
Subject: Re: LYCCA - w-DSSSD Time Gated
Posted by [mlcortes](#) on Wed, 13 Aug 2014 13:24:00 GMT
[View Forum Message](#) <> [Reply to Message](#)

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 additional gate for your case. Actually we see a double time structure that seems to come from the different 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 DSSD 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
