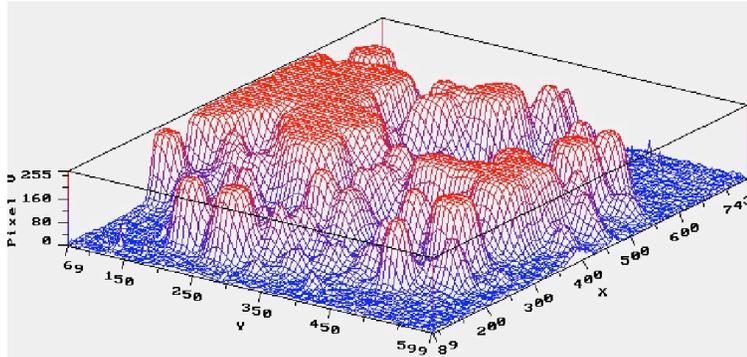


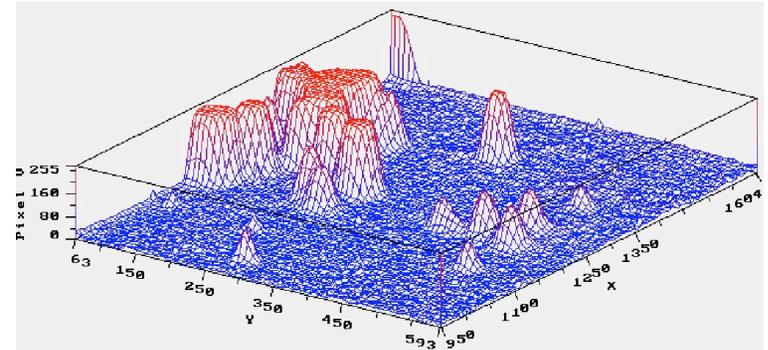
Individual emitter strengths as a function of E field

- Emitter intensity as a function of field, in MV/m, from polaroids.

