

Cavity Production Data at JLab

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SNS MB Production

MB Cavities (35)

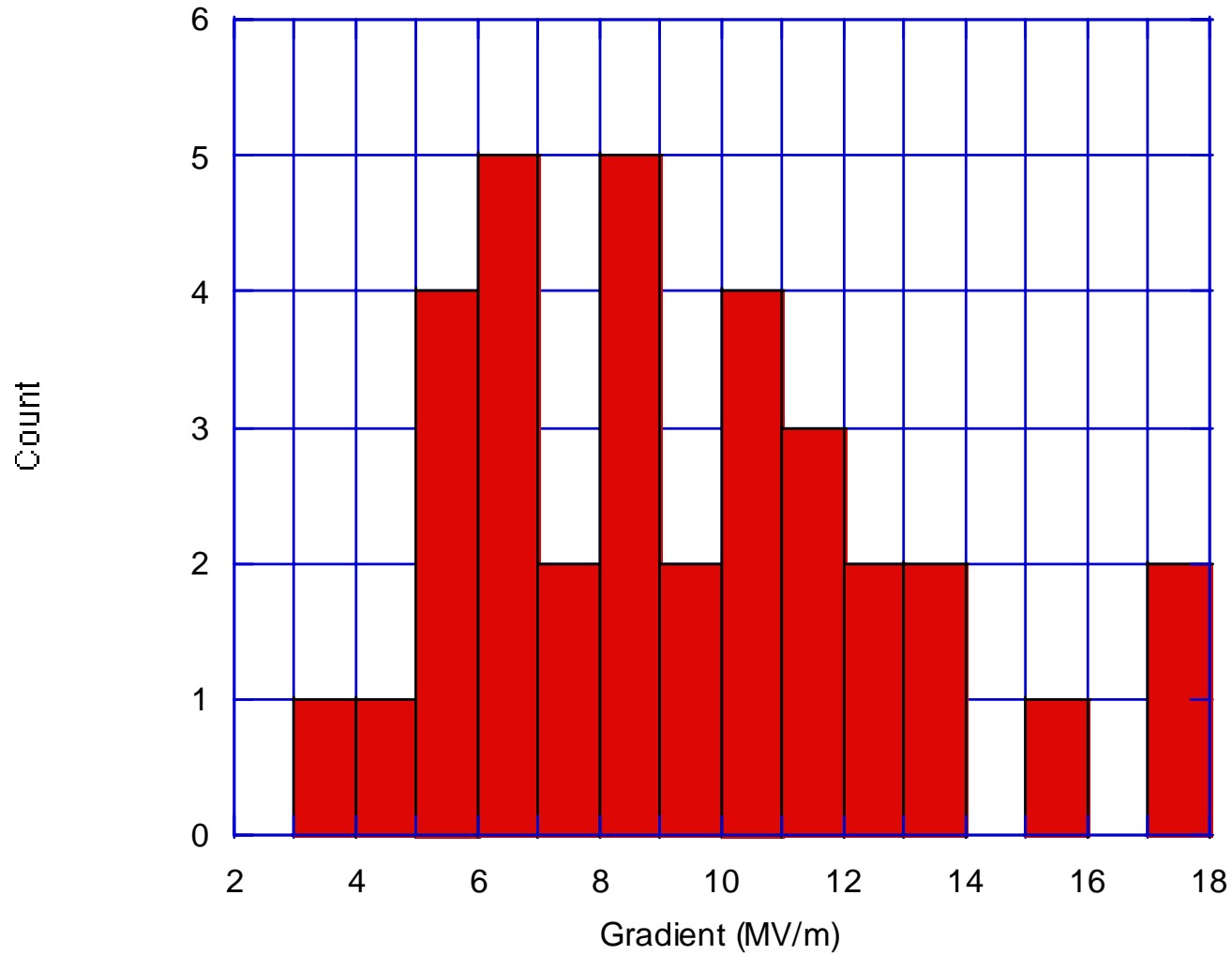
Produce 11 strings of 3 cavities each

Cavities

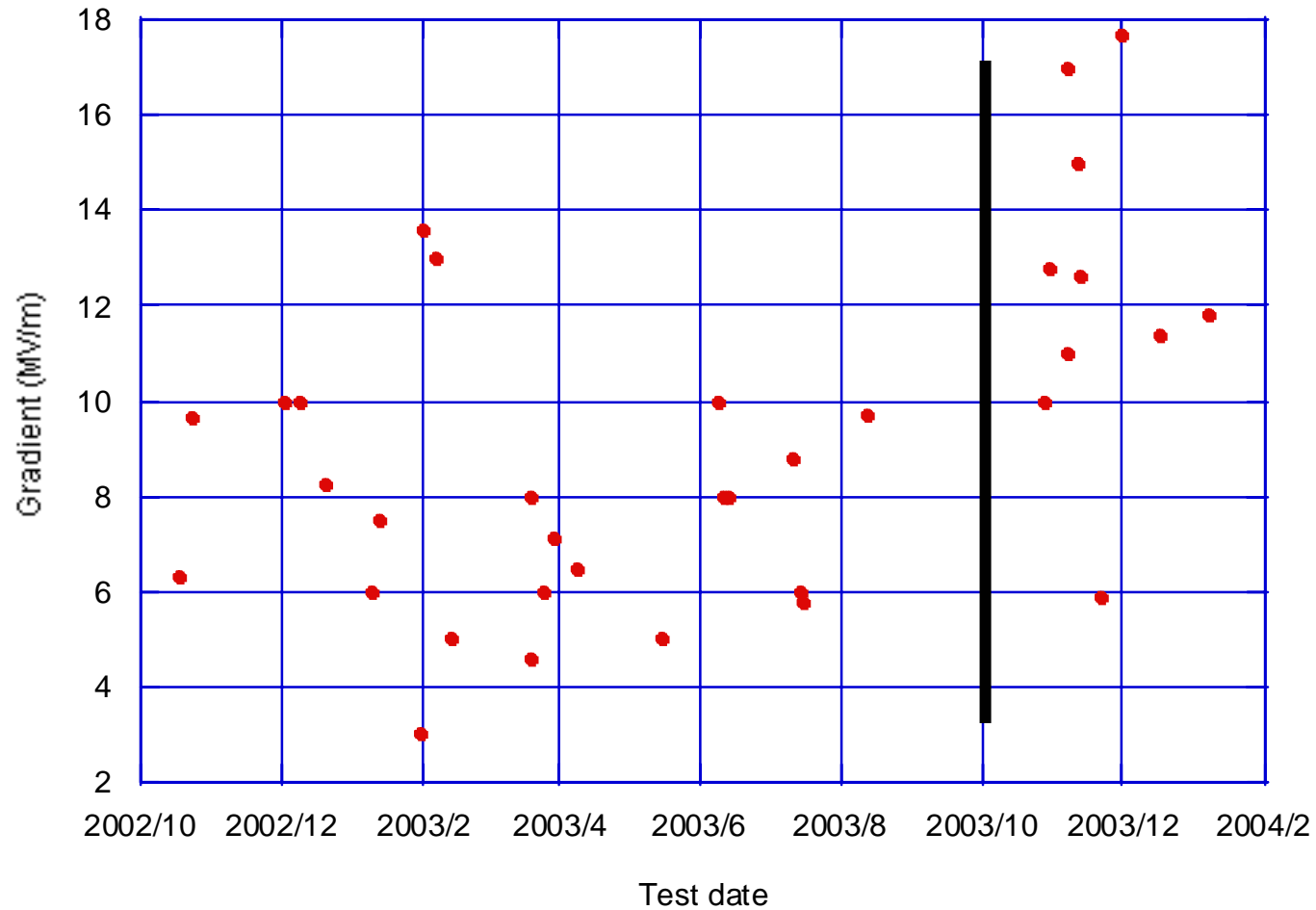
- Beta = 0.61, 805 MHz
- $E_{pk}/E_{acc} = 2.71$, $B_p/E_{acc} = 5.72$ mT/(MV/m)
- R/Q = 279 ohms
- VTA Qualifying Gradient - $E_{acc} > 10$ MV/m @ Q- 5E9, 2.1K



