flair for FLUKA

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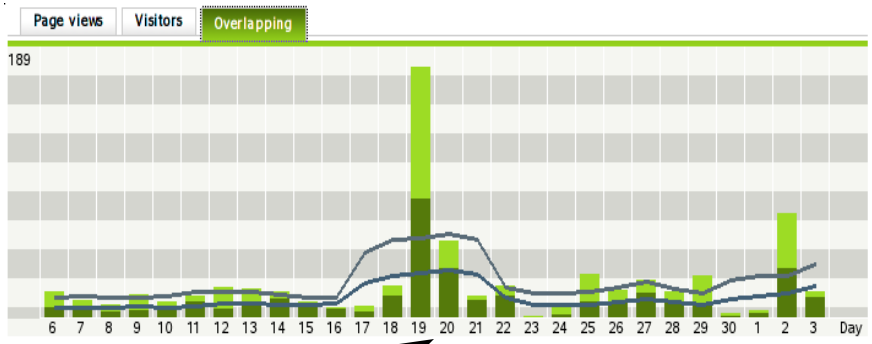
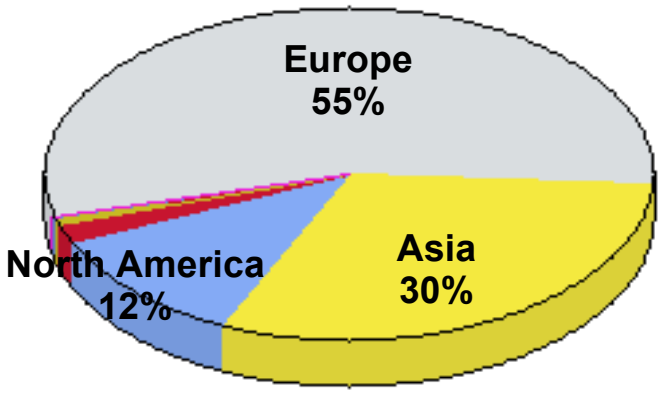
Flair History

Jan 2005	During the FLUKA course at Houston, first idea about a possible graphical interface
Mar 2006	Pavia FLUKA course confirmed the need of such an interface
Jun 2006	Start working on the conceptual design
Nov 2006	Announcement at the CERN FLUKA users meeting
Dec 2006	Announcement at the FLUKA collaboration meeting
May 2007	Introduction and use with success at the FLUKA course at Houston. The program is quite evolved and counting ~50'000 lines of code.
Jun 2007	First public announcement (v0.5) at the FLUKA users list. 250 downloads in the first 24h!
Oct 2007	Similar number of downloads observed for all subsequent releases

