

Digitisation procedure : first thoughts

Simulation gives : Energy deposit E per $5 \times 5 \text{ um}^2$ cells.

Input variables : SimCalorimeterHit

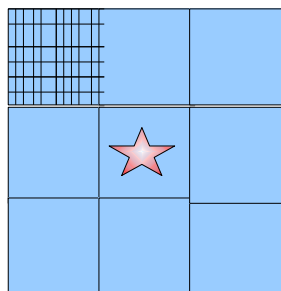
Energy

Unique identifier inside the $50 \times 50 \text{ um}^2$ cell : called LocalID

Unique identifier of each $50 \times 50 \text{ um}^2$ cell : called cellID

Giulio's simulation gives : % of charges/energy collected by the diodes around the initial deposit. The LocalID inside a cell plus the knowing of the closest neighbors cellIDs should be sufficient to have all the output information required : % of deposit in each cell+closest neighbors.

- 1- Sort out the number of hits per $50 \times 50 \text{ um}^2$ cell : new class of "simHits" containing pointers to each initial SimCalorimeterHit contributions, and giving pointers to the closest neighbors of the cell.



- 2- For each simHit, look at the deposits given by the SimCalorimeterHits contained in each neighbor cell+the cell itself, and add them to create a new object : RawCalorimeterHit, containing the total deposit after charge spread, and a unique identifier : cellID. Should also contain pointers to the initial MCparticle responsible for the deposits.

