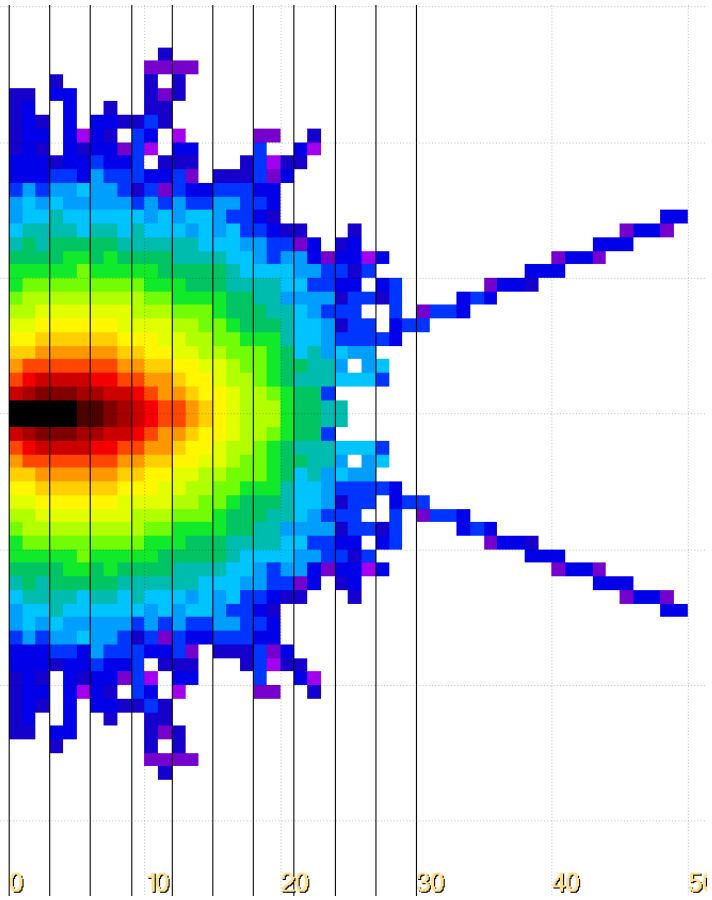
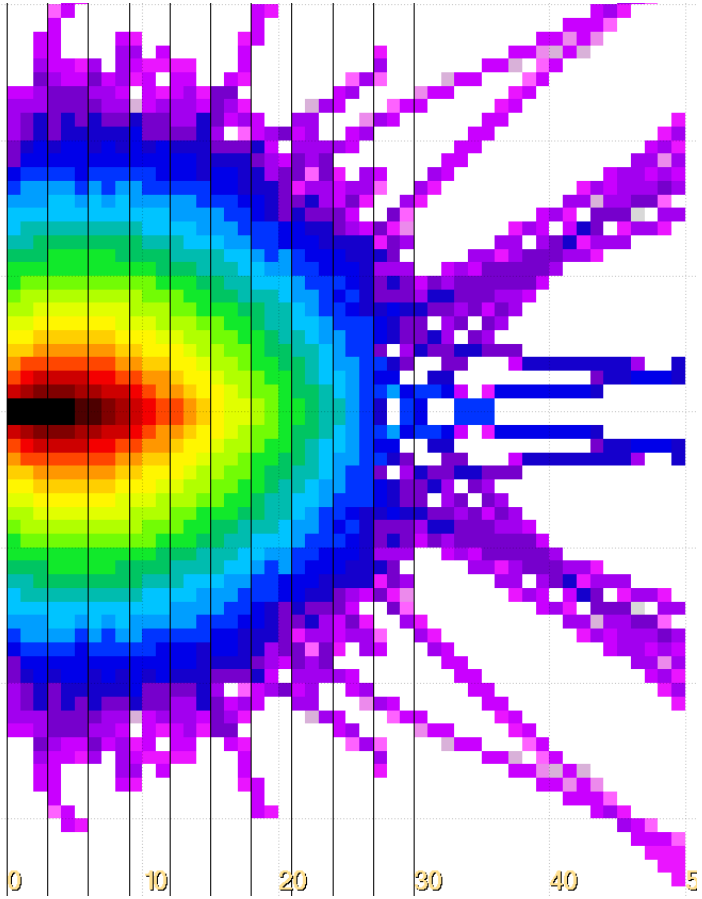
Weight windows biasing exercise

Weight windows biasing exercise

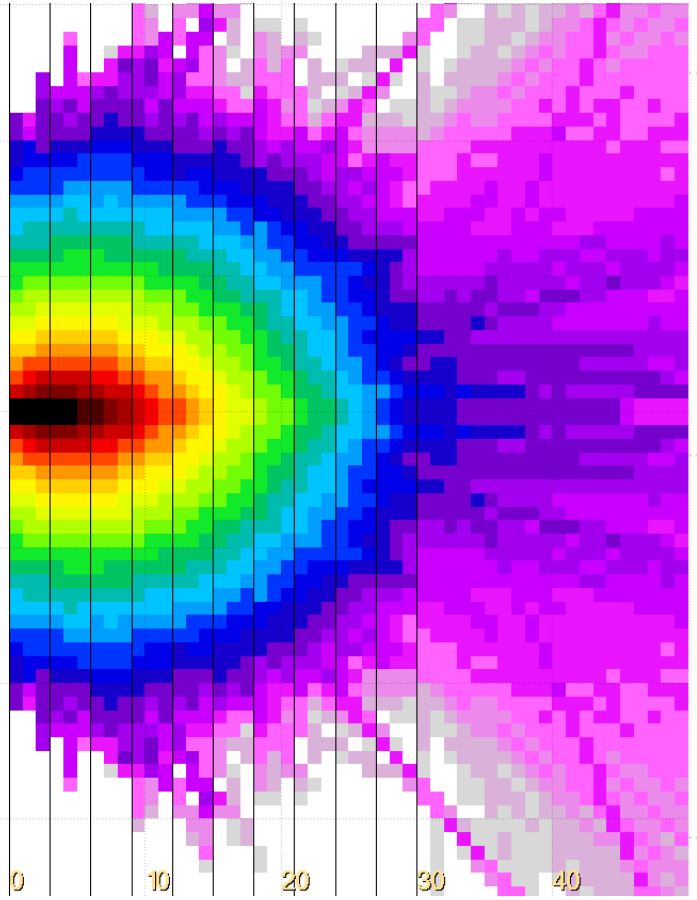
- Try to replicate the plots shown in the lecture



4000 e^- without WW



40000 e^- without WW



4000 e^- with WW

Weight windows biasing exercise

Input preparation and running

- Start from the input file provided
- No need to change the geometry (electron from vacuum to lead target)
- Add preprocessor instructions to use the same input to run with different options
- Add the necessary weight windows cards for all the layers
- Reminder:
  - 500 MeV electrons range in lead is about 3 cm
  - Typical ratio between upper and lower weight is about 10
- Using cycles and spawns
  - Run a small number of primaries with and without biasing,
  - Run without biasing over the same time taken to run with biasing
- Do not forget to merge the results

Decay-length biasing exercise

Plotting results

- In flair Geometry tab
  - Create 3 new layers to show the electron fluence for the 3 simulated cases
  - Add for each layer the appropriate USRBIN and detector
  - Use the longitudinal views to see the biasing effect

FLUKA