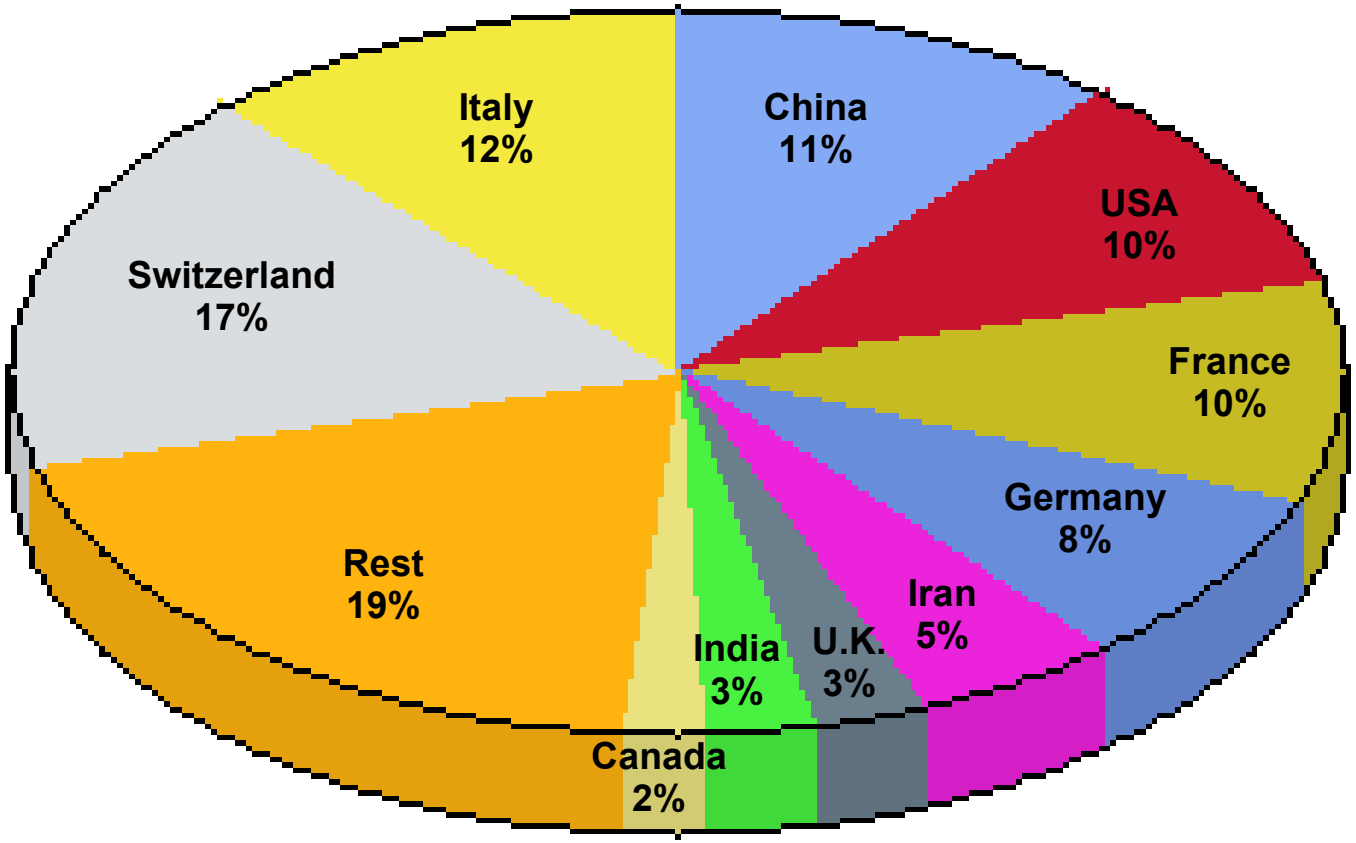
Website statistics





flair 0.5 announced in FLUKA mailing list

Website – Country of origin



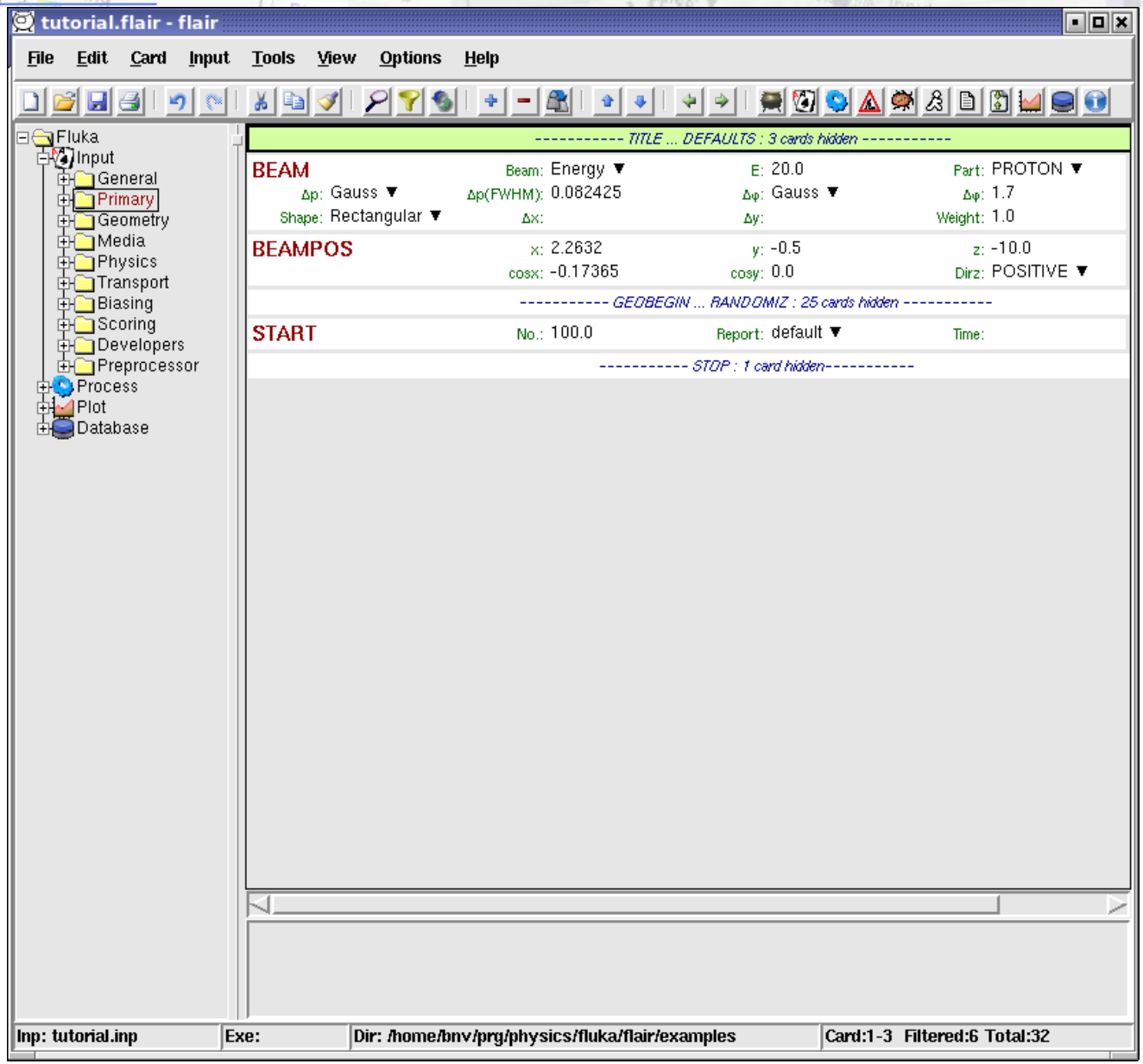
FLUKA Courses

- Flair was introduced with success in the FLUKA course of Houston and Legnaro 2007.
  - Proved to be stable enough even under the test of beginners
  - Reduced the number of technical problems (input file formating, running, debugging etc.)
  - Helped in the learning of students (more concentrated on the simulation rather on technicalities)
  - It was helpful exercise to debug flair and check its robustness, but also to see students needs for extra features.
- Concerns
  - Forced the users on a slightly different organization than what they would have done on their own.
  - Correspondence between flair card layout and manual is not clear some times