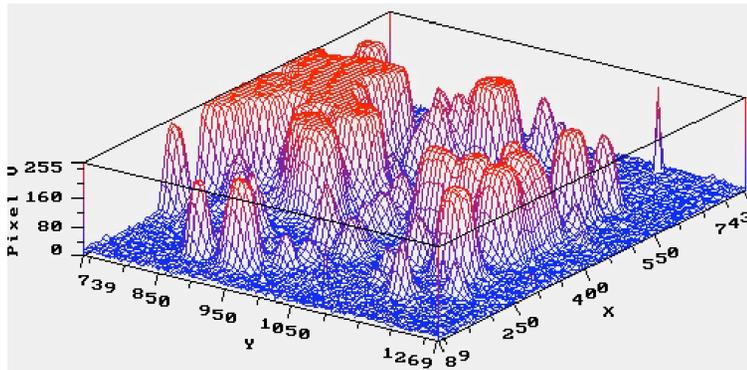
18.0



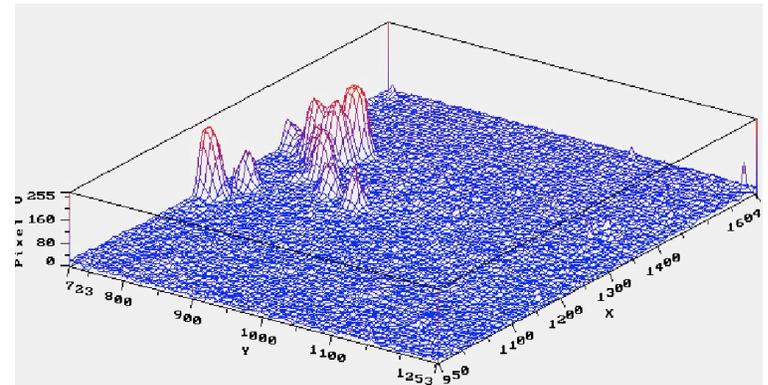
13.5



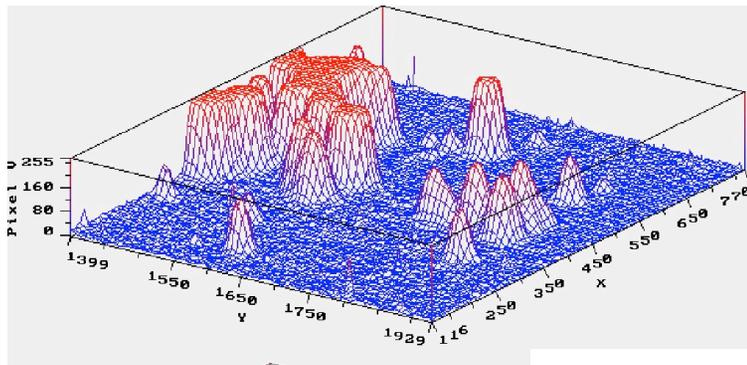
16.5



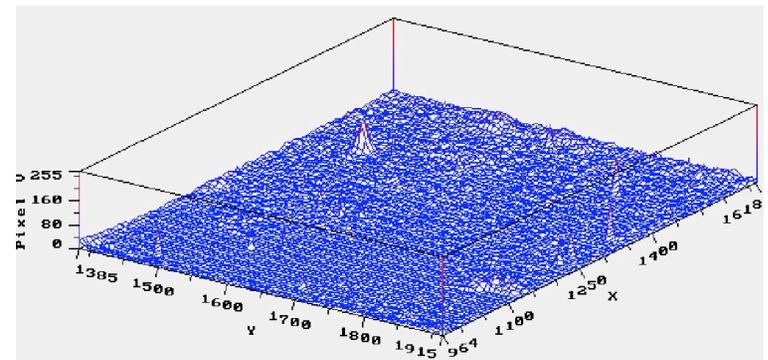
12.0



15.0

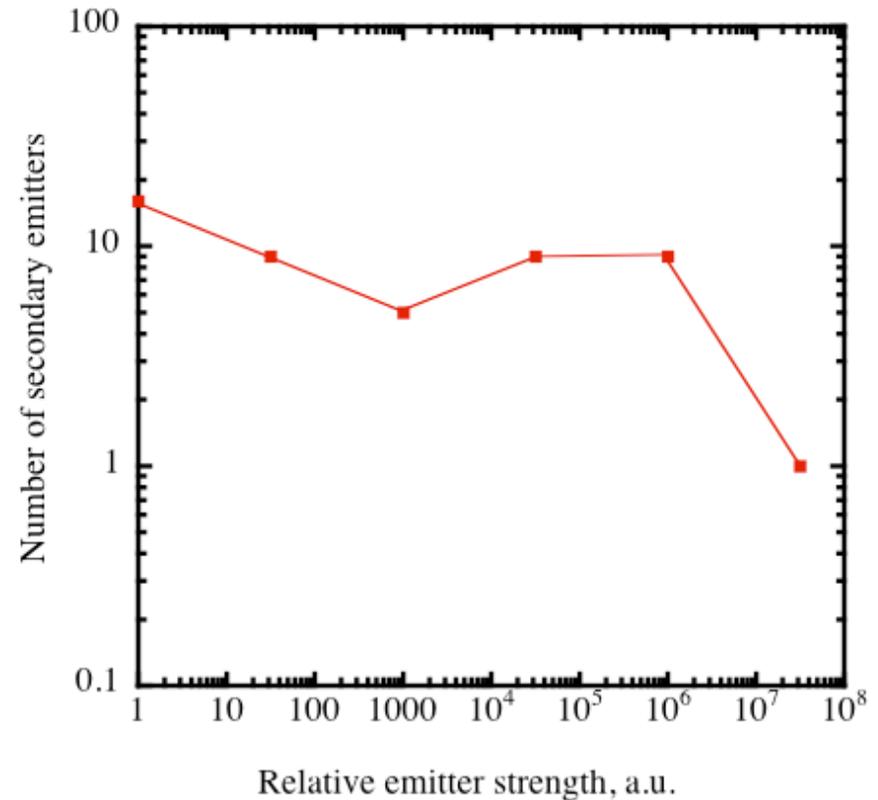
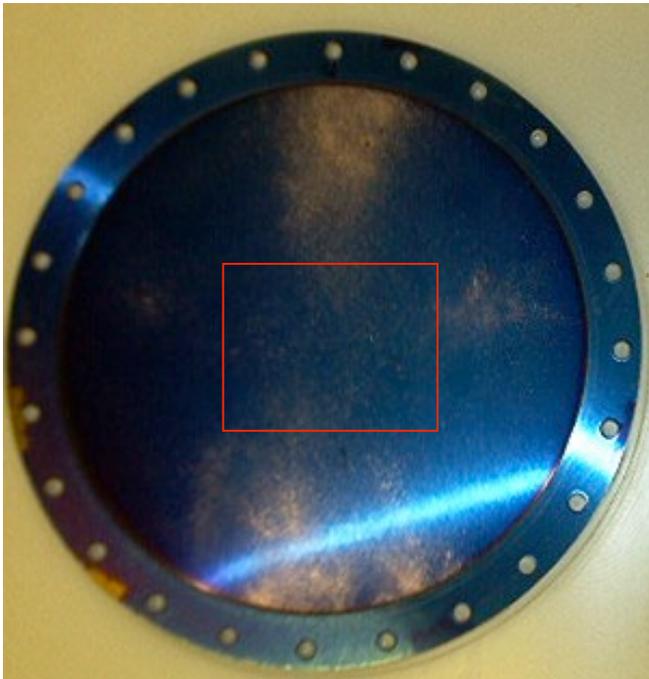