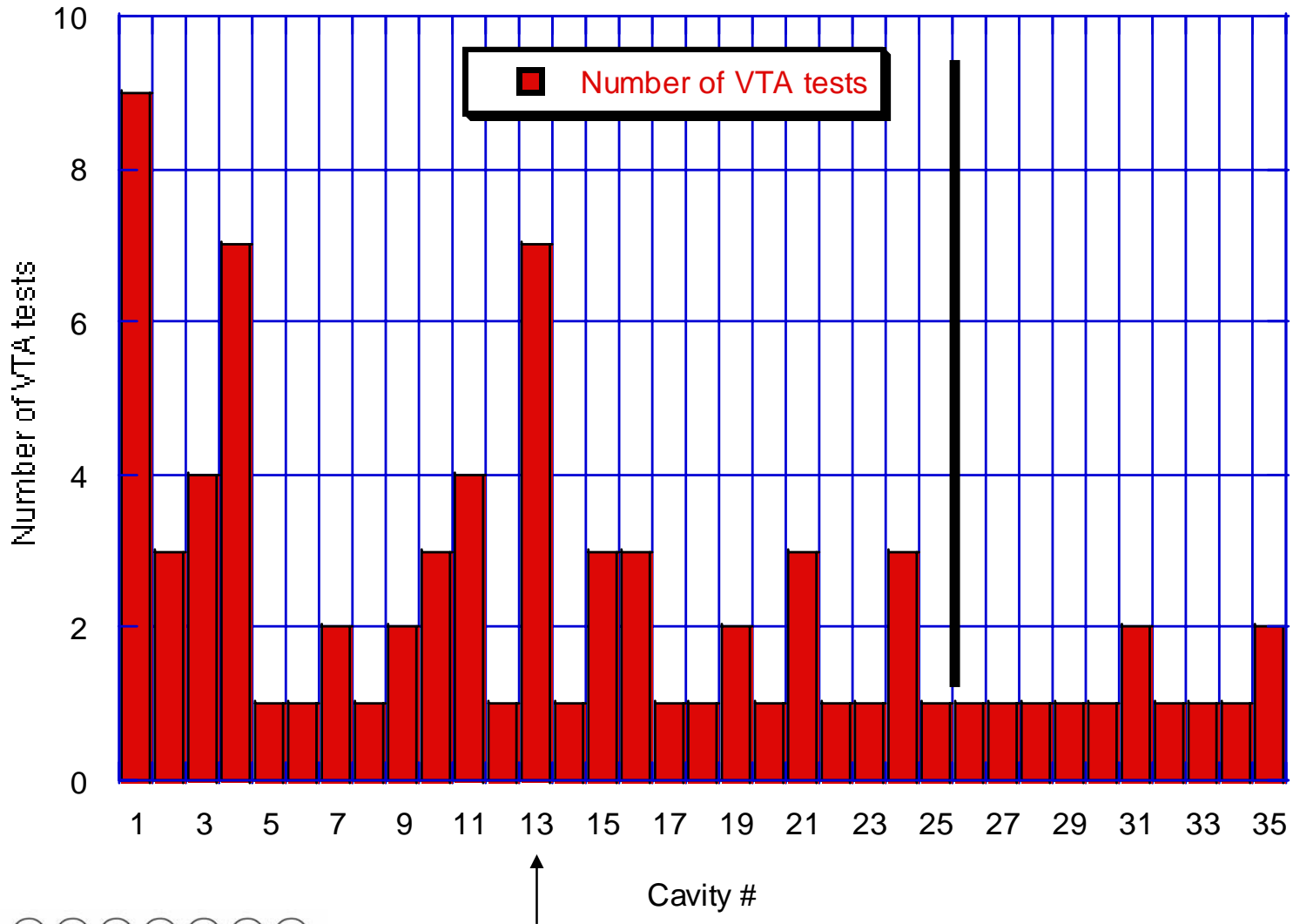
FE onset First Test MB Cavities



MB FE –onset by VTA Test Date



Number of Vertical Tests Performed MB



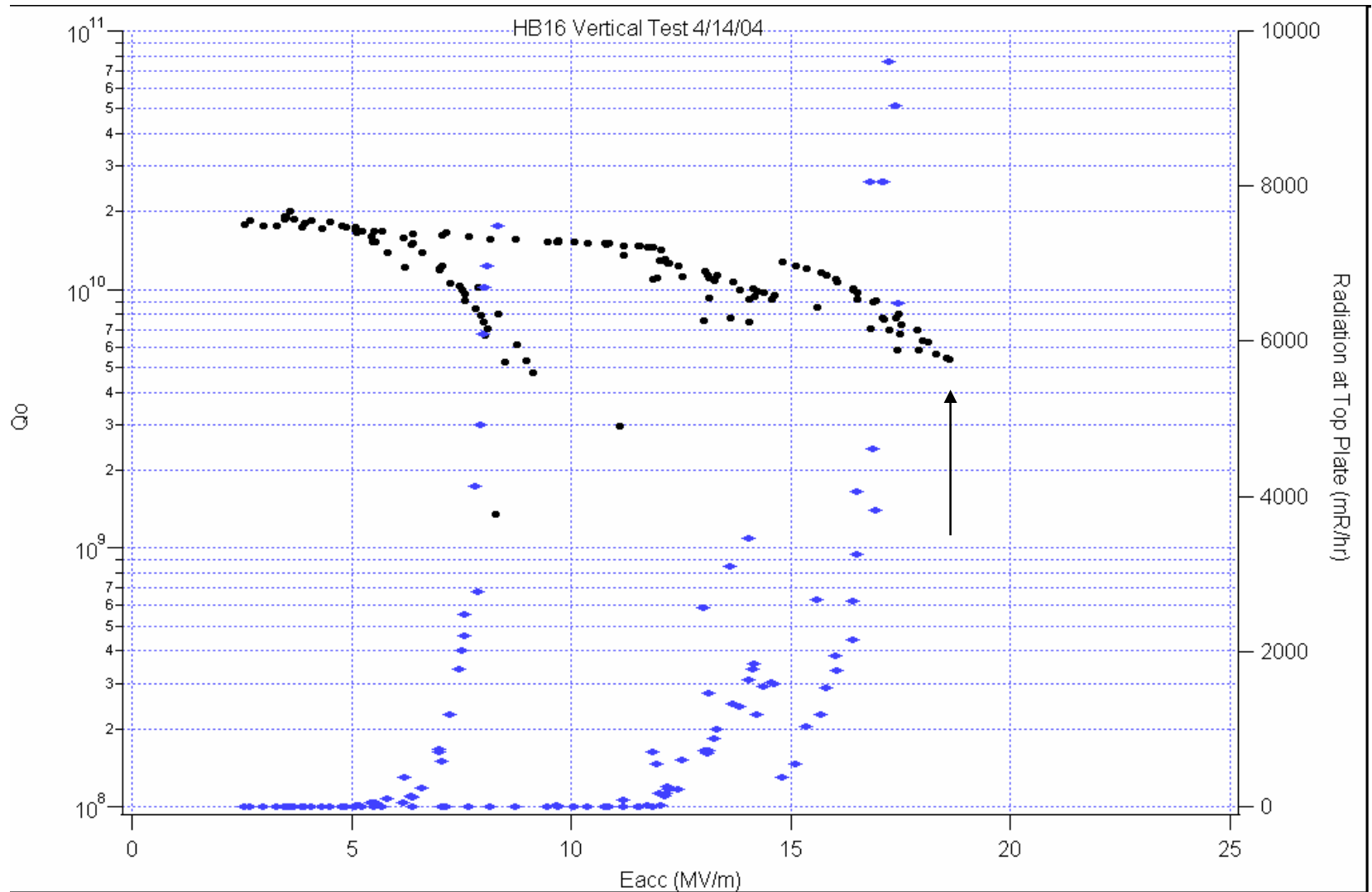
SNS HB Production

- High Beta Cavities (48)

