"FLUKA: new features and a general overview"

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FLUKA is a general purpose MonteCarlo code, capable of handling all radiation components from thermal energies (for neutrons), or 1 keV (for all other particles) till cosmic ray energies.

The code is a joint CERN-INFN project, and is continuously undergoing development and benchmarking. It is the standard tool used at CERN for the radioprotection and beam-machine interaction calculations.

Several improvements and additions to the code capabilities will be presented, in particular:

- the new radioactive inventory evolution algorithm, which allows to compute inventories and residual dose rates for arbitrary irradiation profiles and cooling times
- the improved evaporation/fragmentation model, which allows to produce up to 600 different fragments
- the new fission model
- the nucleus-nucleus models (interfaces to DPMJET-III, rQMD-2.4, and the newly developed BME and QMD models)
- improvements and additions to the geometry and user interface