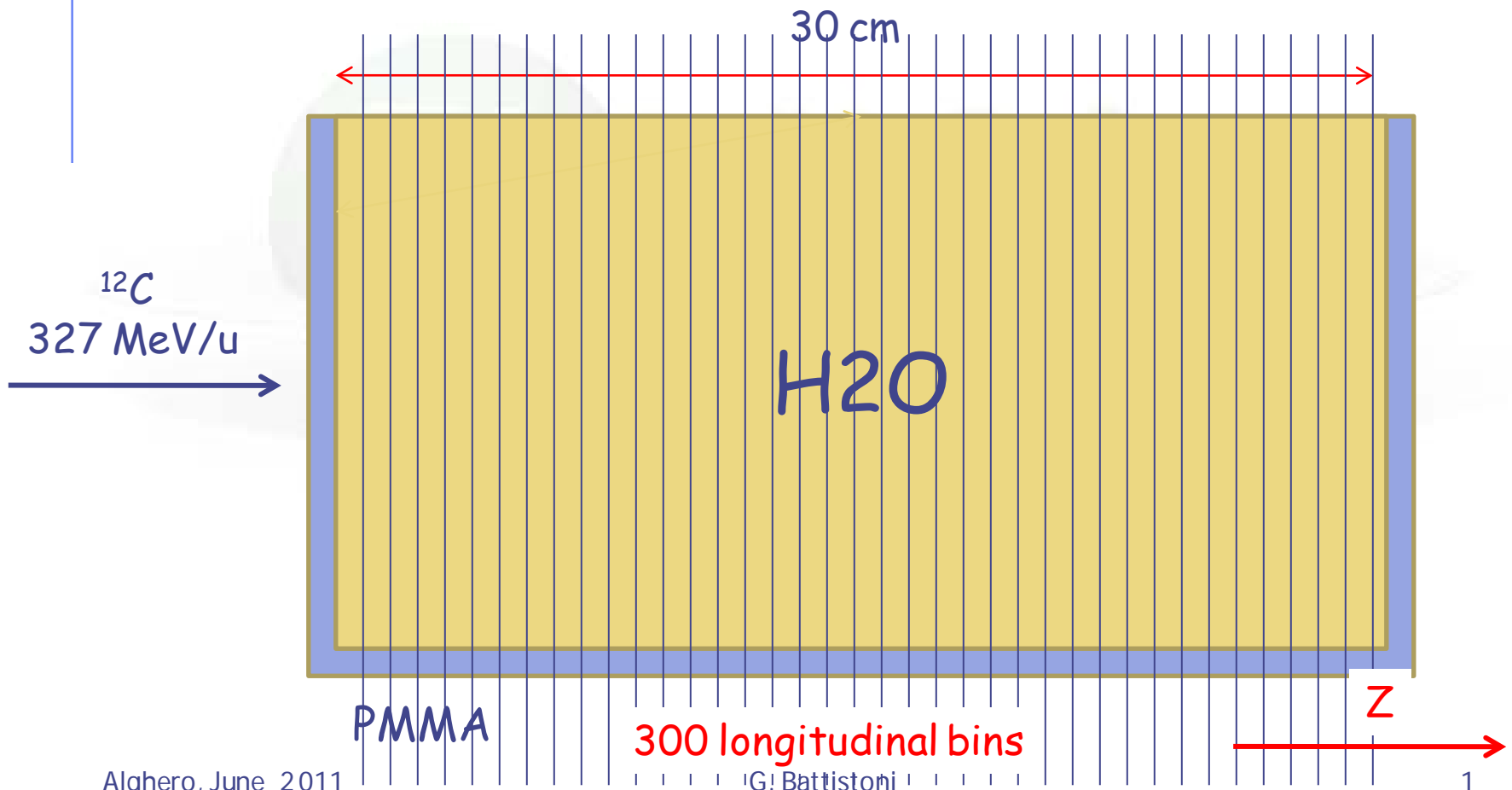


A simple demonstrative example

Shoot a ^{12}C beam on a simple Water or PMMA phantom and obtain the plot of the resulting Bragg Peak