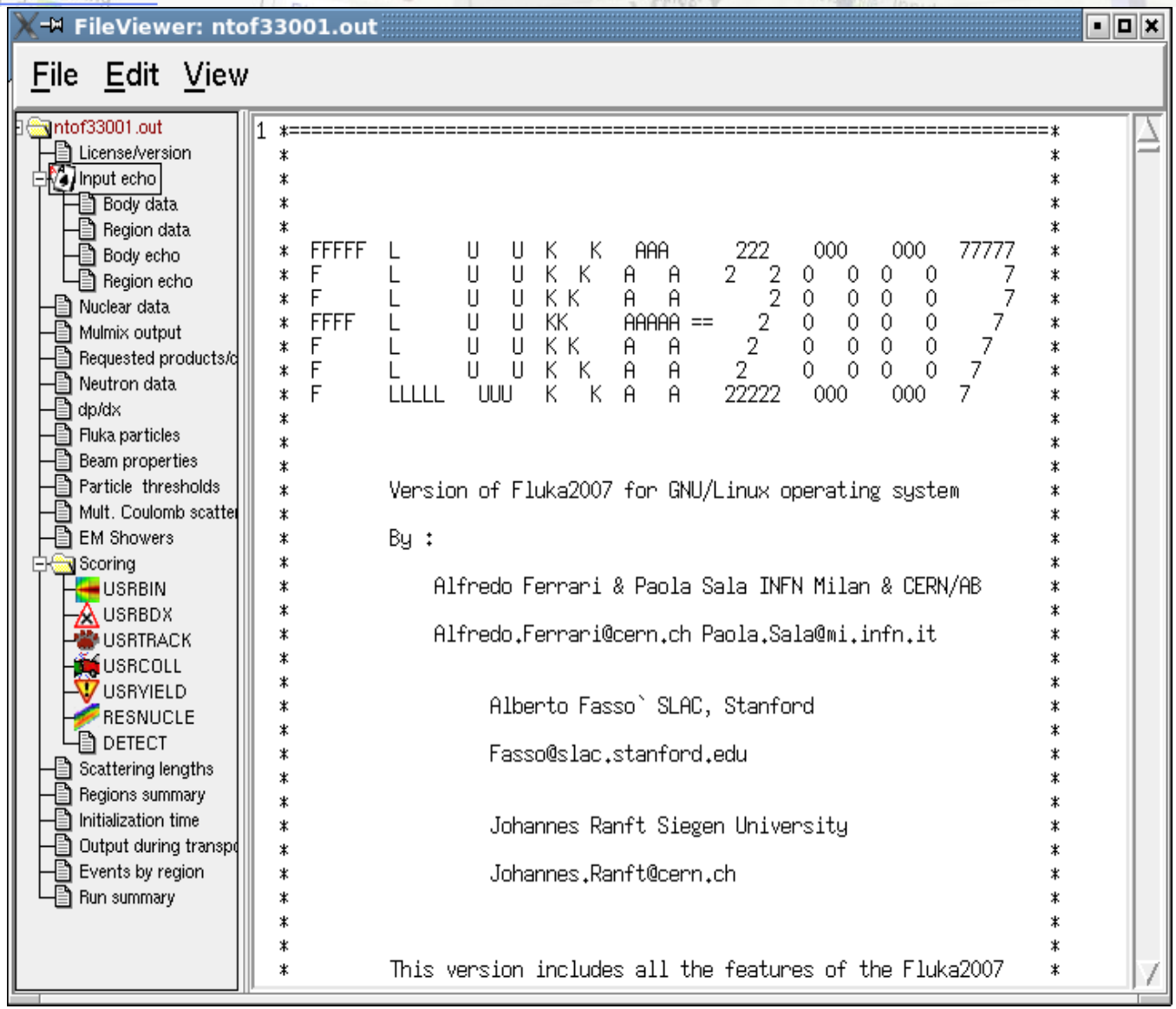
Features Added in 0.5 & 0.6

- Folding of Cards
- Dialog to modify manually the contents of a card
- Manual has now history. TOC & search listboxes are unified
- Output viewer now contains a tree browser
- Region volumes added
- Checking the existence of the $FLUPRO/flukahp during startup
- Web checking of version-major,minor and release number
- Exporting input in MCNP format
- Plotting:
  - Labels for material/region/lattices
  - Palette schemes, CPD from color-bands replaced by Max value
  - Combined Magnetic field intensity and vector field.
  - Very primitive USRDUMP plots (source particles and trajectories)
- All cards now have a layout (last ones added: OPT-PROD, OPT-PROP, POLARIZA, MCSTHRESh)