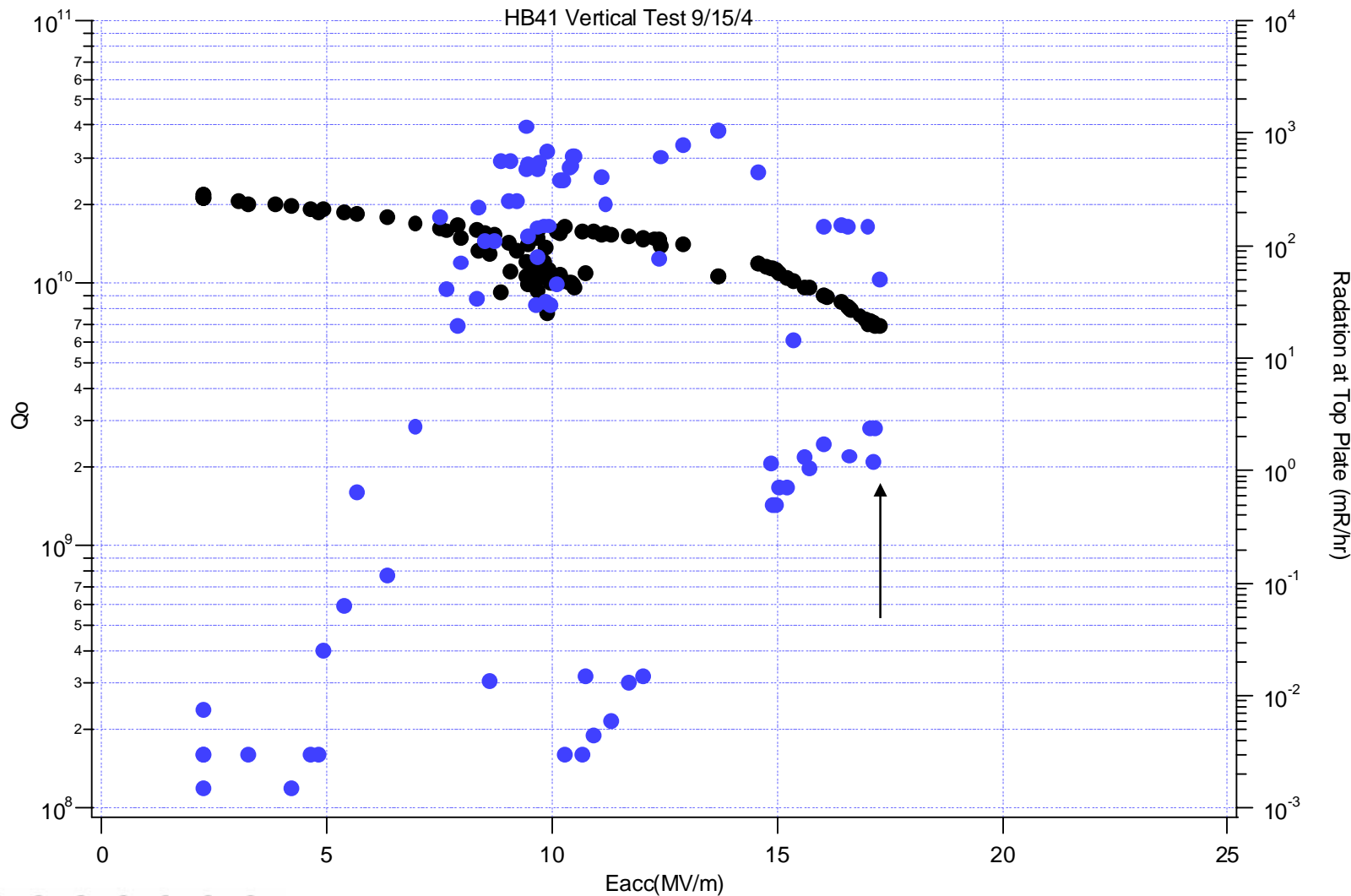
- Beta = 0.81, 805 MHz
- $E_{pk}/E_{acc} = 2.19$ $B_p/E_{acc} = 4.72$ mT/(MV/m)
- R/Q = 483 ohms
- VTA Qualifying Gradient - $E_{acc} > 16$ MV/m @ Q- 5E9, 2.1K



