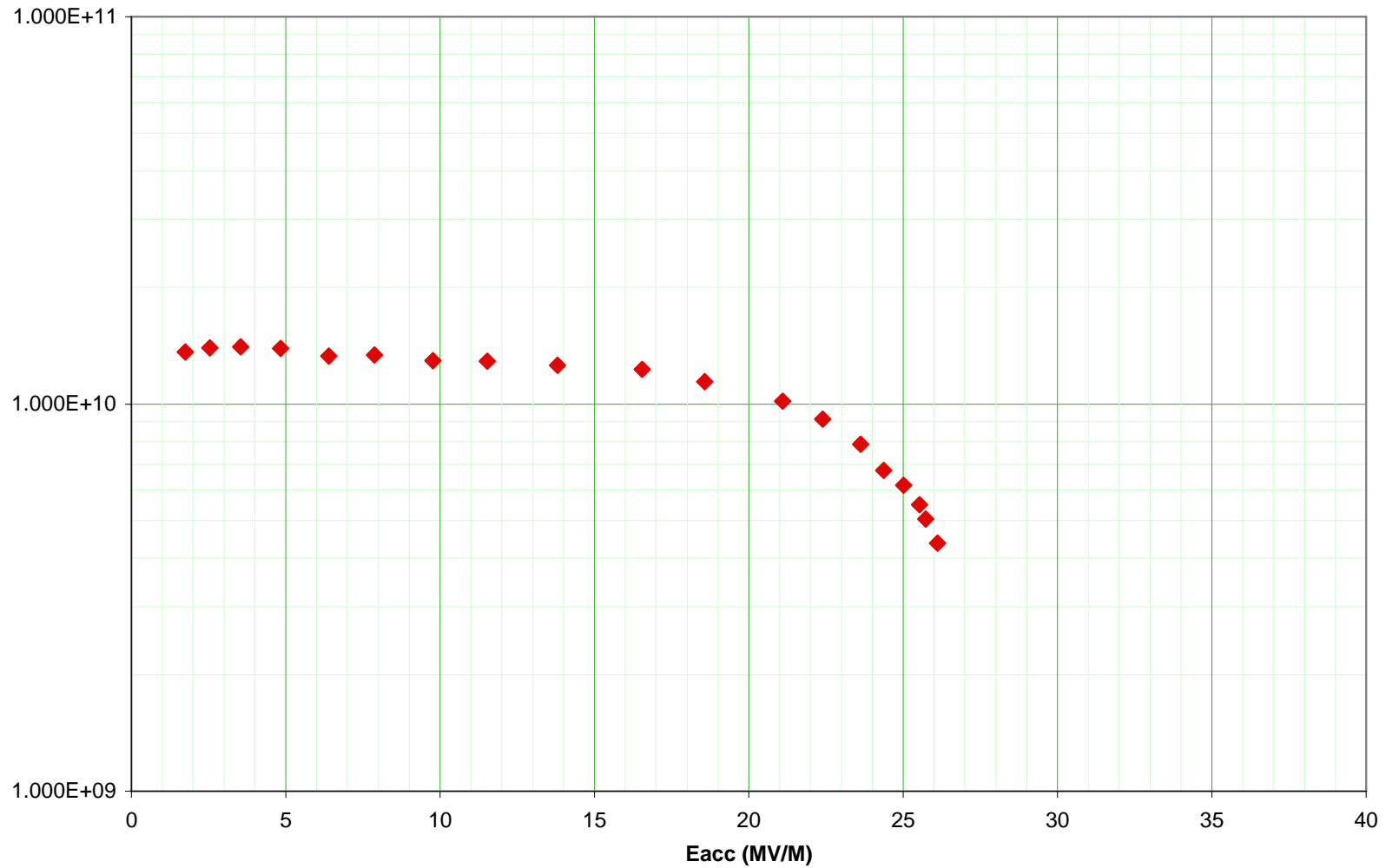
Cornell Report

Good News !

- Cornell surpassed 25 MV/m in vertical test of first 9-cell ILC ACCEL-made cavity (purchased by Fermilab).
- There was NO FIELD EMISSION at the highest field of 26 MV/m (no x-rays).
- There was no quench.
- The test was limited by Q-drop due to Q-slope expected from BCP treatment
- This is a good cavity for US Cryomodule#2

Q vs. E curve at 2.05 K

ACCEL8_24may06



Treatment Summary

- Parts BCP at ACCEL, $\approx 50\mu\text{m}$
- BCP at Cornell, HPR, 50 μm , first test, limited by quench at 17 MV/m, no Field Emission
- BCP at Cornell 60 μm , HPR, second test, 26 MV/m.
- Note: there has been no 800 C heat treatment !
- To my knowledge, this is the only 9-cell cavity in the world tested w/o any HT, and with sufficient BCP ($> 100 \mu\text{m}$)

Options for Next Step

- Send cavity to Jlab for light BCP, assembly with coupler, tuner...preparation for horizontal test at Fermilab.
- Send cavity to Jlab for EP 80 um, 800 C, tune, EP 10um, 120 C bake, test, assembly with coupler, tuner...preparation for horizontal test
- Vertical EP 80 um at Cornell, 120 C bake test
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