a factor of  $\sim 1/(2)^{1/2}$ , however recently this has accelerated, both in the magnitude of the change in minimum bin size and the

## III. APPROACH TO CONTAMINATION IN PURION IMPLANTERS

Designing in particle mitigation solutions for contamination control is well understood and in deployment in most ion implanters. For example, all Axcelis high current ion implanters have utilized high voltage shields which detect the early onset of arc formation and act to interrupt the HV supplies to allow the arc to dissipate before high levels of particles can be generated. However, in order to meet the aggressive specifications being demanded