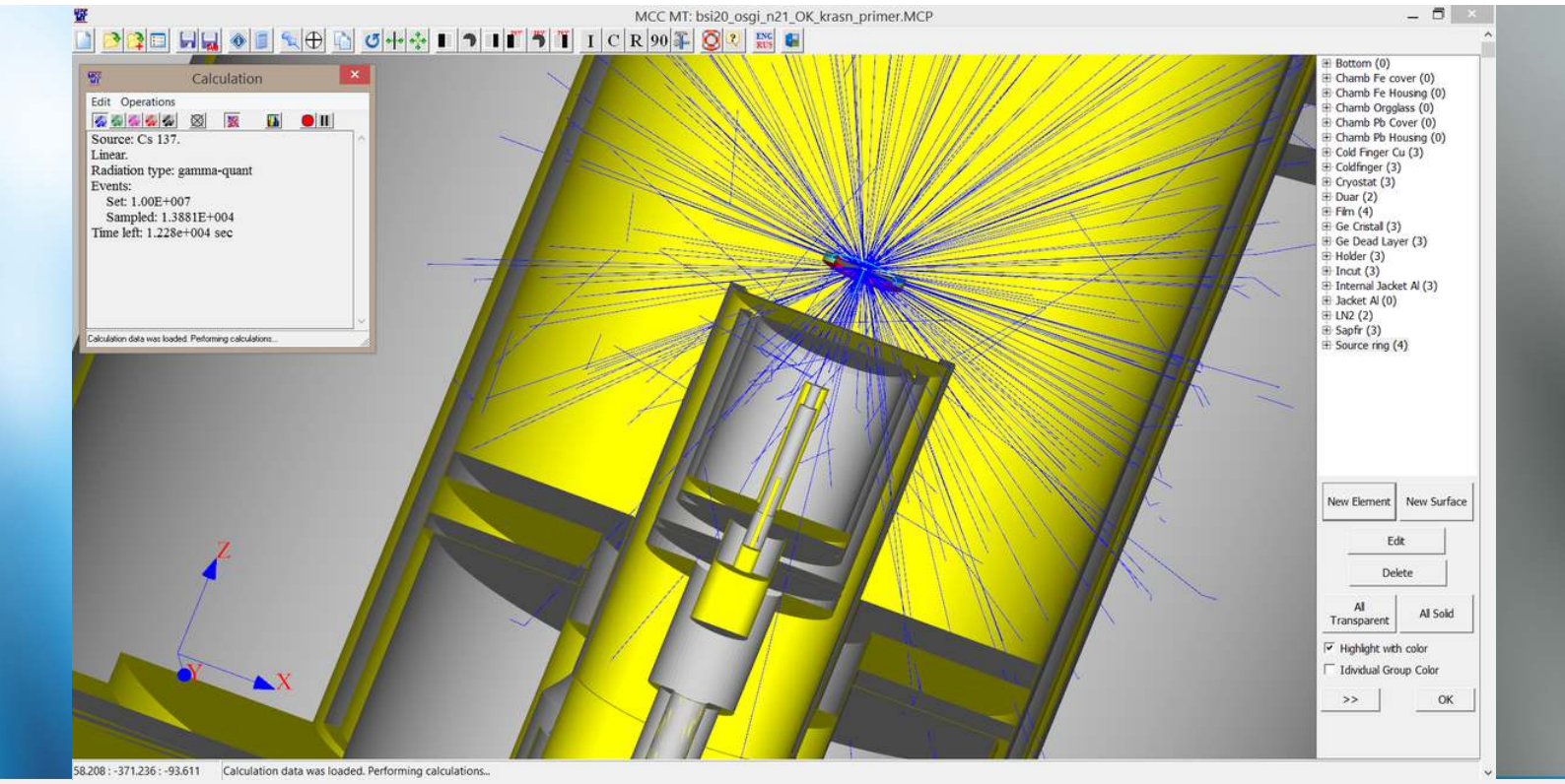
BALTIC SCIENTIFIC INSTRUMENTS

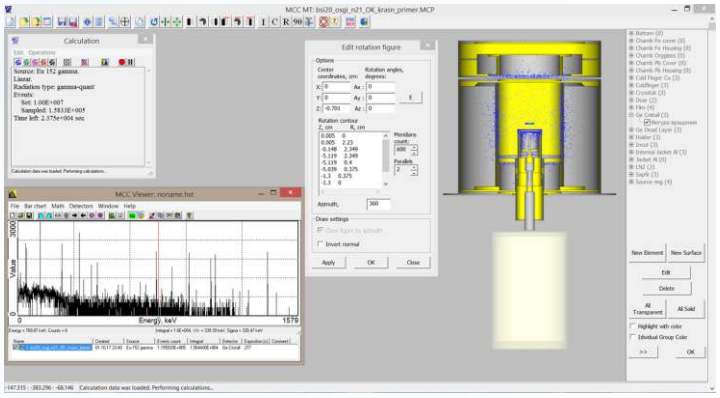


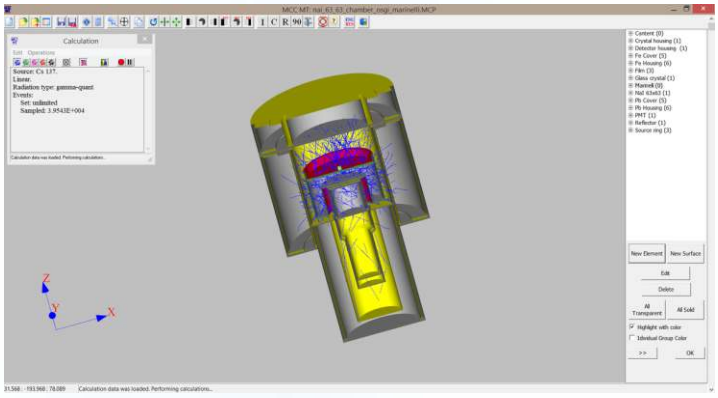
Advanced software package MCC-MT

Monte Carlo simulations

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.





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Software

Specification

Application

- Monte Carlo simulation spectra of gamma, beta and alpha radiation
- Calibration of instruments used for ionizing radiation detection and measurements
- Calculation of detection limits and minimum detectable activity of radionuclides
- Determination of a characteristics of a registration system for inaccessible radioactive sources
- Reduction of experimental investigations with 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
- Comparative demonstration of the different systems of protection against ionizing radiation and its detection systems
- Training of personnel in working with ionizing radiation detection systems without using of an expensive equipment and radioactive sources
- Training of specialists in the field of measurement and protection from ionizing radiation
- Acceleration, simplification and reduction in the cost of design and optimization of ionizing radiation detection systems
- Characterization detectors and detection systems

Features

- High accuracy of calculations
- Simplicity of using for a wide range of tasks
- 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)
- Using of the specified number of computer processors in order to implement multithreading and speed up the calculation
- Automatic creation of efficiency curves
- Network version for 2 and more PC is available