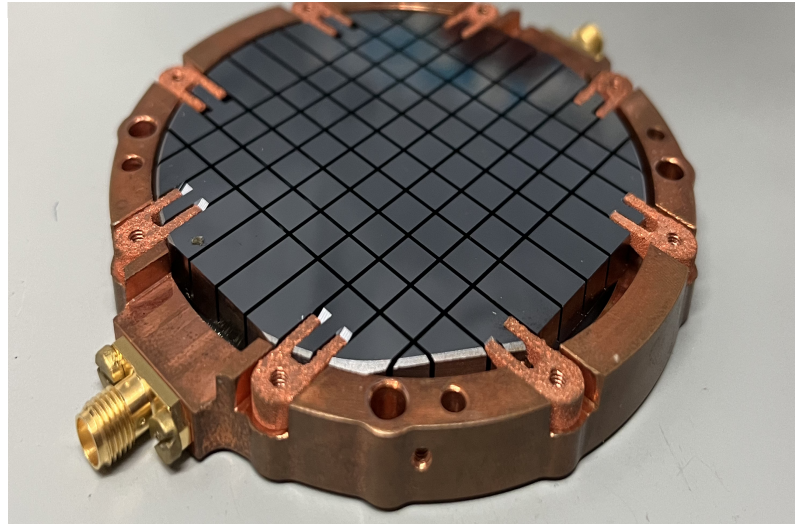
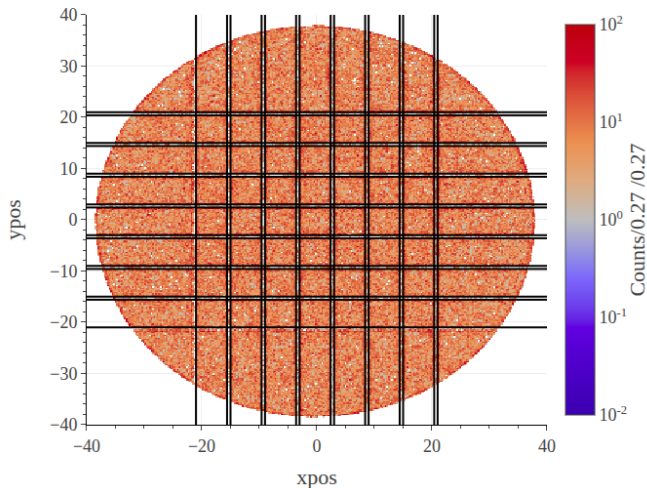


Hi Eric and Alberto,

I've some comments about the simulations you gave me and that can maybe help you on the comparison with the data.

First of all I've plotted the distribution of the hits and it seems to me that the BULLKID you are simulating has 7 dice per side of the square. Instead the geometry of BULLKID has 8 dice per side and the center of the wafer is not on the center of the central die but corresponds to the intersection of the grooves.

