「小型加速器による小型高輝度X線源とイメージング基盤技術開発」

2015.5.14 全体会議　京都大学報告

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IPAC15の発表より

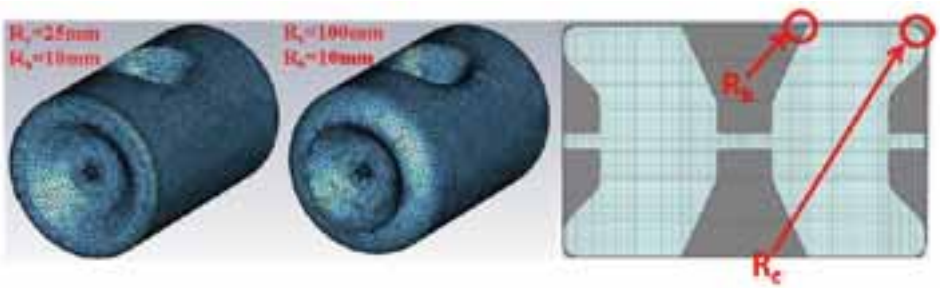

Figure 1: Examples of optimized cavity geometries. Both have optimized geometry and similar RF characteristics, but a detailed design (i.e., a corner radius of the end-plate in this example) is different from each other.

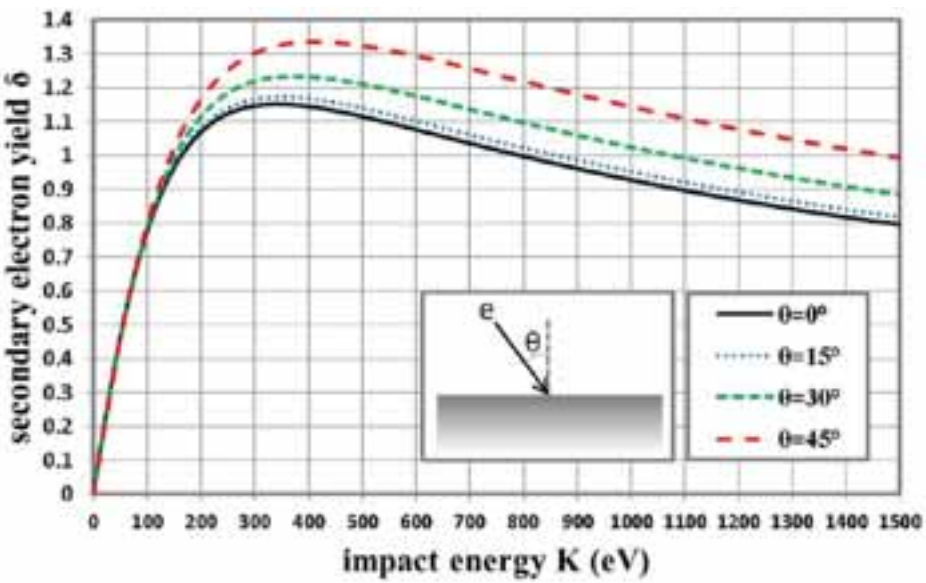

Figure 2: Furman model SEY as functions of impact energy. Each curve corresponds to an impact angle.