HB Vertical Test Data

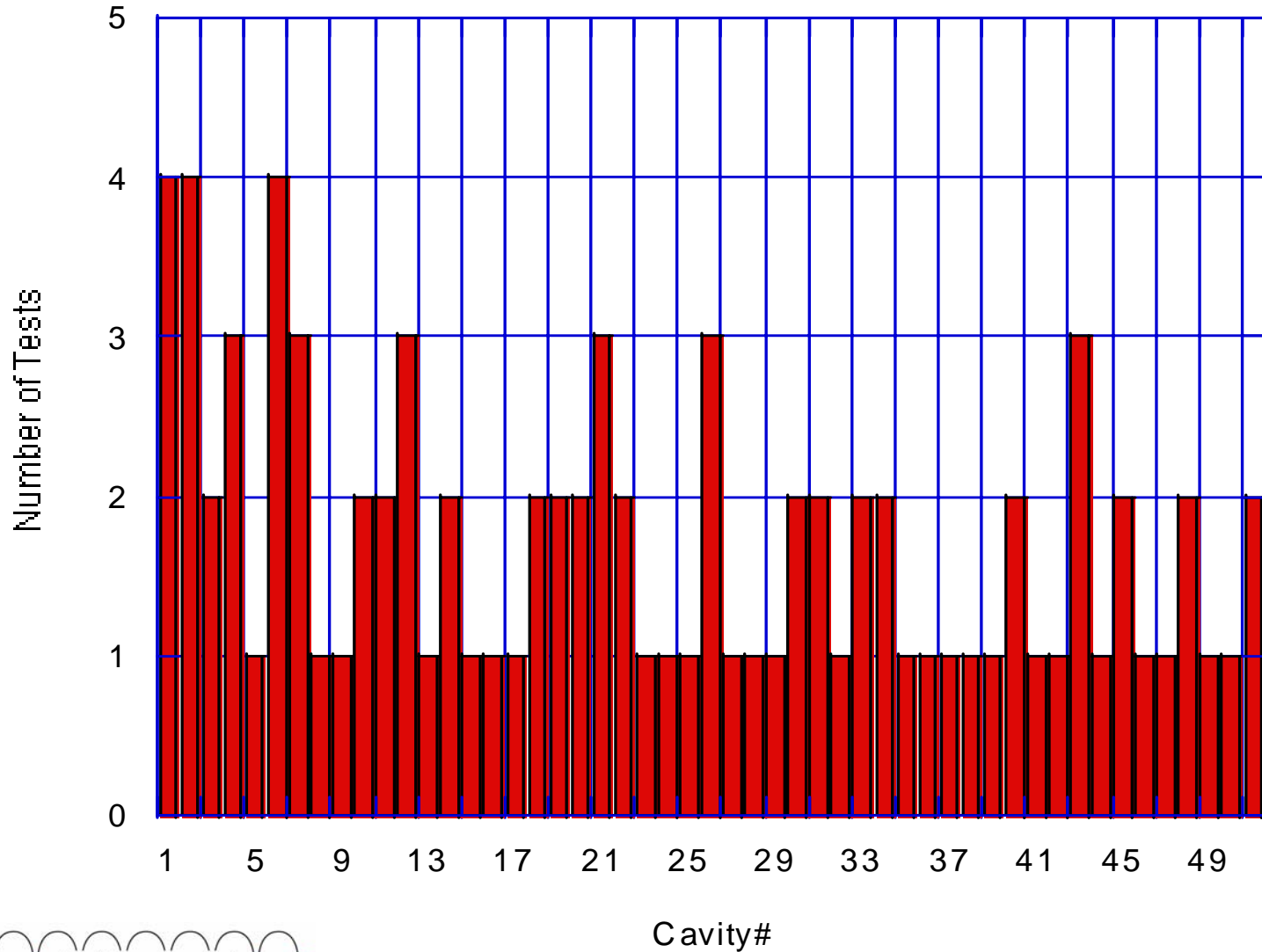


HB Vertical Test Data

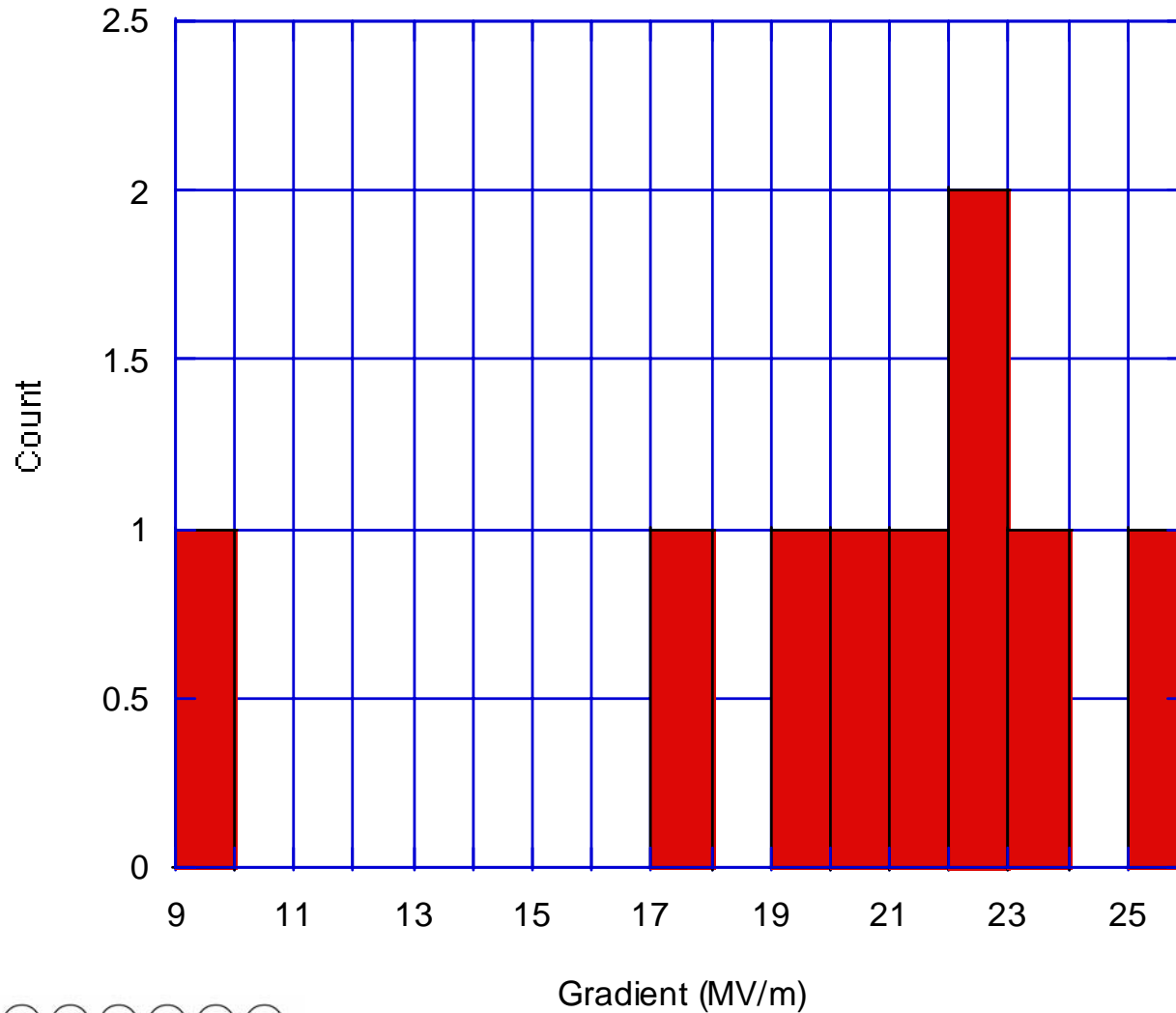


HB Qualification

