



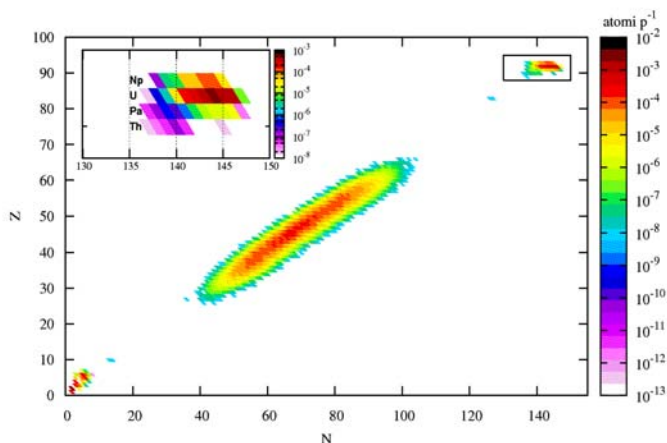
Fluka, an INFN–CERN Collaboration Agreement for the Maintenance and Development of the Fluka Code, is a general purpose tool for calculations of particle transport and interactions with matter, covering an extended range of applications spanning from proton and electron accelerator shielding to target design, calorimetry, activation, dosimetry, detector design, Accelerator Driven Systems, cosmic rays, neutrino physics, radiotherapy etc.

Fluka can simulate with high accuracy the interaction and propagation in matter of about 60 different particles, including photons and electrons from 1 keV to thousands of TeV, neutrinos, muons of any energy, hadrons of energies up to 20 TeV (up to 10 PeV by linking Fluka with the Dpmjet code) and all the corresponding antiparticles, neutrons down to thermal energies and heavy ions. The program can also transport polarised photons (e.g., synchrotron radiation) and optical photons. Time evolution and tracking of emitted radiation from unstable residual nuclei can be performed on line.

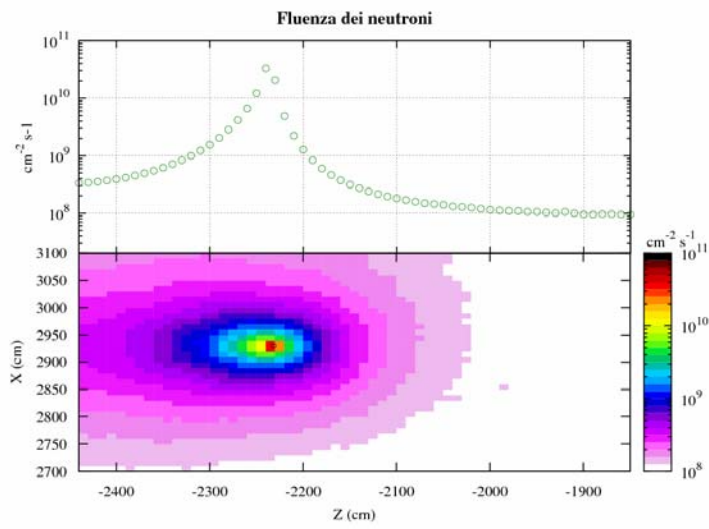
Fluka can handle even very complex geometries, using an improved version of the well-known Combinatorial Geometry (CG) package. The Fluka CG has been designed to track correctly also charged particles (even in the presence of magnetic or electric fields). Various visualisation and debugging tools are also available.

SOME EXAMPLES OF CALCULATIONS MADE WITH FLUKA

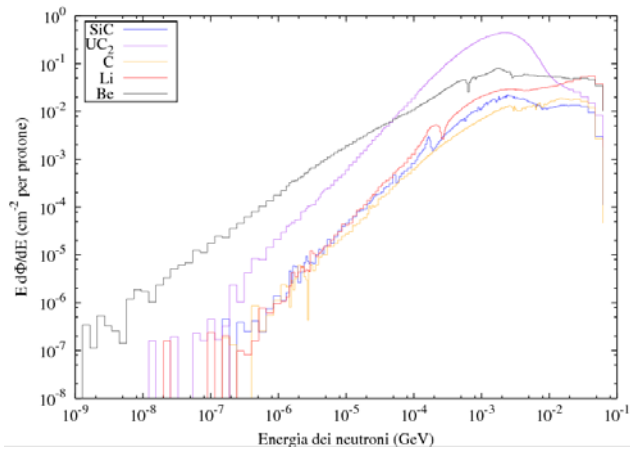
- Nuclide production



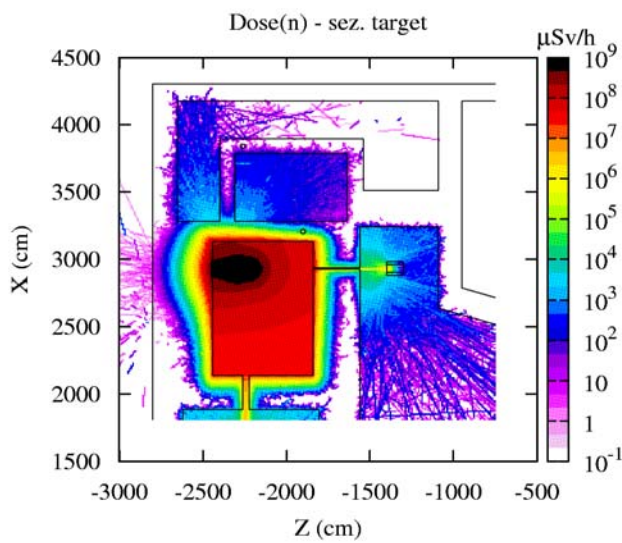
- Neutron fluence



- Neutron spectra



- Shielding calculations



AND MORE OTHER...