MULTIPACTOR SIMULATIONS IN 325MHZ SUPERCONDUCTING SPOKE CAVITY FOR AN ELECTRON ACCELERATOR

WEPMA053

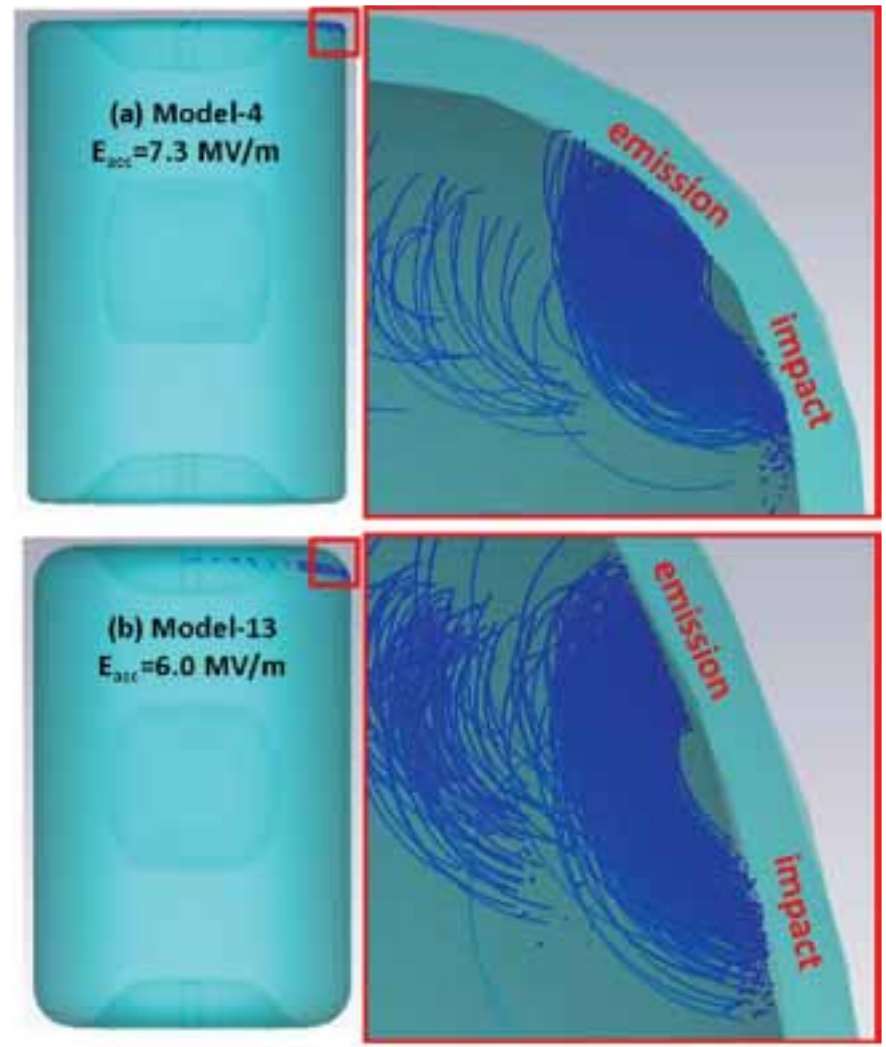

Figure 3: Examples of MP electron trajectories on end-plate corners.