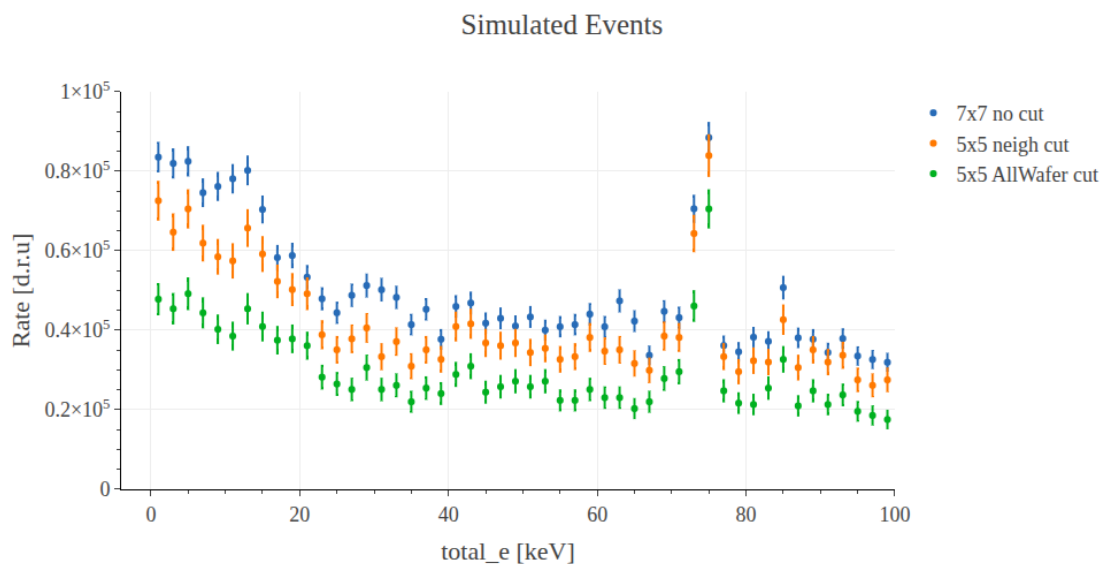


The dimension of the dice and of the wafer is correct so you should only change the position of the dice and add the missing ones. Such modification changes the dimensions of the semilune and could possibly affect the resulting energy spectrum.

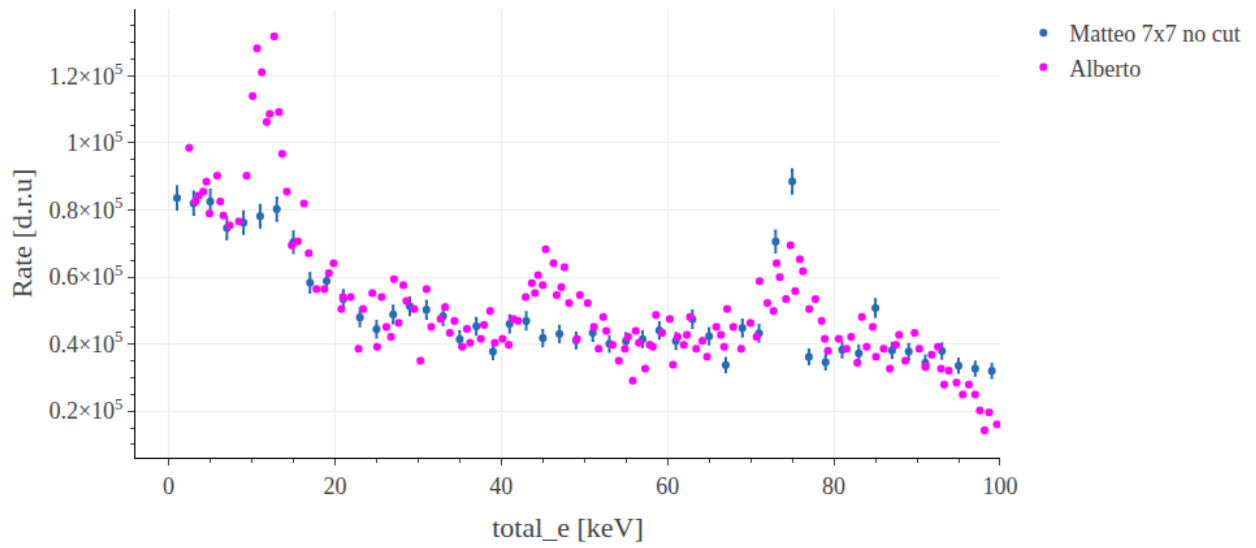
Then I've tried different cuts following what you presented on 17 September on the simulation data you gave me. I'm considering only gammas, no smearing and no 210Pb.

The cuts are the following:

- All the dice 7x7 without any cut (I found to be compatible with your spectrum of 3 September with the factor 2 disagreement)
- Only the internal dice 5x5 + cut on the first 8 neighbours of each dice
- Only the internal dice 5x5 + cut any coincidence in the entire wafer (both dice and semilune)

