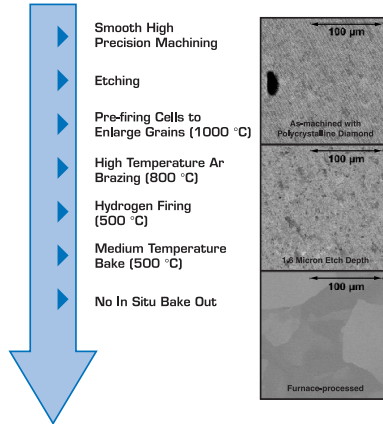


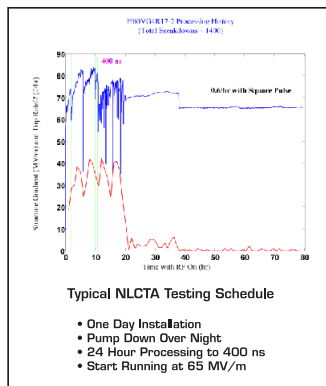
## Structure Processing

Careful surface treatment during fabrication is the key for fast processing and good performance  
Fast turn-around of accelerating structures  
Potential for higher gradients at shorter pulse length

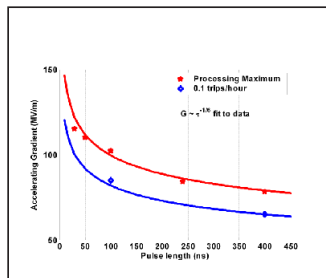
### Surface Treatment at FNAL During Production



### Extremely Fast Processing of New Structures



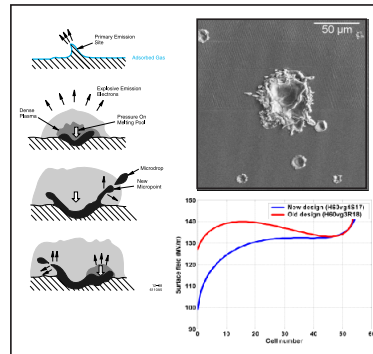
### Potential for Higher Gradient at Shorter Pulses



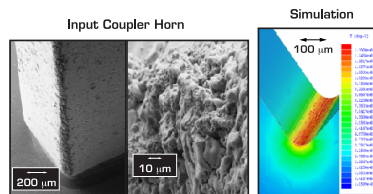
## RF-breakdown in a Nutshell

Very fast dissipation of stored RF energy  
High electric surface fields leads to explosive electron emission  
High magnetic surface fields leads to RF pulse heating  
Material and machining defects

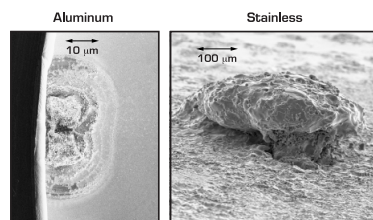
### Explosive Electron Emission



### RF Pulse Heating



### Localized Defects and Particles



Quality Control and Careful Handling Needed