Exercise 6: Scoring

Beginners' FLUKA Course

Exercise: Scoring

- Create a folder called **ex6** and start there a new flair project based on the **course** template:
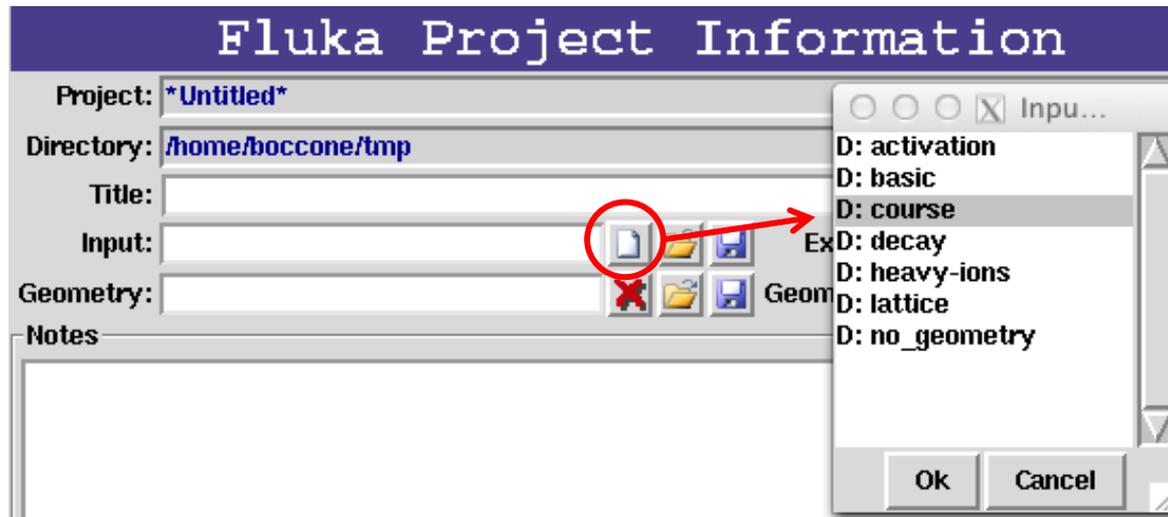
- Save the input as **ex6.inp** and the flair project as ex8.flair

Exercise: Scoring

○ Add two <u>boundary crossing scorings</u> from target segment 2 (aluminium) to target segment 3 (lead):

  ○ **<u>fluence</u>** of electrons and positrons with log-E bins (find a suitable energy range and # of bins) with 1 angular bin (unformatted output on <u>unit 51</u>);

  ○ **<u>current</u>** (unformatted output on <u>unit 52</u>);

  Note the difference between <u>fluence</u> and <u>current;</u>

○ Add two energy deposition **USRBIN** by region for the three target segments:

  ○ total energy deposition (unformatted output on <u>unit 41</u>);

  ○ **<u>only</u>** by electrons by using an additional **AUXSCORE** card to filter the electron (unformatted output on <u>unit 42</u>)

○ Run 5 cycles with 1000 primaries, process the data files, and plot the results;

○ Change the number of primaries/cycles and look at statistical errors;

Exercise: Scoring

○ View the USRBIN with the geometry editor

○ Convert result into ASCII and view the **ex6_usrbin_4[x].lis**
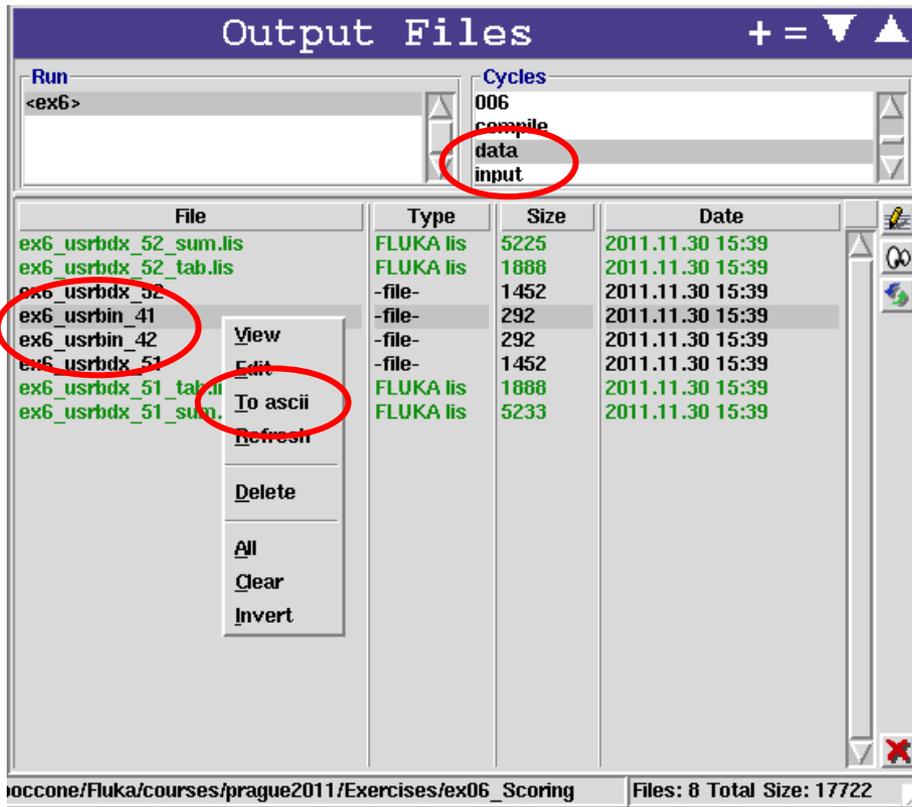
right click on the USRBIN

then select "To ascii"

○ Check that results are consistent with standard output;