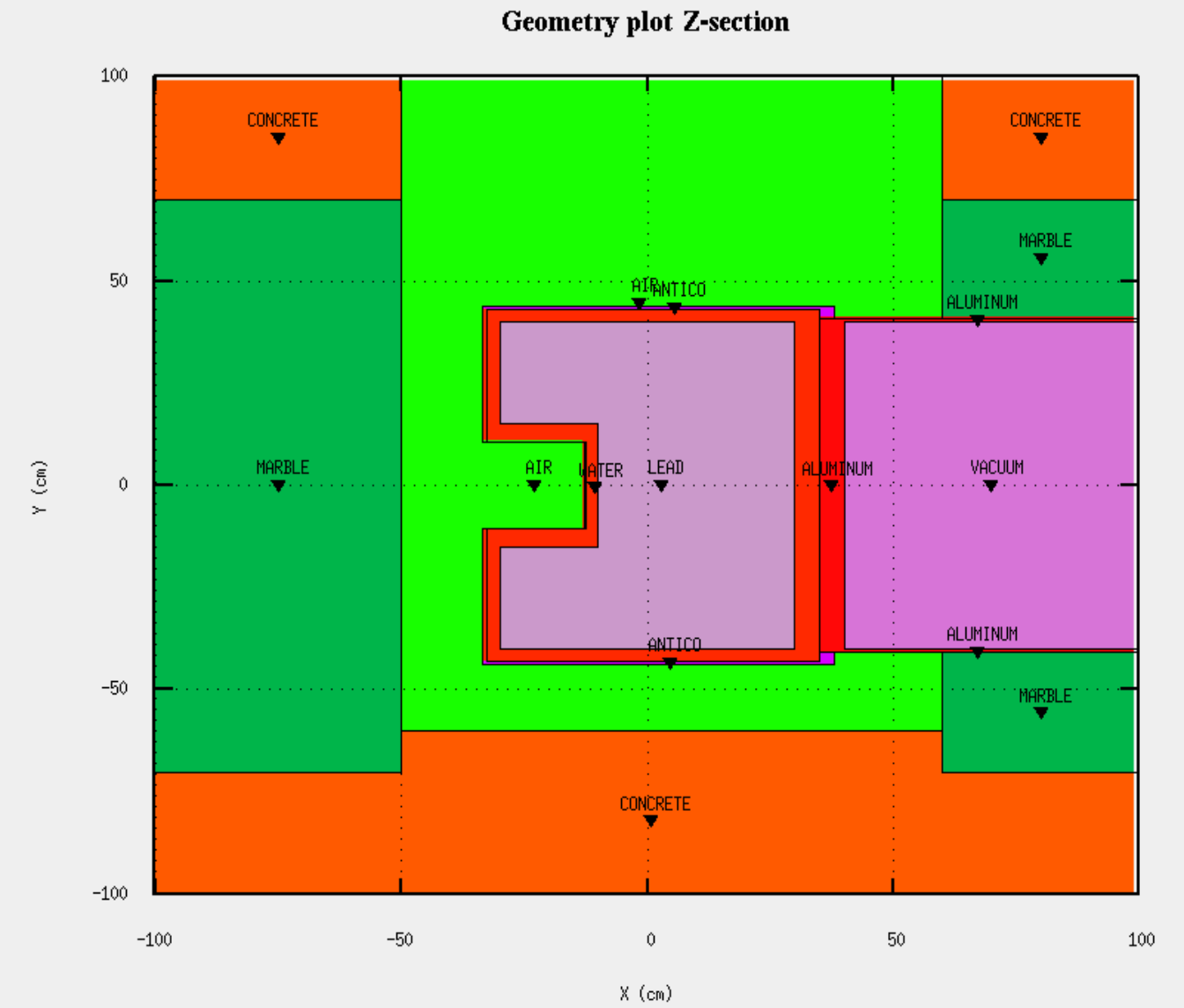
Folding of Cards



Output Viewer



Labels in geometry



Features to be added for V1.0

- Interface
  - Working on multiple projects
- Input Editor
  - Full Undo/Redo
  - Geometry manipulation (Transformations, CSG optimization etc)
  - Error checking on correlated information
- Manual
  - Correspondence of FLUKA whats with flair cards
- Post Processing
  - Re-binning or USRBINs
  - Maximum trace
- Plotting:
  - Information of Input File
  - Double differential quantities for USRBDX
  - 3D Visualization via OpenGL or Ray Tracing