Origin of secondary photons that reach plane at $z = 580\,\text{cm}$ (Feb’03 collimator)

Significant generation of secondary photons at second collimator.
Neven’s improved March 2003 collimator

Collimator 1

Collimator 2

Much reduced flux of secondary photons – produced outside envelope of electron beam
Path through the magnet (pre-May 2003)
Mock up of mini-toroid

- Place field in gap between first and second collimators
- Use the same field map as for the main toroidal field
- For points inside the mini-toroid, scale (x, y, z) to corresponding points in the field map
- Reverse sign of field
Secondary photons
1% of main field

Secondary photons from other segments of collimator
5% of main field

Generation of secondary photons at collimator 2
Secondary photons

1% of main field

5% of main field