

Abstract Submitted
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Multipactor Induced Flashover in HPM Waveguides CHRIS FICHTL, KEITH CARTWRIGHT, AFRL, ICEPIC TEAM — Modeling multipactor discharges is important for understanding window breakdown and parasitic plasma discharges in high power microwave tubes. This poster makes use of the Secondary Electron Emission (SEE) codes that have been incorporated into the ICEPIC (Improved Concurrent Electromagnetic Particle-in-Cell) code to study these phenomena. A 2-dimensional waveguide simulation looking at the formation of multipactor discharge and its role in causing flashover as a function of waveguide size and electric field will be presented. The area scaling of the minimum electric field that result in a discharge in PIC simulations will be compared to the commonly assumed scaling of $E \propto \frac{1}{\sqrt{A}}$.

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