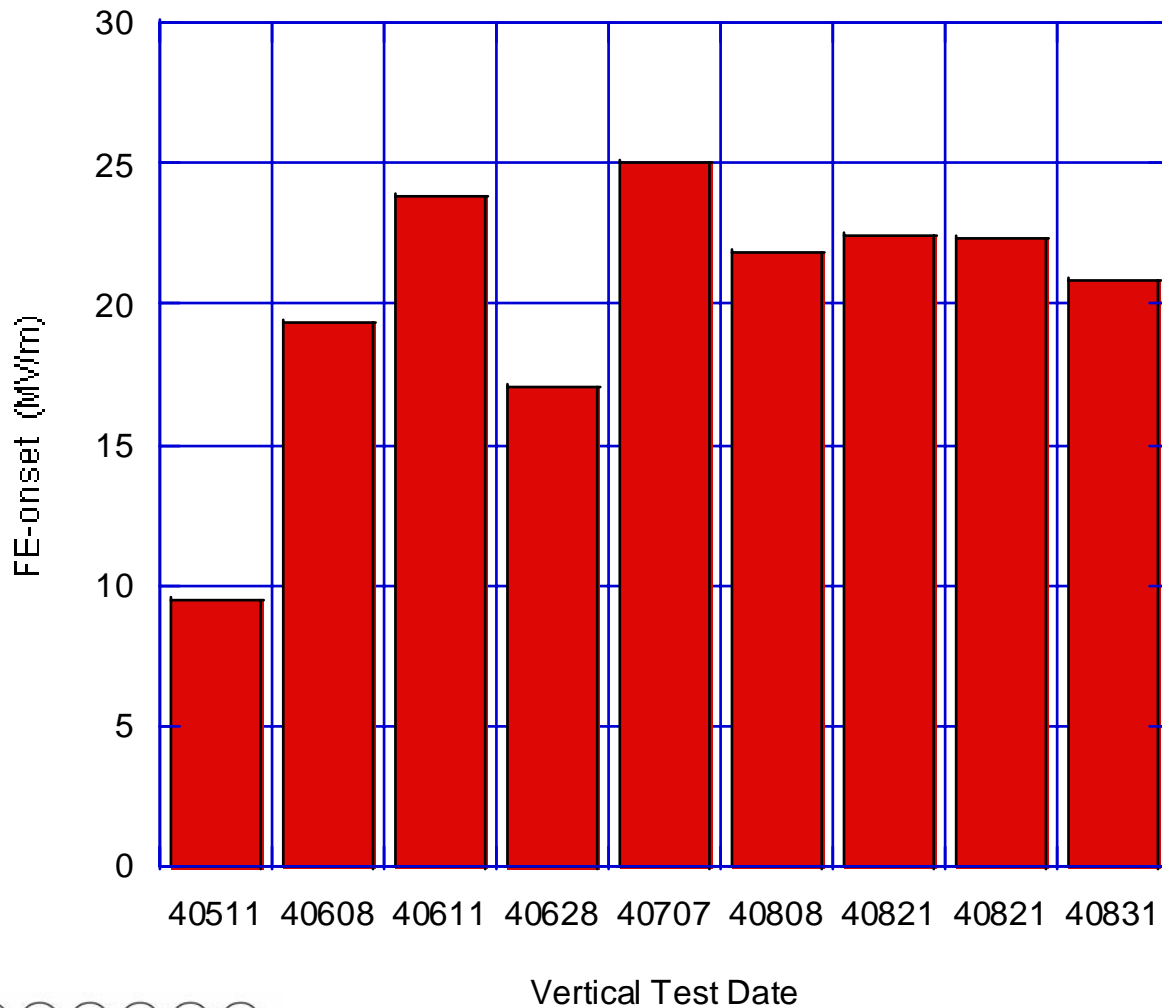
HB Vertical Tests



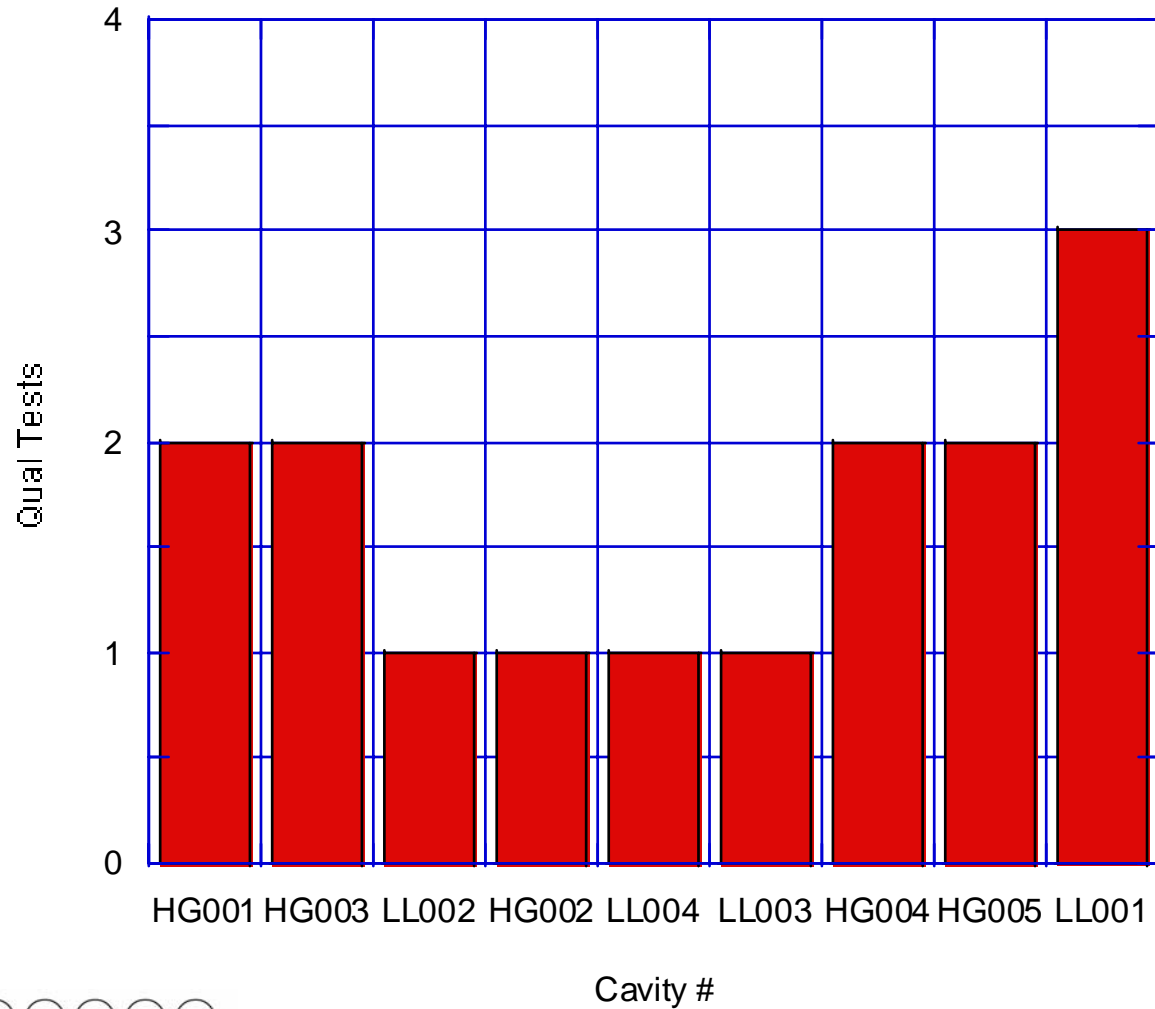
HG and LL Vertical Qualifying Performance FE-onset



