

XFEL-based $\gamma\gamma$ Collider Higgs Factory – 1st Look at Detector Backgrounds

Tim Barklow

XFEL $\gamma\gamma$ Collider Meeting

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ILC beam beam background dominated by incoherent e^+e^- pairs

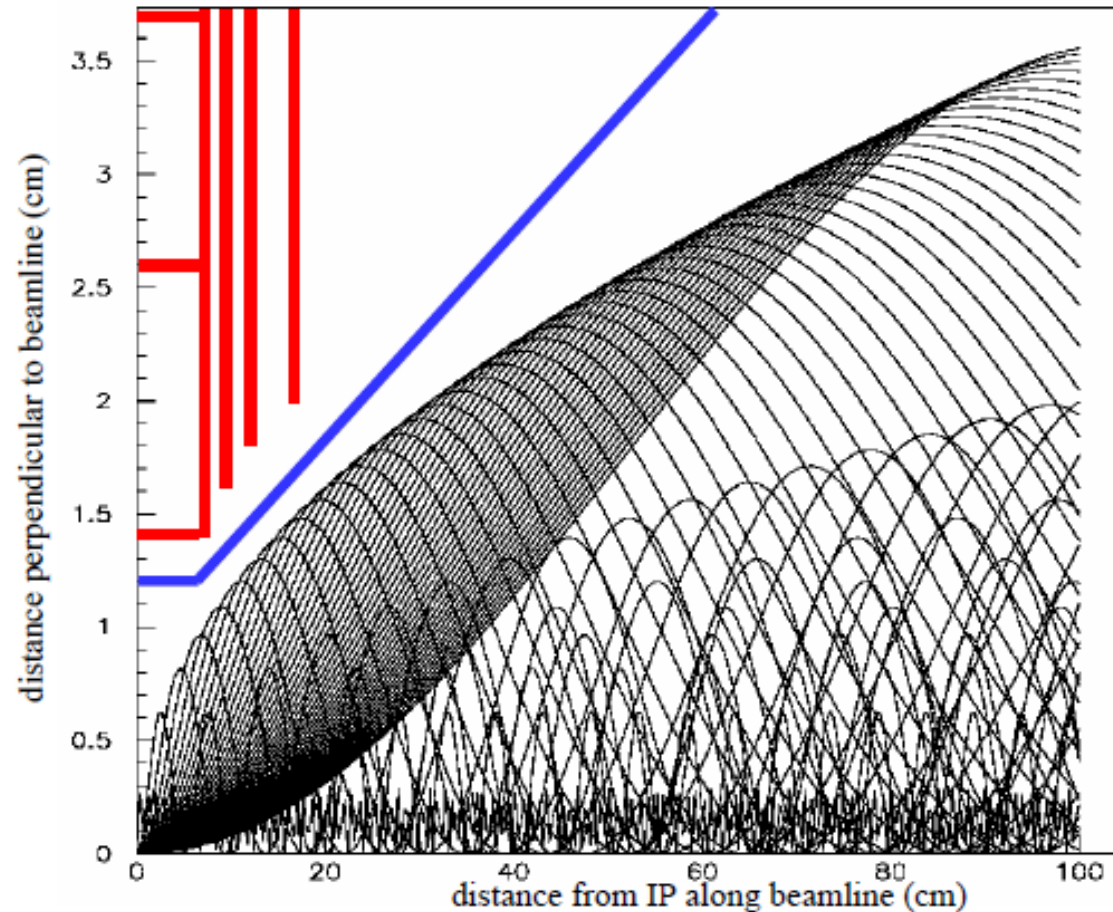
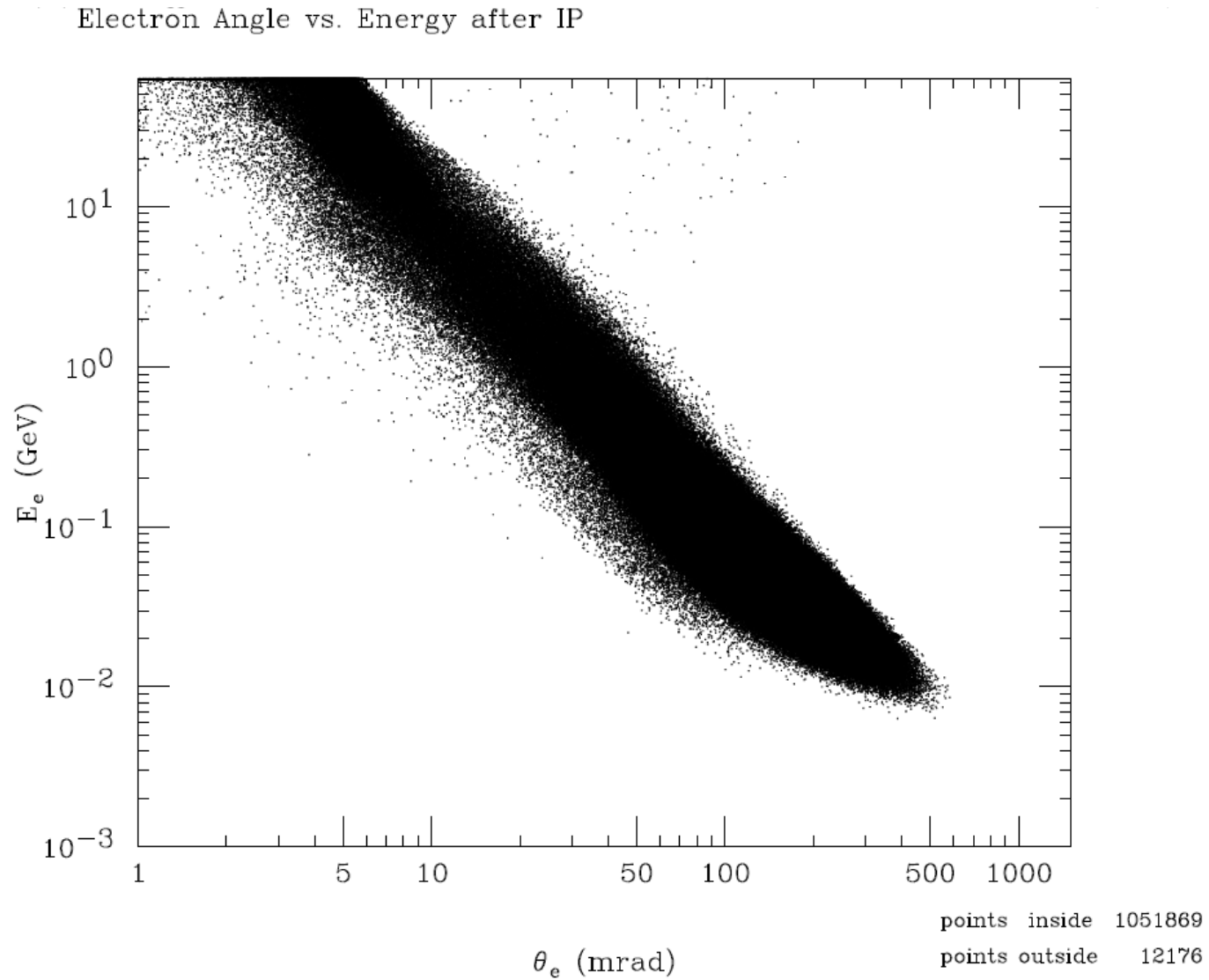
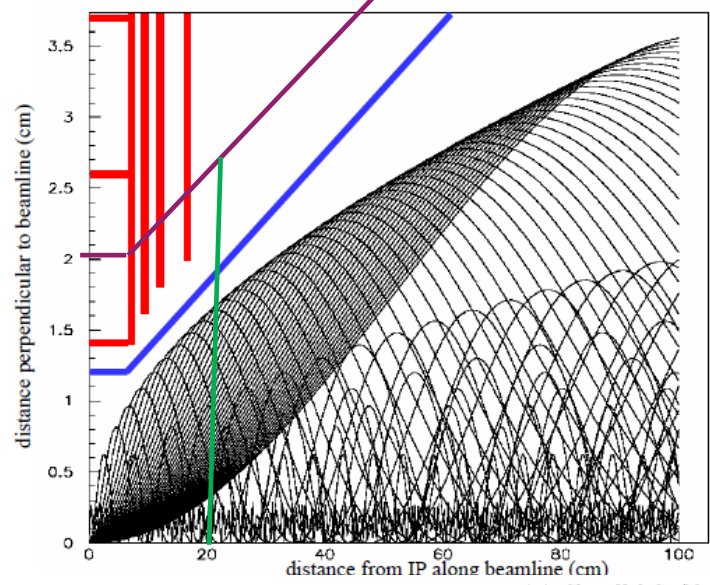


Figure 23 12mm beam pipe at the interaction point with VXD and maximum envelope of the e^+e^- pair backgrounds in a 5 Tesla field.

