Subject: Re: FINGER ToF detector
Posted by mlcortes on Mon, 11 Aug 2014 09:11:04 GMT
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Hi again Tayfun,

Well, the FingerGainMatching is basically the same as the analysis code use in the new_prespec_Go4. I would say that any difference come from the calibration parameters. Have you made the calibration for the Finger detector for your experiment?
In principle, with any code that you use, if you use the approach of checking the maximum charge deposited you need to calibrate the gain of each PMT. By October 2012 I believe that the voltages of the Finger were set correctly to allow for a proper calibration. You can check this by looking how the raw data of the Finger QDC looks like (If you have not make the calibration and you want to give it a try let me see how this raw spectra look). Of course, if the calibration that is in the new_prespec_Go4 works, you can try to put it in the FingerGainMatchig processor and see how it looks.

There is other approach you can try, based entirely on the timing of the signals, and not in the total energy. The idea is to select the "correct time hit" of each strip per event and then make the average of all the hits, instead of selecting one. This of course affects the time resolution you can achieve, but as you don't need to gain match is an easier starting point. Here I attach my config file for this approach. It has 3 stages: First a preprocessor of each MhTDC involved, then a HitSelection and finally an average of the times. After that you can find a calculation of beta and Tof (that in any case needs calibration). I think I wrote some of this processors in May-June, so maybe is better if you pull from the repository and compile. If you want to give it a try to this idea and you have any question or any problem just let me know.

File Attachments

1) Finger_tof.config, downloaded 293 times