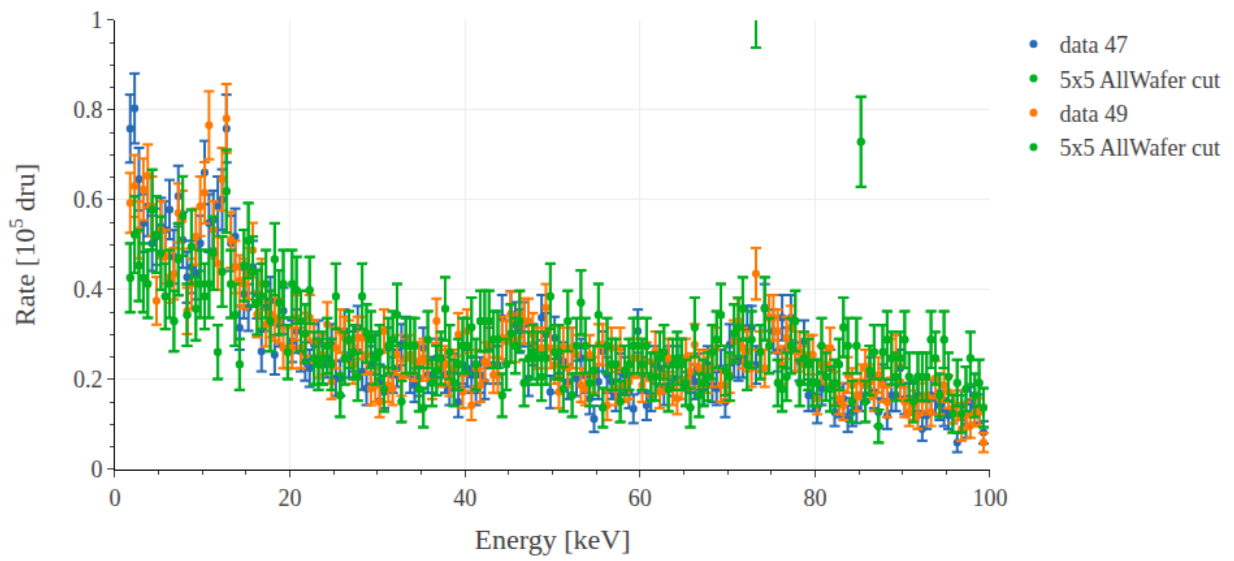


Simulated Events

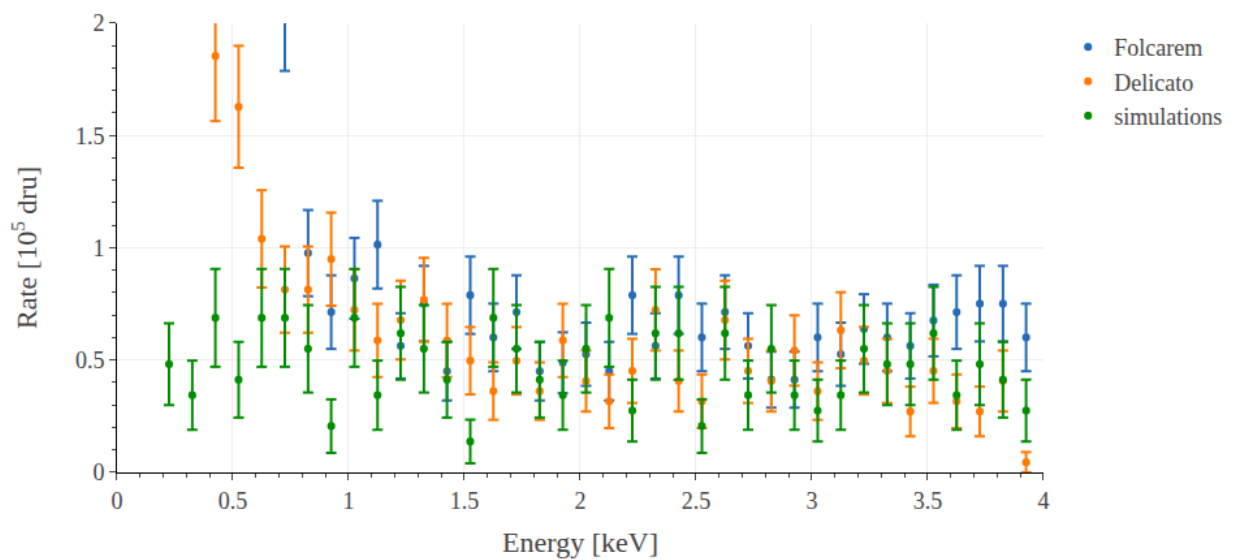


With the most stringent cut (the last one in green) I find a good agreement with data at high energy.

Superimposed Channels



Energy after cluster cuts KID-49



I don't know if you have tried all these cuts and if you obtain the same results. In case feel free to ask for a meeting in such a way we can discuss on this. I hope this can help you.

Thank you very much,
Matteo

P.S

I leave here some questions:

- how is an event defined in the tree you left me? I'm assuming that hits within the same event are originated by the same primary particle
- I need the access to the github repository of Sapienza simulations because I would try to produce some simulations with the Americium source for my thesis. Could you give me the access? Is the repository updated with the most recent results?