XCC background dominated by low energy e^- & γ from Compton IP

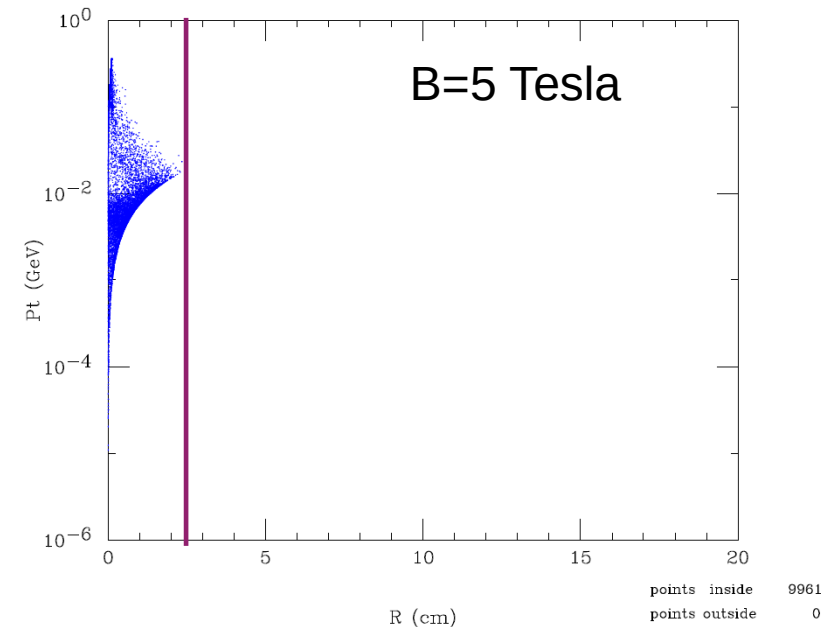
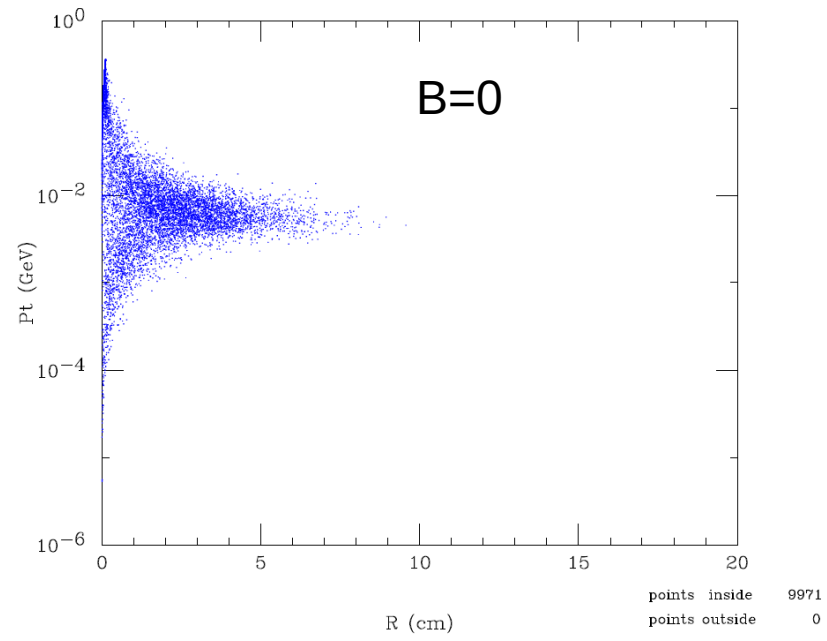