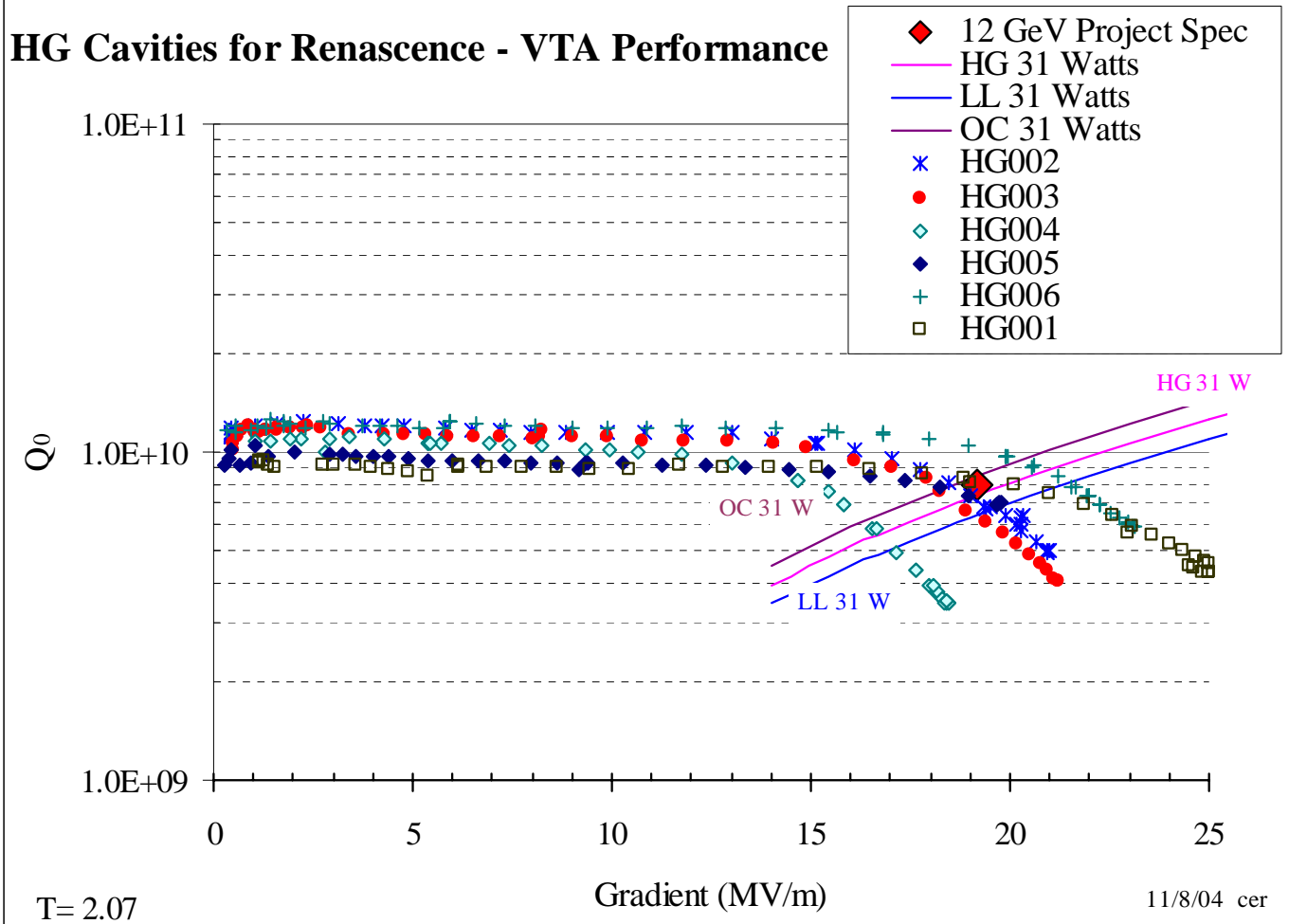
HG and LL FE-onset by Test Date



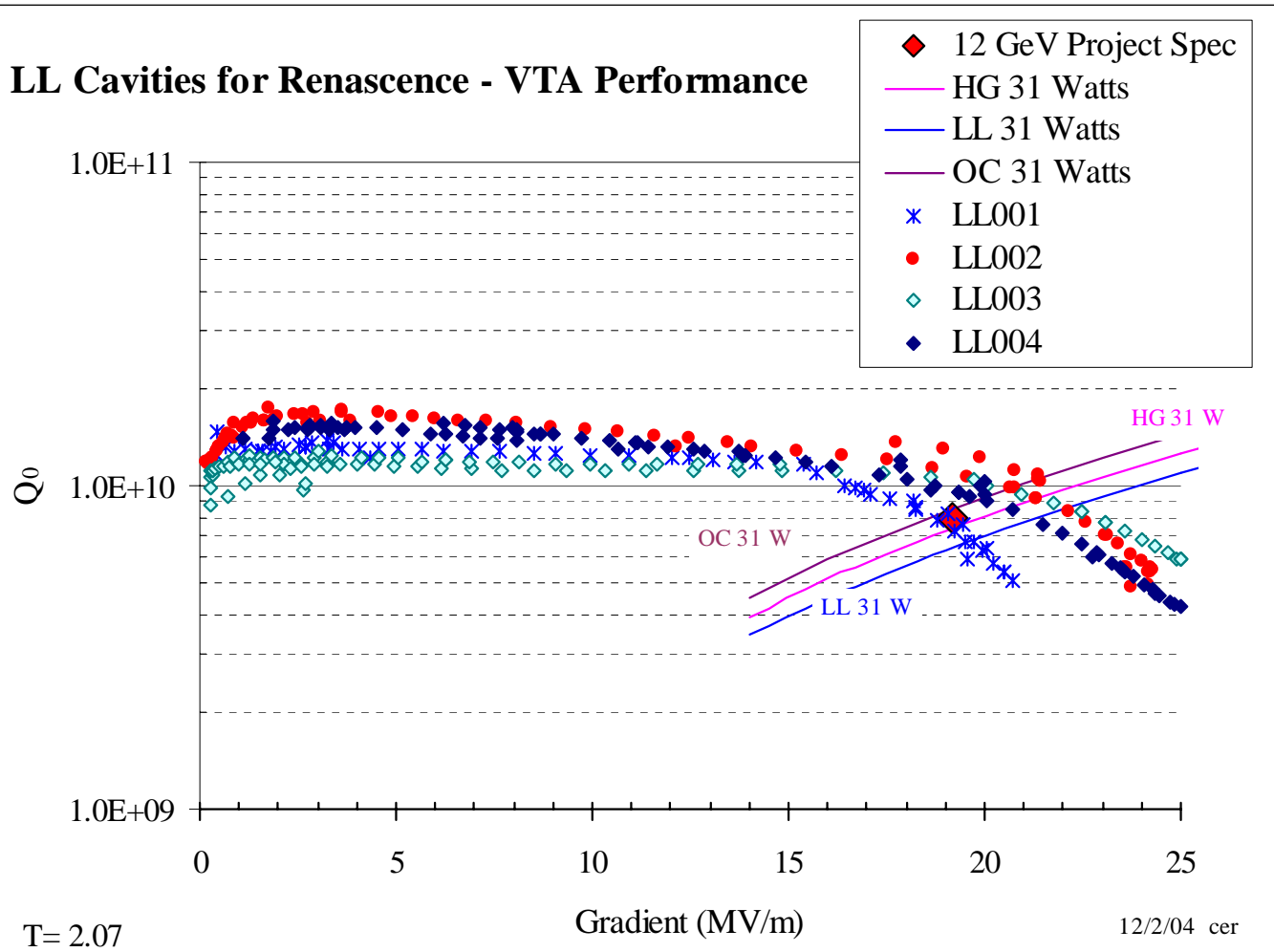
HG and LL Qualifying Tests



HG Cavities for Renascence - VTA Performance



LL Cavities for Renaissance - VTA Performance



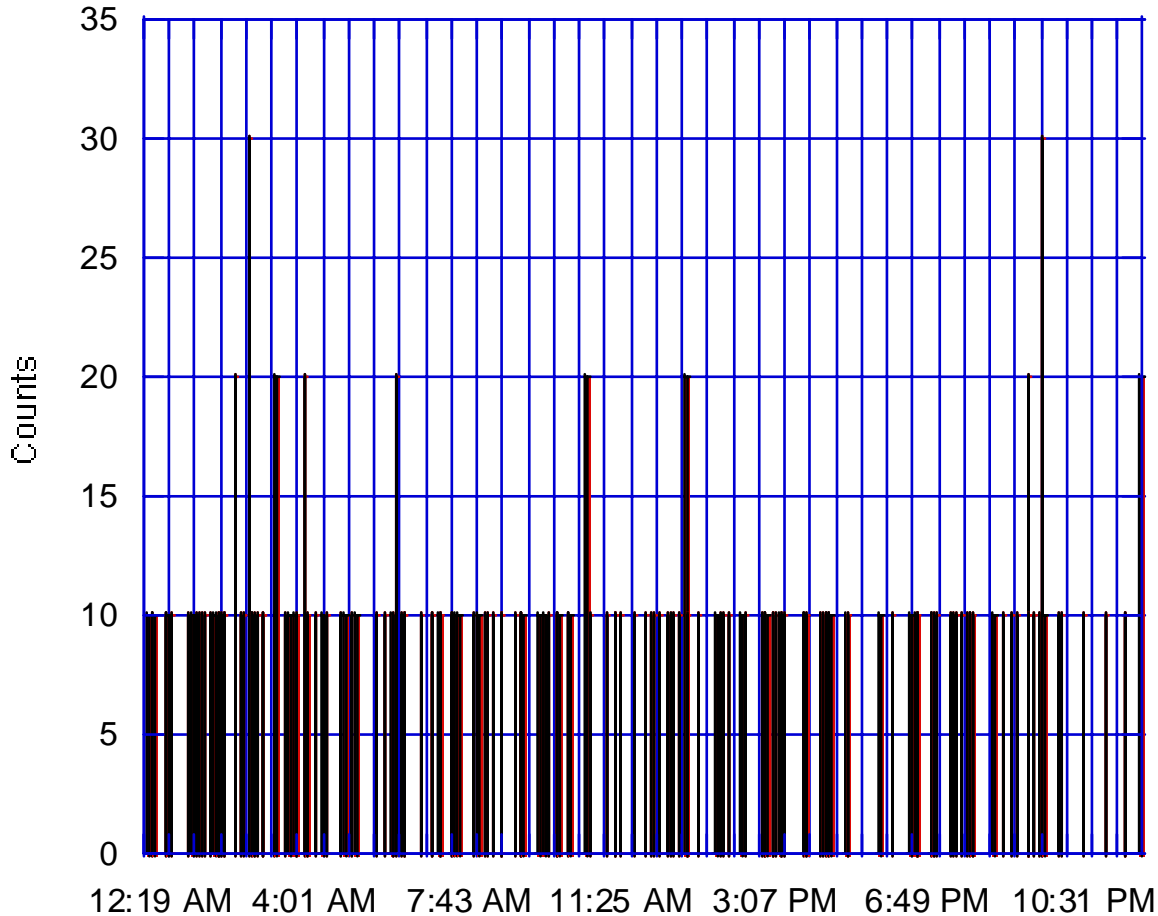
Data from LL and HG string assembly

- Cleanroom particulate counts (constant monitoring)
- Final part cleaning (data summary)
- Assembly particle monitoring
- Logging of personnel entering and leaving cleanroom
- Entry, exit and operation protocols

