



flair for FLUKA + geometry editor

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Major changes since last report

flair

- Dicom importing (using the pydicom library):
 - as enhanced Voxel with correction factors
 - Working on importing as Usrbins
- Calculator (with all particle mass tables from FLUKA)
- FLUKA Run can take place in a subdirectories
- Smart asking for name-change for bodies/regions/defines
- Allowing superimpose of USRBIN projection and 1D-Max as USR-1D plots
- Addition of flair cards !POINT, !ARROW, !RULER, !LIGHT
- I/O to pickle format a compress binary of the input file to be later used to autosave and recovery in case of crash
- Resizing of Multilistbox is more intuitive
- Python3 and cygwin version ready

Major changes since last report

Geometry Editor

- Full graphical geometry editing capabilities bodies / regions / zones
- Fully coupled (in sync) with flair window
- Geometrical optimization of zone expression
- Several accuracy bugs corrected
- Multiple USRBINS as layers
- Oriented and Axis-Aligned Bounding boxes
- 3D Fast graphics using realtime ray tracing
 - VOXELS are now raytraced
 - USRBIN plotting on 3D
 - Dynamic lights definition
 - Shadows from lights
 - 3D wireframe display of bodies
 - Transparencies (xray etc...)
 - Use of clipping bodies
- Working on STL importing

Future work

Some of the most important topics

- Optimize 2D projection, by working on original coordinate system and not the projected one.
- Dicom Importing:
 - Voxel: easier settings for CORRFACtORS
 - Usrbin importing in order to visualize the TP doses
 - Flag specialized regions/organs
- USRBIN
 - Draw dynamically projections
 - Multi-palette (e.g. Gray for density, Color for Dose)
- Use AABbox for zone optimization
- Continue work on STL importing
- Eliminate the xterm (integrate all output messages inside flair)