
Subject: Re: AGATA particle-gamma time
Posted by [miree](#) on Tue, 22 Jul 2014 08:13:01 GMT
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If all the MHTDC gates are good and you do not find any pair of (MHTDC-channel, crystal-ID) that shows a correlated time... then it looks like there was something wrong. It might be that something is wrong during ADF-MBS merging. In the directory, where you do the replay, there should be a file called "timestampdifference.dat" that shows a histogram of the GTS-timestamp difference between MBS and ADF part of the data. (It is an ascii file and you have to plot it). Can you post this file here? There should be one peak inside. If not, you can try to make the time window during merging. The default value for this is 3 microseconds, which should be enough.

The strange structure around the peak of the "particle_gamma_time" histogram (the one created by the MHTDC measurement) can be because the MHTDC channels are not aligned. You can align them by putting the correct number in the AgataAdapter.cal They are called "particle_gamma_time_alignment[0]" and you can try to change the offset (slope is always 1). The AgataAdapter provides a way to determine the offsets:

- 1) add in your config file in the AgataAdapter processor the line
`display time_alignment_energy | time_alignment_energy_gate`
and move the gate to cover an energy range from approx. 500 keV to a few MeV (below the saturation signatures called "bumps").
- 2) add in your config file in the AgataAdapter
`display gated_particle_gamma_time`
This will create time spectra corresponding to the energy gate determined above. These time spectra will thus not be affected by low energy walk effects or high energy saturation effects. In these spectra you can determine the center of the peaks and put this position with a minus sign into the .cal file of the adapter.
That should align the time histograms.