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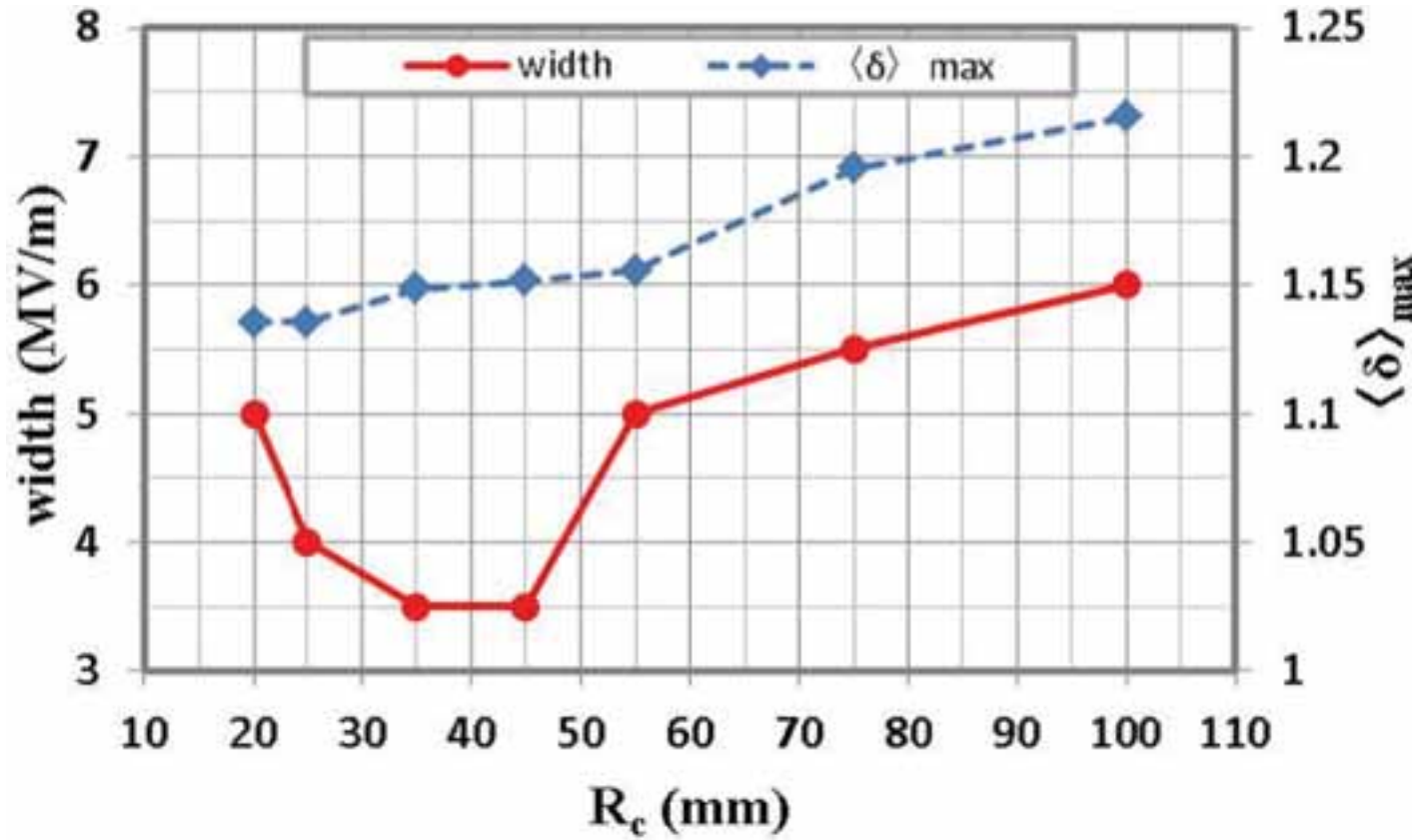
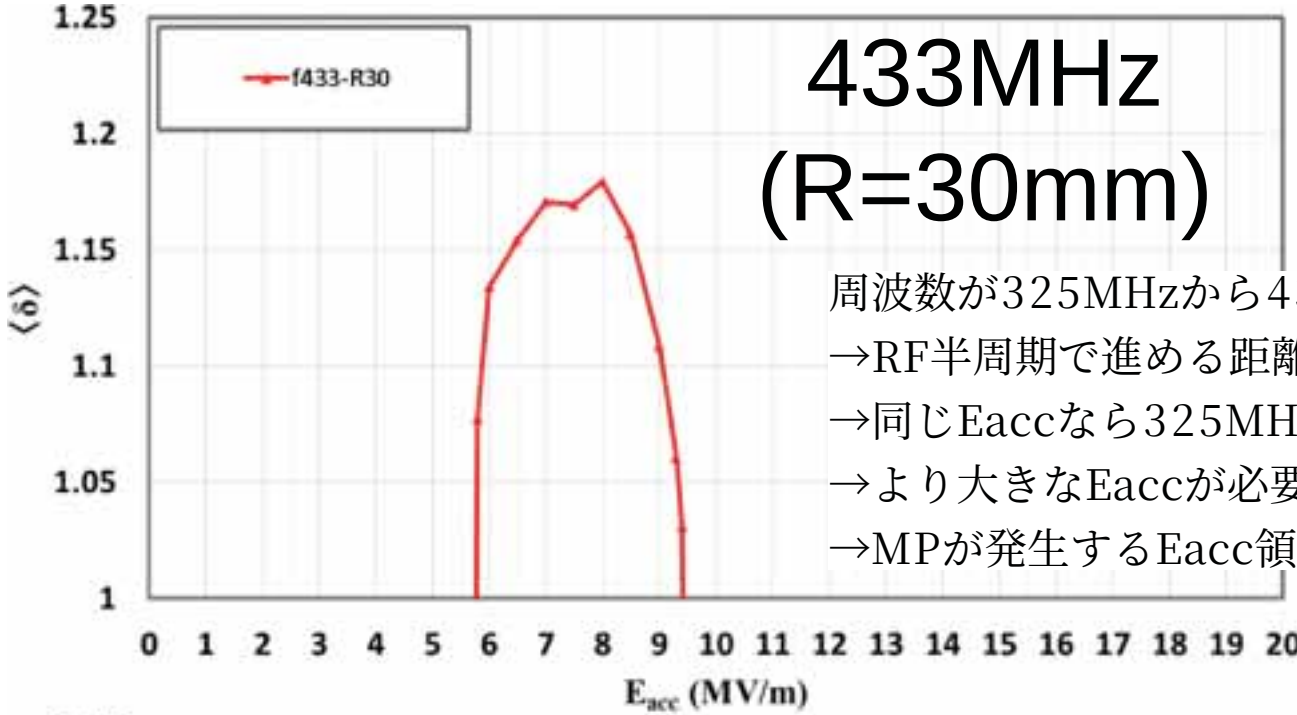