In practice

```
cd ~/flukawork/BraggC  
flair BraggC.flair
```

Input window

Fluka - BraggC.flair - flair

File Edit Card Input View Tools Help

Fluka

- Input
 - General
 - Primary
 - Geometry
 - Media
 - Physics
 - Transport
 - Biasing
 - Scoring
 - Preprocessor
- Process
 - Compile
 - Debug
 - Run
 - Files
 - Data
- Plot
 - BraggC_plot01
- Database
- Material
- Elements

TITLE 12C 327 MeV/u			
DEFAULTS HADROTHE			
BEAM	Beam: Energy	E: 0.327	Part: HEAVYION
Δp : Flat	Δp :	$\Delta \phi$: Flat	$\Delta \phi$:
Shape(X): Rectangular	Δx :	Shape(Y): Rectangular	Δy :
HI-PROPE	Z: 6.	A: 12.	Isom:
BEAMPOS	x: 0.0	y: 0.0	z: -10.0
	cosx:	cosy:	Type: POSITIVE
IONTRANS	Transport: HEAVYION		
PHYSICS	Type: EVAPORAT	Model: New Evap with heavy frag	
FLUKAFIX	Ekin frac: 0.02		
	Mat: BLCKHOLE	to Mat: @LASTMAT	Step:
GEOBEGIN	Log:	Acc:	Opt:
	Inp:	Out:	Fmt: COMBNAME
Title: scatola d'acqua 30x30x100 cm**3			
A large box for the blackhole			
RPP	BH	Xmin: -9999999.	Xmax: +9999999.
		Ymin: -9999999.	Ymax: +9999999.
		Zmin: -9999999.	Zmax: +9999999.
RPP	VA	Xmin: -100.0	Xmax: 100.0
		Ymin: -100.	Ymax: 100.
		Zmin: -100.	Zmax: 200.
Water tank			
RPP	WATER	Xmin: -15.	Xmax: 15.
		Ymin: -15.	Ymax: 15.
		Zmin: 0.	Zmax: 30.
Box			
RPP	BOX	Xmin: -16.	Xmax: 16.
		Ymin: -16.	Ymax: 16.
		Zmin: -1.0	Zmax: 31.0
1) Blackhole			
REGION	BLK	Neigh: 5	Volume:
	expr: +BH -VA		
*...+...1...+...2...+...3...+...4...+...5...+...6...+...7...+...+...			
TITLE			
12C 327 MeV/u			

Inp: BraggC.inp Exe: flukaion Dir: /home/battisti/flukacourse/Alghero2011/BraggC Card:1 Total:33

Compiling window

The screenshot shows the 'BraggC.flair - flair' application window. The interface includes a menu bar (File, Edit, Card, Input, View, Tools, Help), a toolbar with various icons, and a project tree on the left. The project tree is expanded to show the 'Process' folder, with the 'Compile' option highlighted. The main window area is titled 'Compile Executable' and contains a table with columns for 'File', 'Size', and 'Date'. The table is currently empty. At the bottom of the window, there are fields for 'Link: ldpm3qmd', 'Exe: flukaion', and 'Default main:'. There are also checkboxes for 'D Line' and 'Bound Check', and buttons for 'Build', 'Compile', and 'Clean'. The status bar at the bottom shows 'Inp: BraggC.inp', 'Exe: flukaion', and 'Dir: /home/battist/flukacourse/Alghero2011/BraggC'.

File	Size	Date
------	------	------

Link: ldpm3qmd Exe: flukaion Default main: D Line Bound Check

Options:

Inp: BraggC.inp Exe: flukaion Dir: /home/battist/flukacourse/Alghero2011/BraggC

Running window

The screenshot displays the 'Run Fluka' window in the FLUKA software. The window title is '+ BraggC.flair - flair'. The menu bar includes File, Edit, Card, Input, View, Tools, and Help. The toolbar contains various icons for file operations and simulation control.

The left sidebar shows a tree view of the project structure under 'Fluka', including folders for Input, General, Primary, Geometry, Media, Physics, Transport, Biasing, Scoring, Preprocessor, Process, Compile, Debug, Run, Files, Data, Plot, Database, Material, and Elements.