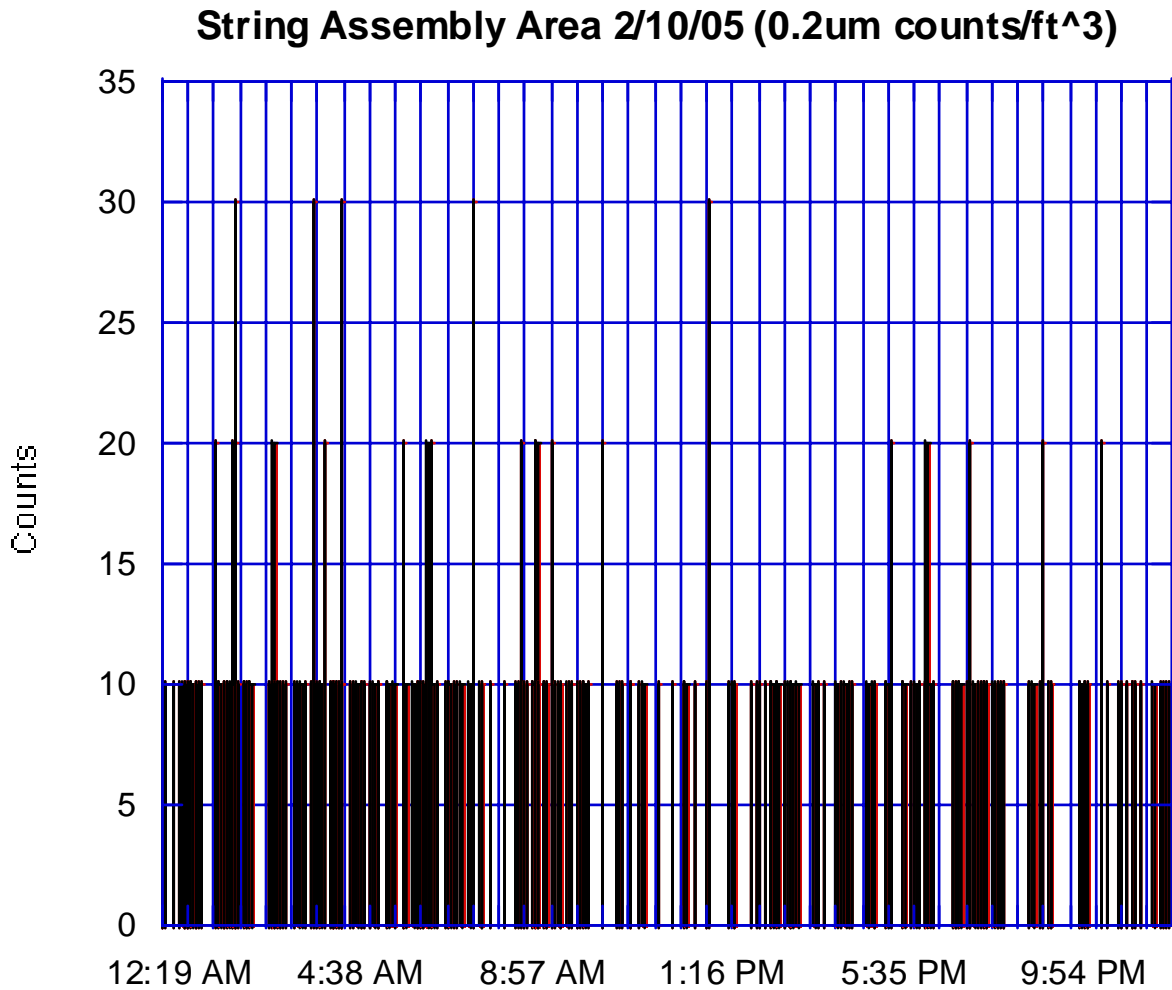


Cleanroom particulates

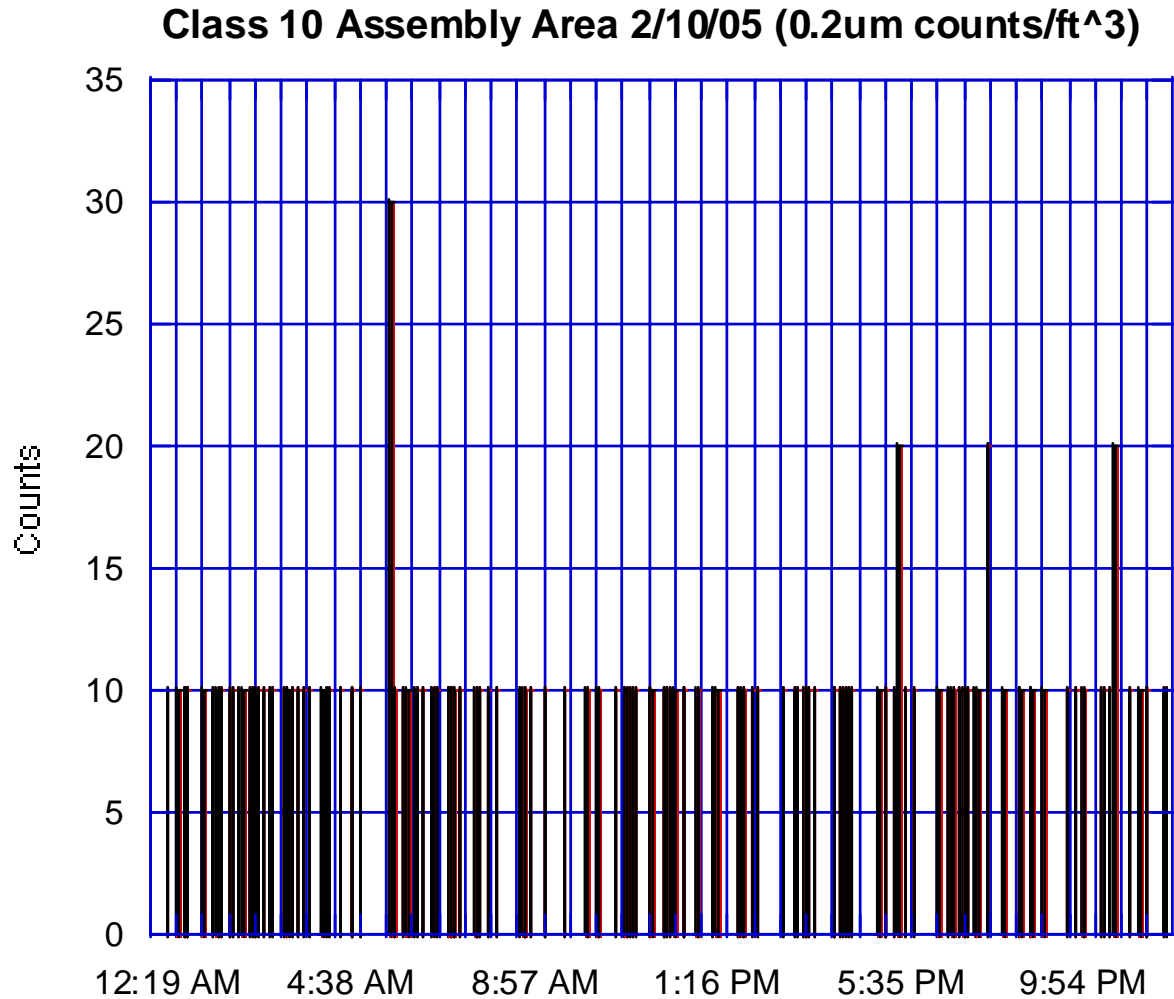
HPR Area 2/10/05 (0.2um counts/ft³)