Figure 5: Width of range of E_{acc} inducing MP and the maximum value of $\langle\delta\rangle$ as functions of the corner radius of the end-plate, R_c, for the case that MP occurs near the end-plate corner.

433MHz (R=30mm)

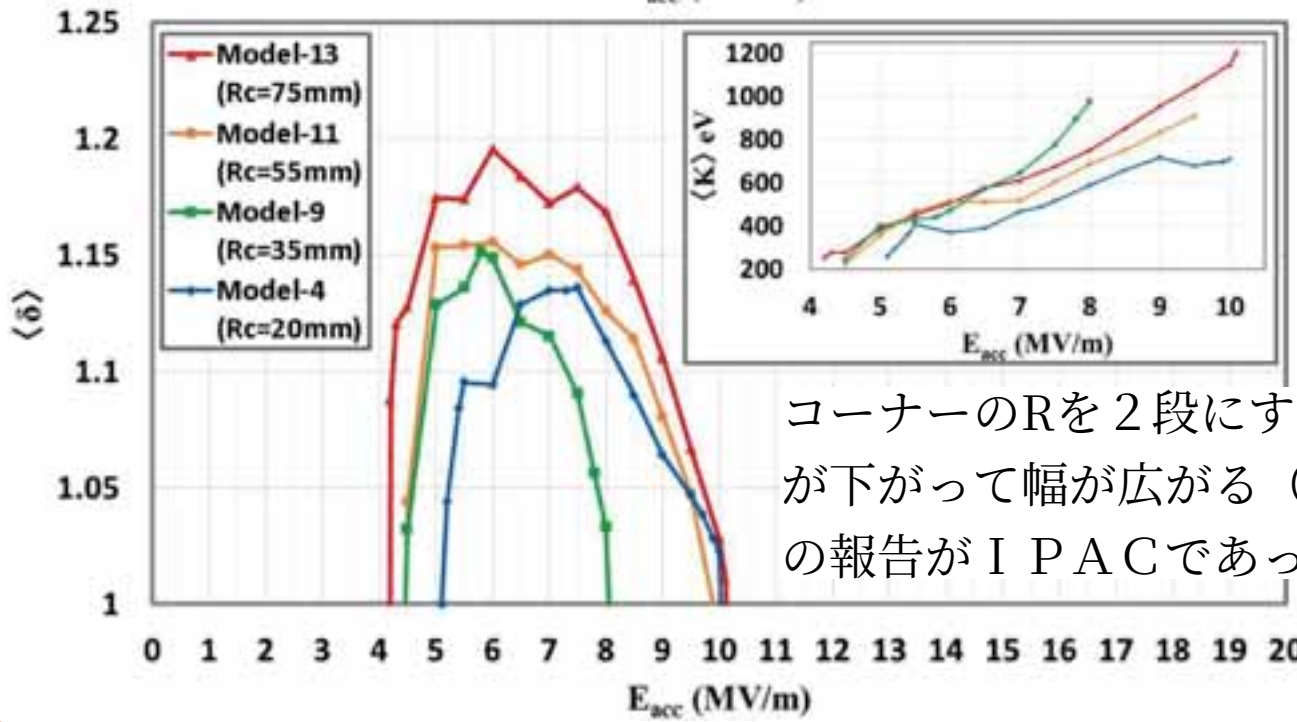
2015.5.11 久保

30x433/325 =40mm相当



周波数が325MHzから433MHzに増加
→RF半周期で進める距離（電場を感じる区間）が減少
→同じEaccなら325MHzより衝突エネルギーが小
→より大きなEaccが必要
→MPが発生するEacc領域が右にシフト

325MHz (Fig.4)



コーナーのRを２段にすると、マルチパクタのピークが下がって幅が広がる（ふたつの山が重なった形）との報告がＩＰＡＣであった。（ロマノフさん）