10.5



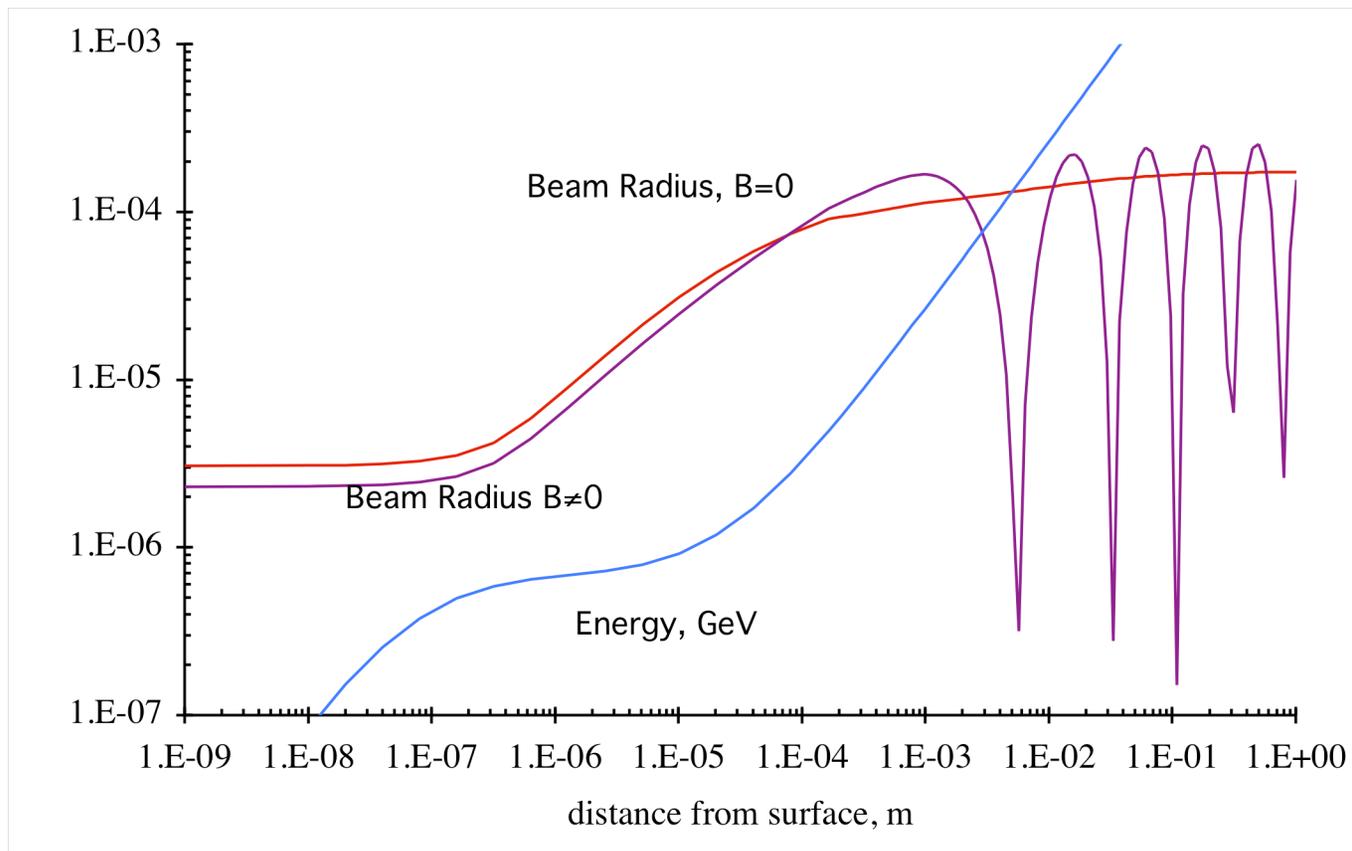
These are secondary emitters.

- These emitters are copper splashes deposited on the undamaged Be window.
- The spectrum of these emitters shows a huge variation in strength.
- Only a tiny fraction of the copper fragments emit measurable currents.
- The area seen in previous slide.
Many spots, few emitters.



Conditioning the 201 MHz cavity in a B Field will show new problems.

- During operation everything should be all right because field emission will be small.
- There can, however, be **very high power densities** on interior surfaces during aggressive conditioning. We have to be careful to run with magnetic fields that do not focus cusps of these beamlets on the opposite wall of the cavity. We can look at these effects with the 805 pillbox, and maybe small test assemblies.



A simple test cell may be useful for looking at these beams.

- We have a hard time looking at individual FE beams in a cavity because we cannot access the surface without a few week shutdown.
- It isn't clear how much of a problem cusps in these beams will be, but this system should be able to measure them with good precision and fast turnaround, without impacting the rest of the rf program.

