Update on Geometry Extension

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Geometry

- Grant 3 - $e^\pm$, $\pi$ backgrounds
  - LCD Small Detector $\pm 20$ m beam line
  - Complete extraction line
- Fluka98 - neutron background
  - LCD Small Detector + Complete extraction line ($E > 0$ only)

Grant 3 Geometry Extended

LCD Small Detector

+ Complete extraction line

$\pm 200$ m of incoming beam line

Applications

- Synchrotron radiation
- Off-energy beam hitting beam pipe or magnets
- Beam gas scattering
LCD Small Detector in GEANT3
Mask and Bear-n-line Optics in GEANT3

$e^+ / e^- \text{ pairs (E}>10 \text{ GeV}) \text{ from beam-beam int.}$
Geant 3 Geometry
Synchrotron radiation Stan H.

X vs S for 8.00 σ * 20. μrad

Y vs S for 40.00 σ * 27. μrad
Beam transport in Geant 3

Vertical plane
Synchrotron radiation from disrupted beam

$E_e > 450 \text{ GeV}$
Synchrotron radiation from disrupted beam

$E_\gamma < 250 \text{ GeV}$
Summary

- Grant3 Geometry has been extended to $1 \leq l < 200$ m.
- Beam related backgrounds can be studied.
- Synchrotron radiation from disrupted beam is not a problem.