
Subject: Re: Tracking efficiency release/jan14
Posted by [MartinJGaluska](#) on Mon, 24 Feb 2014 15:10:59 GMT
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Hello Klaus,

I have just noticed that you seem to have included the very forward part to calculate the average tracking efficiencies. One reason that the average efficiency might be measured lower than with previous versions of PandaRoot is a change in the FTS ideal tracking which leads to

I have changed the standard behavior of the FTS ideal tracking to make it behave more realistically by requiring a track found by the FTS tracking to have at least 5 FTS hits (compare to <https://forum.gsi.de/index.php?t=msg&goto=15518>). Previously, the FTS ideal tracker "found" all tracks that had at least 1 hit in the FTS.

As I said, from the FTS tracking point of view that behavior is more realistic. However, currently there is only a tracking starting from STT + MVD and from FTS in the code. Both tracking algorithms find mostly distinct sets of tracks so that a merge is easily done. Hits from GEM are only added to tracks found by FTS and by STT + MVD, but there is no tracking starting from GEM being used in the current version of the code.

I was made aware of the drop in efficiency by Donghee in December and as a workaround implemented `PndFtsTrackerIdeal::SetMinFtsHitsPerTrack(int)`; to set the number back to 1 to have an overall detector performance that is similar to before the changes in the FTS ideal tracking. However, I did not change the default value of requiring at least 5 FTS hits.

I have just changed the default value to 1 to avoid possible problems and confusion, especially when the simulation campaigns will be executed and new results will be compared with old ones. At this point I suggest to use the value of 5 for standalone performance studies of the FTS only.

Maybe that was one factor that your efficiencies look worse than before, but in your talk this affected (which is most probably not due to any FTS ideal tracking changes).

Kind regards,
Martin