XCC background dominated by low energy e- & γ from Compton IP

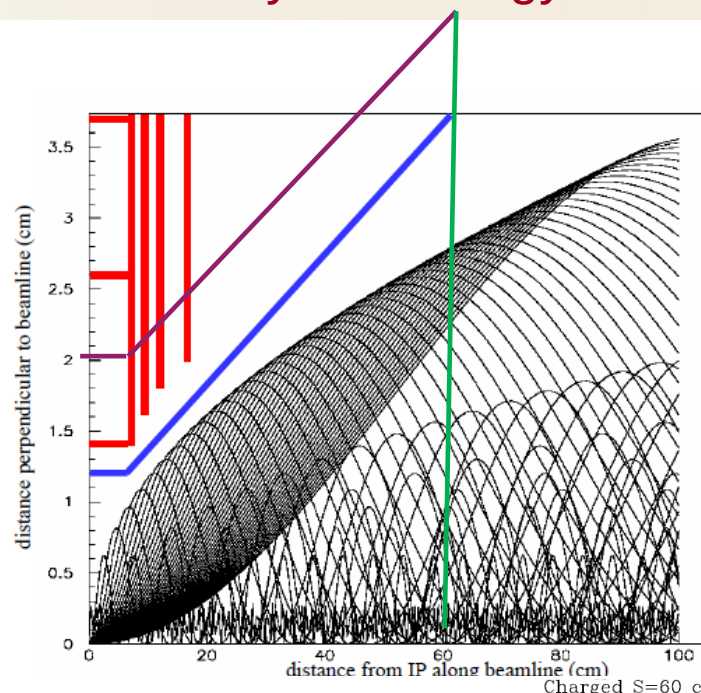


Charged S=20 cm Pt vs R

Charged S=20 cm Pt vs R

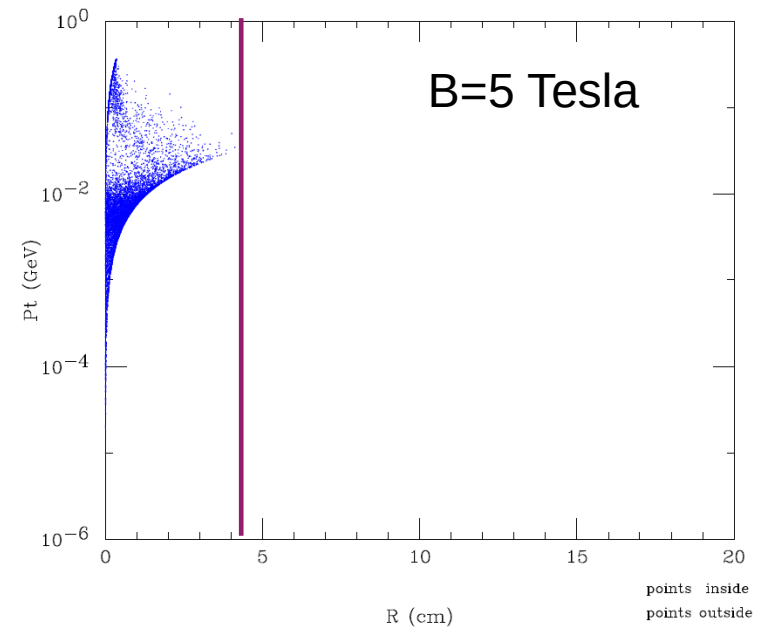
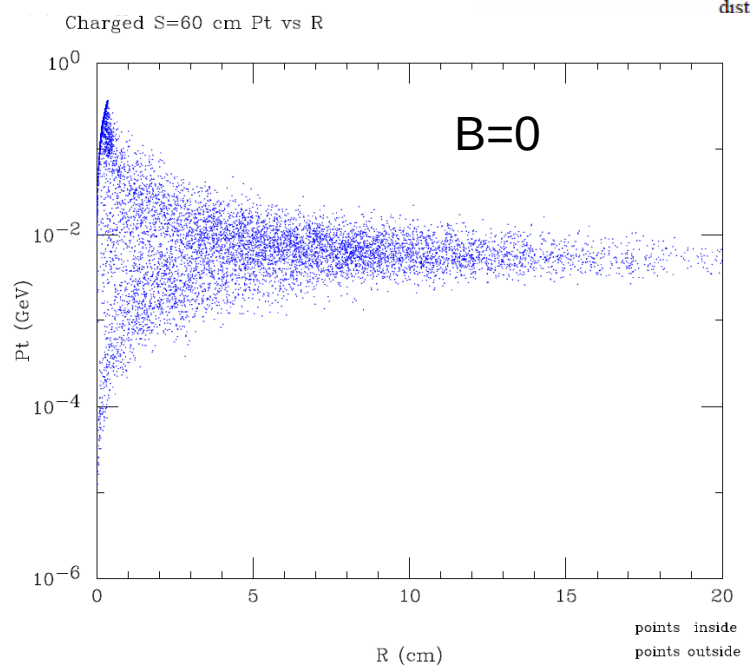


XCC background dominated by low energy e^- & γ from Compton IP



Charged particles controlled by 5 Tesla Solenoid

Inner radius vertex det increased from 1.5 cm to 2 or 2.5 cm if solenoid still 5 Tesla



XCC background -- problem with photon background

