Calibration software
MCC-MT
(Monte Carlo simulations)

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**BSI BALTIC SCIENTIFIC INSTRUMENTS**

DESCRIPTION

Software package MCC-MT (Monte Carlo Calculation Multi Thread) is intended for 3D-modelling of physical experiments and calculation of radiation detectors response functions using Monte Carlo simulation method. Software MCC-MT based on multi-threading technology providing significant increasing the rate of simulation and getting fast result as spectrum.

APPLICATION

- Monte Carlo simulation spectra of gamma, beta and radiation
- Characterization detectors and detection systems
- Calibration of instruments used for ionizing radiation detection and measurements without using the hazardous ionizing radiation for human health
- Obtaining clear picture of the internal processes of radiation transfer in order to optimize the design of the measuring devices and their protection
- Acceleration, simplification and reduction in the cost of design and optimization of ionizing radiation detection systems

FEATURES

- High accuracy of calculations
- Detailed 3D-scene based on Open GL graphics technology providing maximum representation and visibility of modeling
- Availability of replenished database of sources and materials
- Possibility of creating the maximally complex measuring systems
- Forming multidetector systems and schemes of coincidence
- Display of the results in the form of an ideal and real spectrum
- Tracing and drawing trajectories of particles during calculation process
- Availability of the ready and test projects in the distributive package (HPGe, scintillation detectors, protective lead shielding, volumetric sources and samples, etc.)
- Accounting cascade summation ('Full cascade' source type)
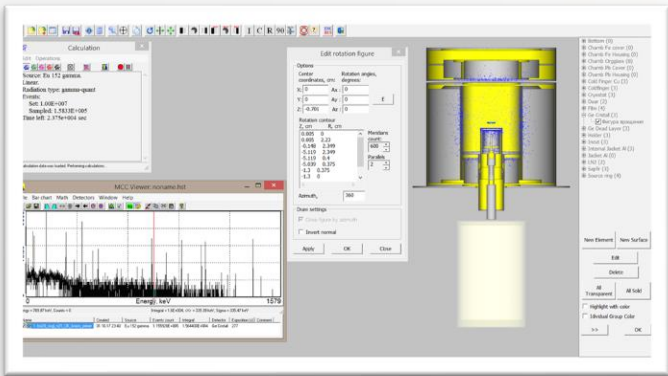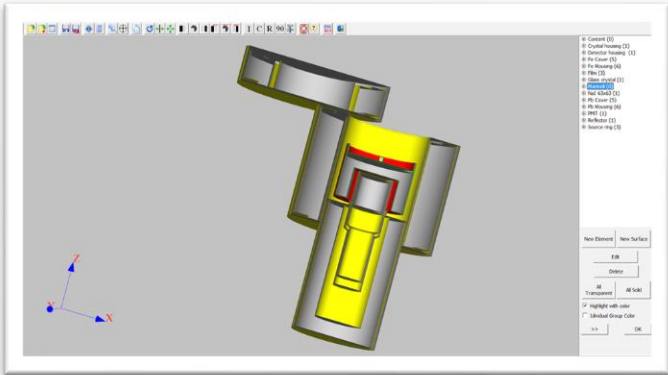
Parameter	Value
Energy range	10 keV - 10 MeV
Particles	photons, electrons (positrons), heavy charged particles
Figures	cylinder, cone, parallelepiped, torus, sphere, shear shape, rotation figure, polygon, disk.
Types of spectra	linear, beta - continuous, continuous, full cascade.
Projects views	contour, grid, fill with color, section, fill + grid, section + fill with color.
Types of source geometries	point, volumetric

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Gamma-rays