



Exercise 8: Scoring

FLUKA Beginner's Course

Exercise 8: Scoring

Aim of the exercise:

- 1- Add scoring cards
- 2- Practice with AUXSCORE card
- 3- Plot simulation results
- 4- Convert results to ASCII

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- ❑ Start from the solution of ex5 (Either copy your .inp and .flair files and rename them to ex8, or download from the site & rename):

```
mkdir ex8 ; cp ex5/ex5.inp ex8/ ; cp ex5/ex5.flair ex8/ex8.flair ; cd ex8
```
- ❑ Add 2 **boundary crossing scoring** from TARGS2 (Al) to TARGS3 (Pb):
 - ❑ **Fluence** of e⁻ and e⁺ with log-E bins (find suitable energy range and #bins) with 1 angular bin (unformatted output on unit 51)
 - ❑ **Current** (unformatted output on unit 52)
- ❑ Note the difference between fluence and current
- ❑ Add 2 **energy deposition USRBIN** by region for the three targets
 - ❑ Total energy deposition (unformatted output on unit 41)
 - ❑ Only electrons. Use **AUXSCORE** to filter the particles (unit 42)
- ❑ Run 5 cycles, 1000 primaries each, process the data files

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- ❑ Plot the results in Flair
- ❑ Plot the USRBIN within the Geometry Editor too
- ❑ Convert the result in ASCII and view ex8_usrbin4[x].lis
- ❑ Verify that results are consistent with the standard output
- ❑ Change #cycles and #primaries and look at the statistical errors