The main area is divided into two main sections:

- Run / Input:** Shows the current input name as '<BraggC>'.
- Override Options:** Contains fields for:
 - Title: 12C 327 MeV/u
 - Start: 0
 - Time: 0
 - Rnd: 0
 - Exe: flukaion
 - Defines: Load Default

Below these sections is a control bar with buttons for 'Cycles: Continue', 'Previous', 'No. Cycles: 5', 'Last: 5', 'Run', 'Stop Cycle', 'Stop Run', 'Kill', 'Attach', 'Refresh', and 'Queue *Default'. The 'Run' button is highlighted in yellow.

The bottom section shows the 'Progress' status:

- Status: Running
- Input: BraggC
- Dir: fluka_2805
- Started: 2011.05.31 16:15
- ETA: 2011.05.31 16:19
- Time/prim: 222.078 ms
- Elapsed: 57.5183 s
- Cycle: 20.2091 s
- Run: 4m 13s
- Cycles: Current: 2 [0 - 5] Done: 1 out of 5 (20%)
- Primaries: Current: 260 [0 - 350] Done: 259 out of 350 (74%)

The status bar at the bottom of the window shows: Inp: BraggC.inp | Exe: flukaion | Dir: /home/battist/flukacourse/Alghero2011/BraggC | Running 1 out of 1

Processing Output Files

The screenshot shows the FLUKA software interface with the 'Data Merging' window open. The window displays a list of output files with columns for File Name, Size, and Date. The 'Data' folder is selected in the left-hand tree view.

File Name	Size	Date
BraggC001_fort.40	1438	2011.05.31 16:15
BraggC001_fort.41	1438	2011.05.31 16:15
BraggC002_fort.40	1438	2011.05.31 16:17
BraggC002_fort.41	1438	2011.05.31 16:17
BraggC003_fort.40	1438	2011.05.31 16:18
BraggC003_fort.41	1438	2011.05.31 16:18
BraggC004_fort.40	1438	2011.05.31 16:20
BraggC004_fort.41	1438	2011.05.31 16:20
BraggC005_fort.40	1438	2011.05.31 16:21
BraggC005_fort.41	1438	2011.05.31 16:21

Process

Inp: BraggC.inp Exe: flukaion Dir: /home/battisti/flukacourse/Alghero2011/BraggC Running 0 out of 1

Plotting window

The screenshot displays the 'BraggC.flair - flair' application window. The interface includes a menu bar (File, Edit, Card, Input, View, Tools, Help) and a toolbar with various icons. On the left is a tree view of the project structure under 'Fluka', with 'BraggC_plot01' selected under the 'Plot' folder. The main window is titled 'USRBIN Plot' and contains several configuration panels:

- Plot:** Title: Plot #1, File: BraggC_plot01.png, Display: 0, Line Type: [dropdown]
- Axes Labels:** X, Y, and CB fields with 'Opt:' labels.
- Set:** grid, legend
- Size / Multiplot:** aspect, Width, Height
- Binning Detector:** File: BraggC_usrbin_40, Title: 12C 327 MeV/u
- Cycles:** 5 Primaries: 1750 Weight: 1750.0 Time: ***** Sum file *****
- Binning Info:** Det: 1 Bpeak, X: [-15 .. 15] x 1 (30) Min: 1.92932257E-05, Y: [-15 .. 15] x 1 (30) Max: 0.000573803612, Z: [0 .. 30] x 300 (0.1) Int: 3.1072743
- Projection & Limits:** X, Y, Z axes with 'Get', 'swap', 'errors', and 'log' options.
- Plotting Style:** Type: 1D Projection, With: steps, Axes: x1y1, Smooth: [dropdown]
- Lines:** Type: 1, Width: 1, Color: [dropdown]
- Points:** Type: 1, Size: 1, Style: 0

At the bottom right of the plot area are buttons for 'Plot', 'Replot', and 'Save'. The status bar at the bottom shows: 'Inp: BraggC.inp', 'Exe: flukaion', 'Dir: /home/battist/flukacourse/Alghero2011/BraggC', and 'Running 0 out of 1'.

The FLUKA mailing lists

- fluka-users@fluka.org

Users are automatically subscribed here when registering on the web site. It is used to communicate the availability of new versions, patches, etc.

- fluka-discuss@fluka.org

Users are encouraged to subscribe at registration time, but can uncheck the relevant box. It is used to have user-user and user-expert communication about problems, bugs, general inquiries about the code and its physics content

users are strongly encouraged to keep this subscription