Subject: Re: LYCCA ToF scintillators
Posted by Michael Reese on Fri, 12 Aug 2016 15:20:20 GMT
View Forum Message <> Reply to Message

Hi,

You need to create a pattern artificially. One possible way to do this is to draw a rectangular gate around the projected TPC-position, i.e. the "true" position, and make a gated ToF x:y plot with the condition that the "true" position is inside that gate. You'll see the distorted shape of whatever gate you have drawn.

Reminder of how to create such a rectangular gate in the config file (I didn't test that piece of code... there might be typos inside):

```
processor ToF_Start/TPC/gate UTILS.ConditionWindow2D
  x  <-  Frs/S4tracking.xs[5]
  y  <-  Frs/S4tracking.ys[5]
  display x:y | xy_window
end

processor ToF_Start/distored UTILS.PairWithCondition
  first  <- Lycca/ToFStart/Membrane.x
  second <- Lycca/ToFStart/Membrane.y
  condition <- ToF_Start/TPC/gate.inside
  display tested_first:tested_second
end
```

If you want to have multiple gates, you could do something like this for 6 gates:

```
for $i in [0:5]
  processor ToF_Start/TPC/gate_$i UTILS.ConditionWindow2D
    x  <-  Frs/S4tracking.xs[5]
    y  <-  Frs/S4tracking.ys[5]
    display x:y | xy_window
  end
end

processor ToF_Start/distored UTILS.PairWithCondition
  first  <- Lycca/ToFStart/Membrane.x
  second <- Lycca/ToFStart/Membrane.y
  for $i in [0:5]
    condition <- ToF_Start/TPC/gate_$i.inside
  end
  display tested_first:tested_second
end
```

Then you could draw gates in the shape of horizontal lines, three gates in the shape of vertical lines, and together they'll make a grid-like shape.