# Test notes of cavity TE1ACC001 3rd VT in A0 (total 5th VT)

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**Current test summary**

Cavity TE1ACC001 has been tested the 3rd time in A0 (total 5th time). The cavity was re-HPR'd in A0 since last measurement.

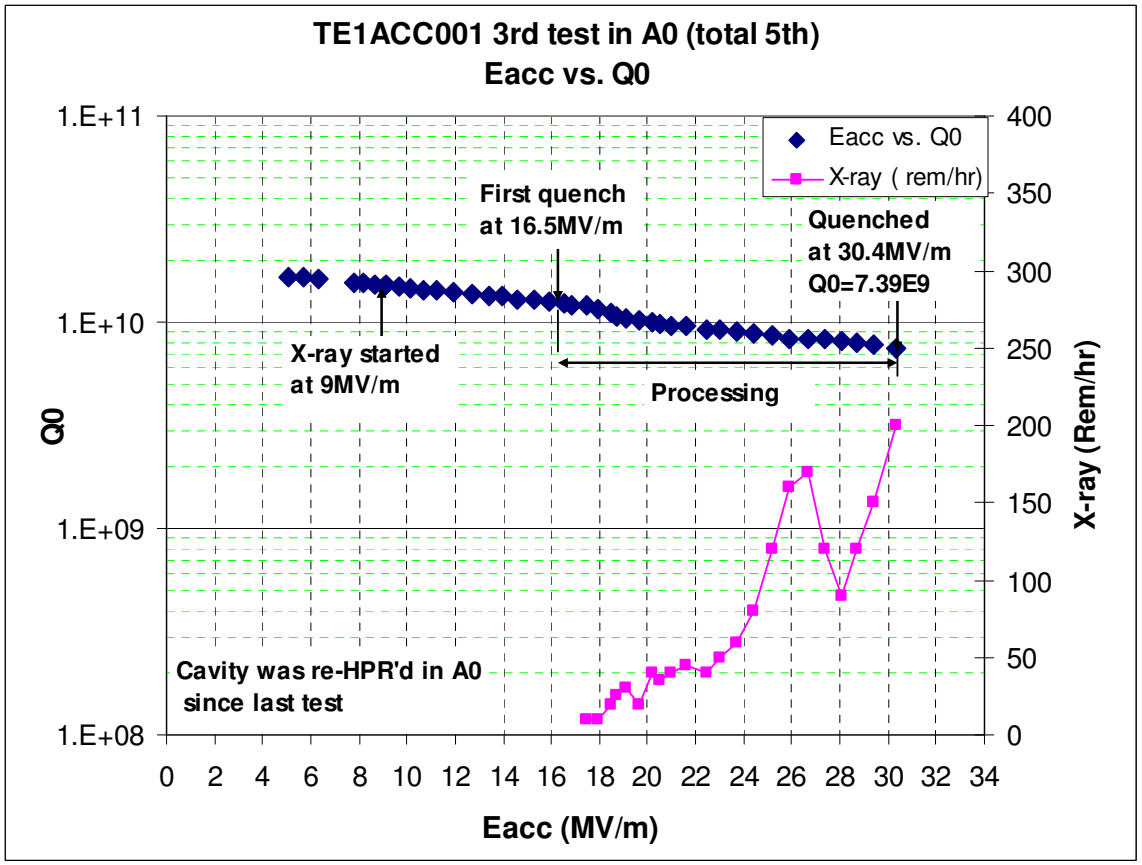


Fig 1 Eacc vs. Q0 curve for TE1ACC001 VT #5

The cable was calibrated before pumping down, the cable loss factors are Cf=34.01dB, Cr=35.158dB, Ct=6.116dB. The Qt=4.25E12 was measured at Eacc=4.5MV/m, T=2.02K. During the Eacc vs. Q0 measurement, the X-ray started at 9MV/m, and the first quench happened at 16.5MV/m, then the cavity started the processing, and several quenches happened during the processing. When the cavity gradient reached 27 MV/m, the X-ray triggered the system interlock, and after that the X-ray was reduced due to processing. When cavity finally achieved Eacc=30.4MV/m and Q0=7.39E9, the X-ray triggered system interlock again, and FE also induced the cavity quench, the test just stopped there.

