

# Geant 4 Examples

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## Example B2:

*This example simulated a simplified fixed target experiment*

### B2a

List of parameters modified in the example:

| Parameters   | Values                   |
|--------------|--------------------------|
| globalField  | 2.0 T                    |
| gun/energy   | 1.0 GeV                  |
| gun/particle | p                        |
| run/beamOn   | 1 (Fig. 1), 100 (Fig. 2) |

Table 1. Parameters modified example B2a

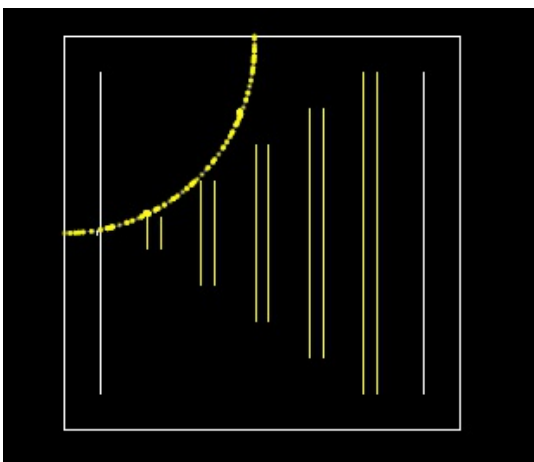


Figure 1. Side view of detector for 1 Event

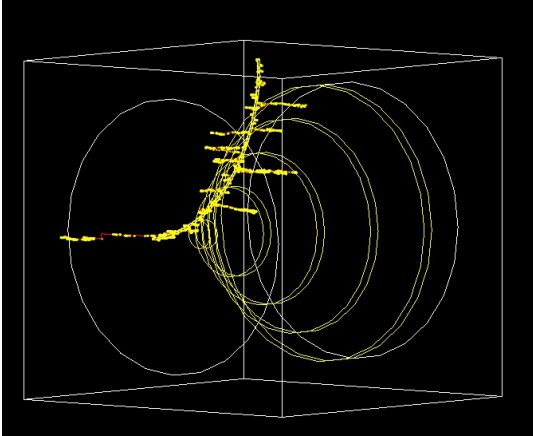


Figure 2. Side view of detector for 100 Events

## Example B3

*This example simulates schematically a positron emitted tomography system*

*Geometry definition:* Scintillating crystals are used for gamma detection. In this example, the crystals are described by a matrix and are circularly arranged to form a ring.

### B3a

| Parameters   | Values       |
|--------------|--------------|
| globalField  | off          |
| gun/energy   | 1.0 eV       |
| gun/particle | e+           |
| run/beamOn   | 100 (Fig. 3) |

Table 2. Parameters modified example B3a

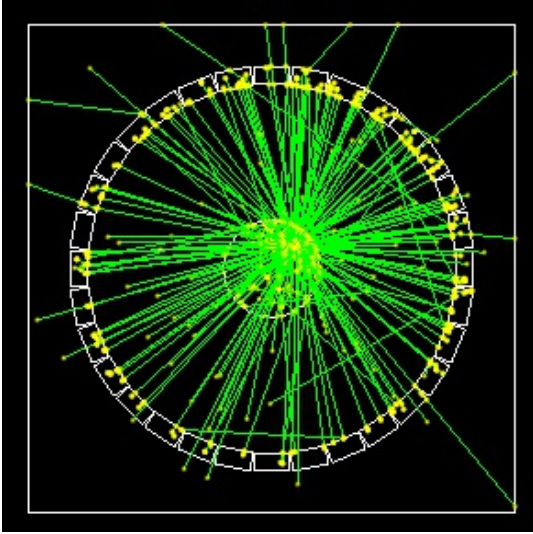


Figure 3. Front view of detector for 100 Events

The `output` obtained:

The run was 100 events ; Nb of 'good' e+ annihilations: 16 Total dose in patient : 1.25761  
picoGy