



Exercise 6: Scoring

FLUKA Beginner's Course

Exercise: Scoring

Aim of the exercise:

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

Exercise: Scoring

- ❑ Start from the solution of **ex4** (Copy your .inp and .flair files). Copy them in the **ex6** directory (Alternatively download from the site or USB stick):

```
mkdir ex6 ; cp ex4/ex.* ex6 ; cd ex6
```
- ❑ 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 **ex_4*_sum.lis**
- ❑ Verify that results are consistent with the standard output
- ❑ Change `#cycles` and `#primaries` and look at the statistical errors