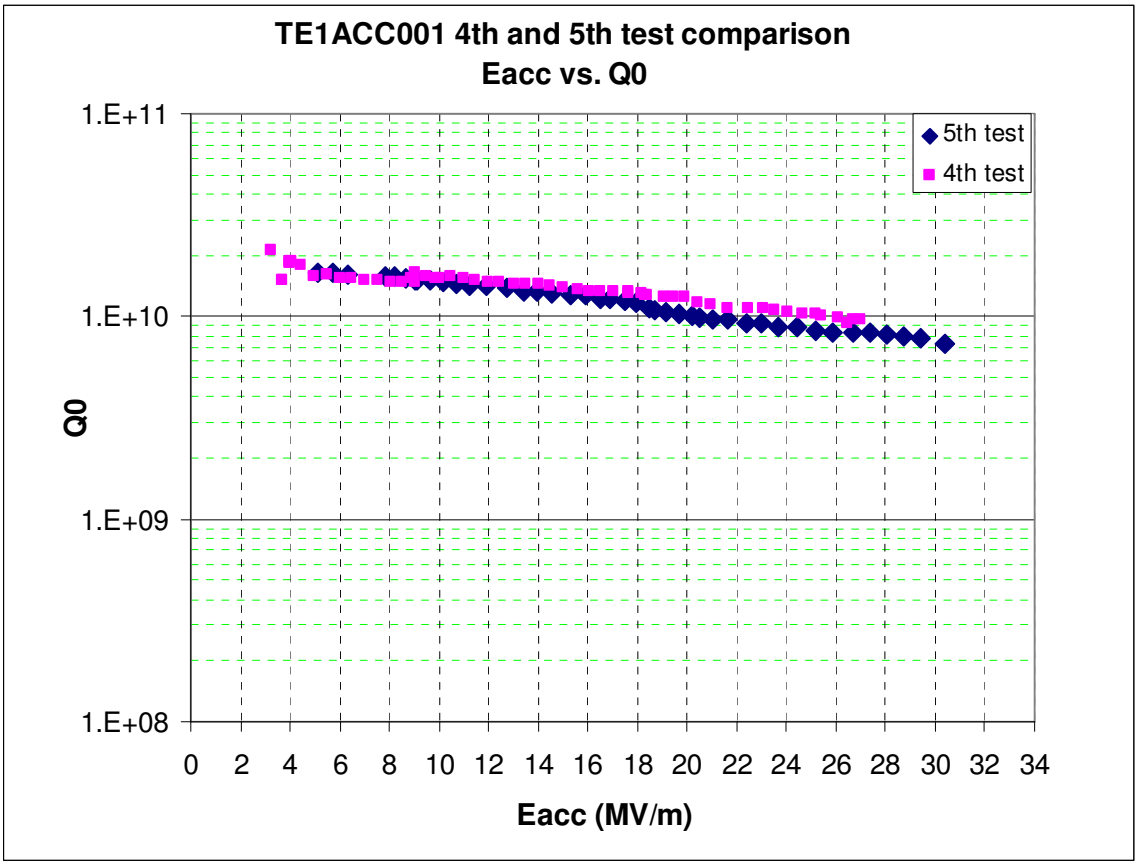


Fig 2 Cavity TE1ACC001 4th test and 5th test comparison

**Previous RF test**

Cavity TE1ACC001 has been measured the forth time for testing A0 vertical test system after added pumping line and replaced new RF components; the cavity was kept in vacuum after the 3rd RF test in A0.

