Subject: Re: LYCCA - w-DSSSD Time Gated
Posted by mlcortes on Wed, 13 Aug 2014 13:24:00 GMT
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Hi Tayfun,

We looked at the times of the WallDssd for the Pb data of 2012. As Michael mentioned, the times of the wall (only the p-side) are read by Multihit modules. What we did, and seems to work quite fine, is to select the first hit of this modules and use it as the input for the Dssd processor. By doing this I can see nice time-energy spectra for all the modules. This selection (for my data) removes the need of a time-energy gate, so you can keep using the normal DSSD processor. I think there you can see if you need an aditional gate for your case
Actually we see a double time structure that seems to come from the diferent electronic chain of the modules 19,20,23 and 24. If you see the same, let us know! We are still not sure about the origin of it.
The code I am using goes like this:
Before the DSSD processors I select the hit

```
processor Lycca/WallDssdPreproc  UTILS.HitPick
   input_array[0:127]  <-  LyccaWallCrate1.tdc[0:127]
#   display out_first
end
processor Lycca/WallDssdPreproc1  UTILS.HitPick
   input_array[0:127]  <-  LyccaWallCrate2.tdc[0:127]
#   display out_first
end
```

And after that I put the time input if the DSDD processor. Here i copy just an example of the module 01 with all the inputs and visualization

```
processor Lycca/WallDssd01 LYCCA.DSSSD
    #triggers 8 9 10
  amplitude_p[0:15]  <-  LyccaWallCrate1.adc01[0:15]
 amplitude_n[0:15]  <-  LyccaWallCrate1.adc01[16:31]
  time_p[0:15] <- Lycca/WallDssdPreproc.out_first[0:15]
 display time_p       in WallDssd/Module01/time_p
     display amplitude_p 2048,0,4096           in WallDssd/Module01/amplitude_p
    display amplitude_n 2048,0,4096           in WallDssd/Module01/amplitude_n
     display multiplicity_p 32,0,32            in WallDssd/Module01/multiplicity
     display multiplicity_n 32,0,32            in WallDssd/Module01/multiplicity
  display multiplicity_t 32,0,32      in WallDssd/Module01/multiplicity
 display multiplicity_p:multiplicity_t      in WallDssd/Module01/multiplicity 32,0,32: 32,0,32
 display cluster_multiplicity_p 32,0,32     in WallDssd/Module01/cluster_multiplicity
    display cluster_multiplicity_n 32,0,32     in WallDssd/Module01/cluster_multiplicity
    display cal_amplitude_p:cal_amplitude_n    in WallDssd/Module01
    display amplitude_p:amplitude_n           in WallDssd/Module01
    display dE                                in WallDssd/Module01
   display cal_time_p       in WallDssd/Module01/cal_times
 display cal_time_p:cal_amplitude_p     in WallDssd/Module01
 display time_p_sum:dE_p   500,0,10000:500,300,4000  in WallDssd/Module01
end
```

The last spectra should show you a nice energy time plot. Hope this is useful for you and let us know if you have any problem