



# Exercise 10: Lattice

Beginners' FLUKA Course

# Exercise 10: Lattice

create a folder called `ex10`, download the solution of **ex5** (only **ex5.inp**) from the website, rename it to **ex10.inp** and open in *flair*

- replicate twice the whole cylindrical target just downstream from the original one (from  $z=10\text{cm}$  to  $z=20\text{cm}$  and from  $z=20\text{cm}$  to  $z=30\text{cm}$ )

*define the two required container regions (add the needed bodies, i.e. a pair of XYP planes) and subtract them from the air region*

*add two LATTICE cards associating each container region to the convenient (roto-) translation to be defined through a ROT-DEFI card*

- score the energy deposition in the resulting 9 target regions and compare the results with those in the standard output  
*add a (pair of) USRBIN card(s) scoring with the special binning (over the full interval of pseudorapidity)*
- score energy deposition density in the prototype and in the two replicas  
*clone twice a (pair of) USRBIN card(s) scoring on the prototype (with cylindrical mesh) and add two ROTPRBIN cards applying the corresponding (roto-) translation to the two scoring clones*