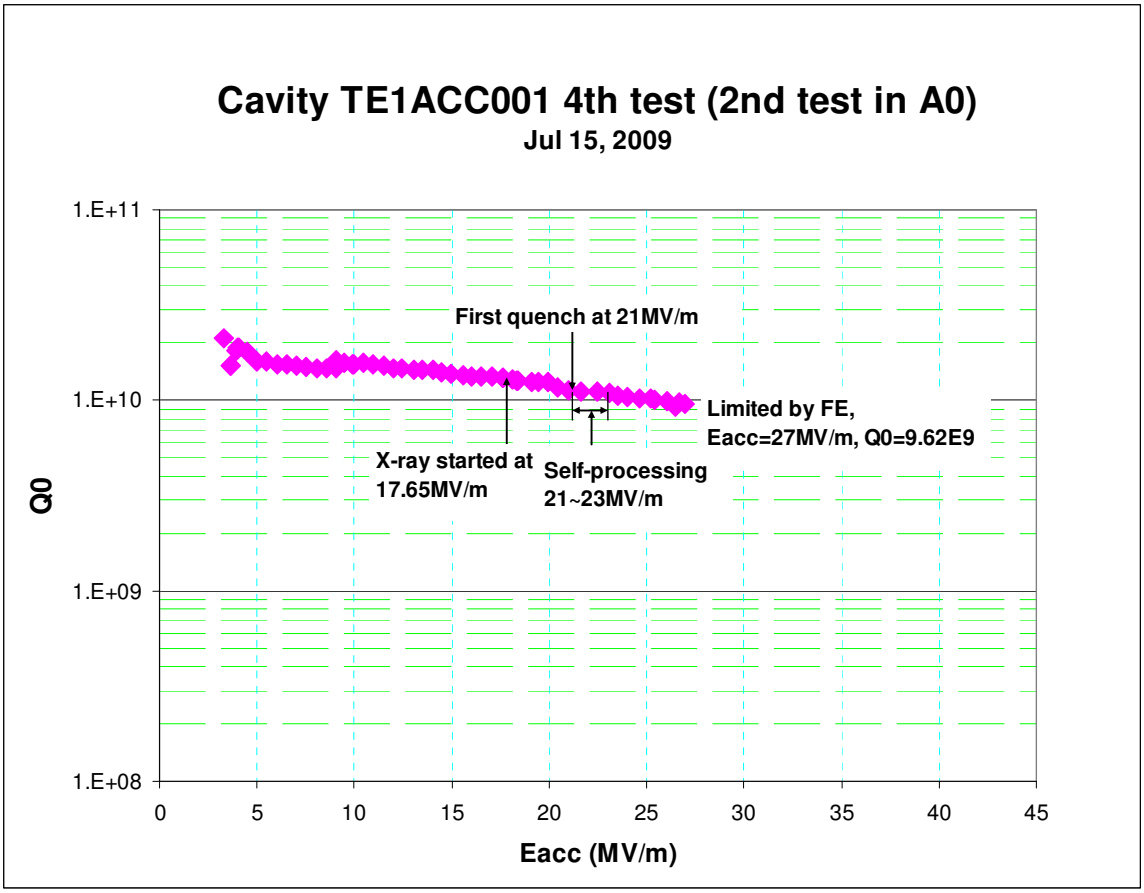


Fig 3 Eacc vs. Q0 curve for TE1ACC001 test #4

The cable was calibrated before pumping down, the cable loss factors are Cf=33.95dB, Cr=35.79dB, Ct=6.28dB. The Qt=3.60E12 was measured at Eacc=3.99MV/m, T=2.02K. During the Eacc vs. Q0 measurement, the X-ray started at 17.65MV/m, and the first quench happened at 21MV/m, then the cavity started self-processing from 21MV/m to 23MV/m, it limited by FE and eventually reached to 27 MV/m, beyond that power level the X-ray detector triggered the system interlock.