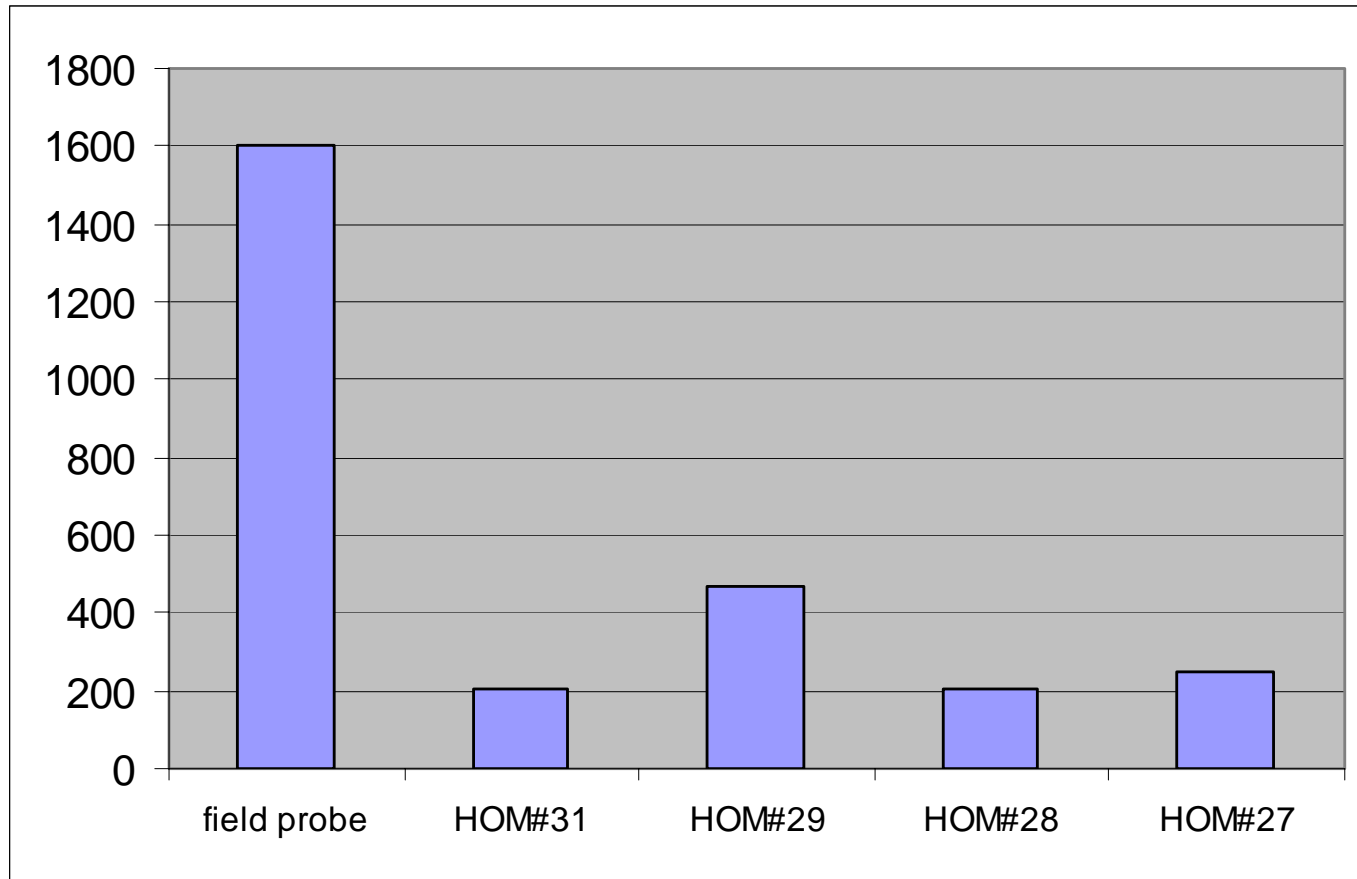
Cleanroom Particulates



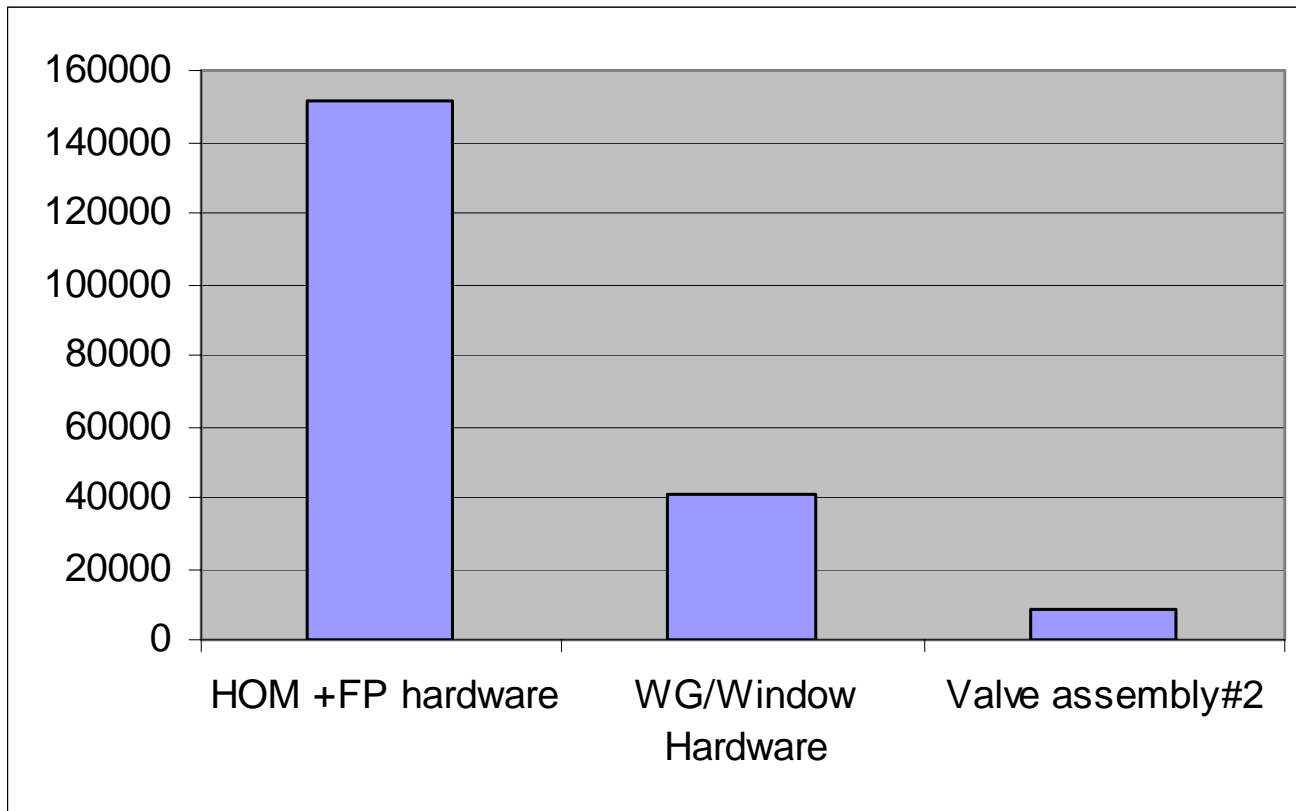
Cleanroom Particulates



Nitrogen Gas Final Cleaning (0.3um)



Nitrogen Gas Final Cleaning (0.3um)



String Assembly Monitoring

