

RESULTS OF THE SPECT BENCHMARK

I. Energy spectra

I.1. Spectrum of the detected events

Number of emitted particles : 17,995,436

Number of detected counts from 20 to 190 keV : 35,852

I.2. Primary and scatter spectra of the detected events

Percentage of primary and scatter photons, as a function of the medium in which the last scatter event occurred, i.e.:

(number of scatter counts for the medium / number of total detected counts) * 100.

The medium called "Phantom" corresponds to the "Phantom" and "movsource" volumes.

Primary	Scatter				
	Phantom	Table	Collimator	Crystal	Backcompartment
32.7%	52.3%	3.3%	2.2%	8.3%	1.2%

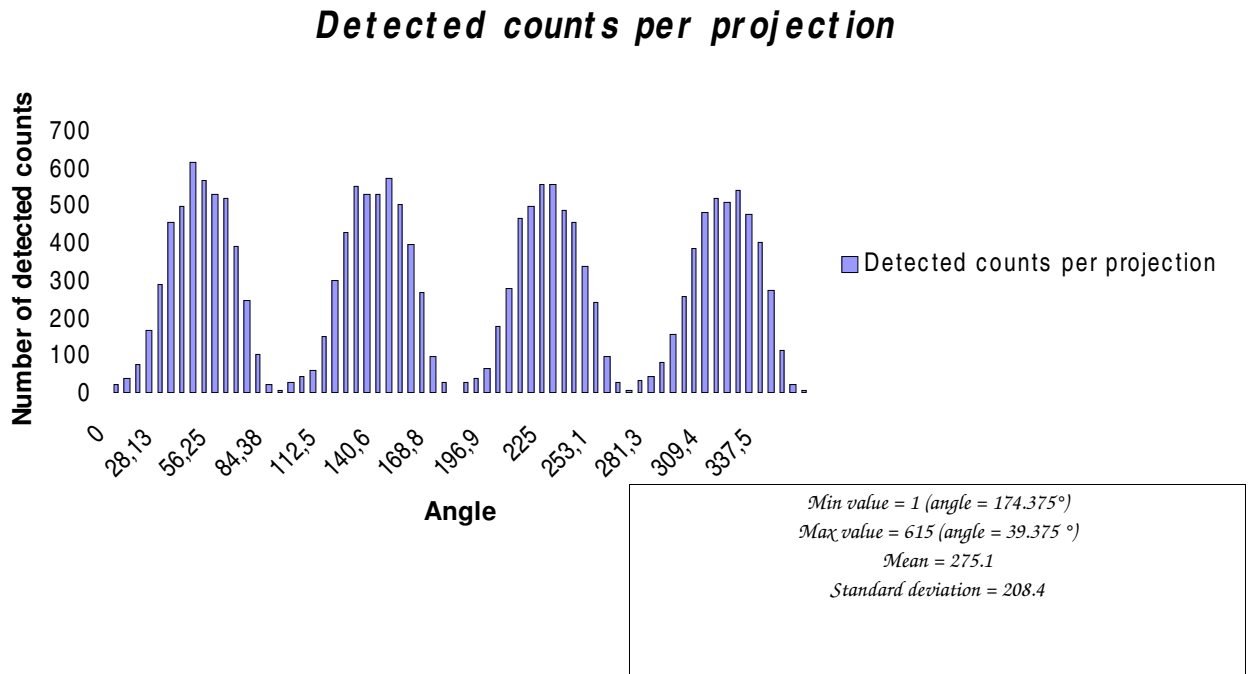
I.3. Scatter spectra of the detected events

Percentage of scatter photons as a function of the scatter order, i.e.:
(number of scatter counts of that order / number of counts for the total scatter spectrum) * 100

Scatter order	Order 1	Order 2	Order 3	Order 4	Order > 4
Number of detected counts (%)	52.7	22.9	11.8	6.3	6.3

II. Detected counts per projection

For a 0.2 - 190 keV energy window :



III. Profile through the projections

For a 0.2 - 190 keV.energy window :

Horizontal profile through the whole sum image of the 64 projections of the scattered and primary photons.

Min value = 0
Max value = 358.4
Mean = 136.7
Standard deviation = 118.3

IV. Computation time

PC configuration :

Intel Pentium 4 CPU 2.0 GHz (cache 512 KB)

OS : Red Hat Linux 8.0 3.2-7

Compiler : gcc 3.2

G4 Version : geant4.4.1

CHELP Version : clhep-1.8

ROOT Version : ROOT 3.04/02

Computation time : 5H21 CPU