Subject: alternative to LHE tracking
Posted by Radoslaw Karabowicz on Fri, 17 Dec 2010 10:59:32 GMT
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Dear All,

In the last few months I have developed a track finder that is using most of the tracking detectors to form global tracks. The task is called PndBarrelTrackFinder, and is located in trunk/global directory. At present it uses MVD, STT, TPC and GEM hits, although the TPC option was not tested yet. I have also developed a QA task which should test the performance of the track finder. It produces several histograms in the output file that show the tracking efficiency, resolution, and number of detector hits in reconstructed tracks as a function of theta.

Few of them are presented below:

You can try yourself the task with macro/global/sim_BARREL.C and macro/global/digi_BARREL.C macros. To run, you should type:

root -l -q 'sim_BARREL.C(100)'
and
root -l -q 'digi_BARREL.C(100,22)'

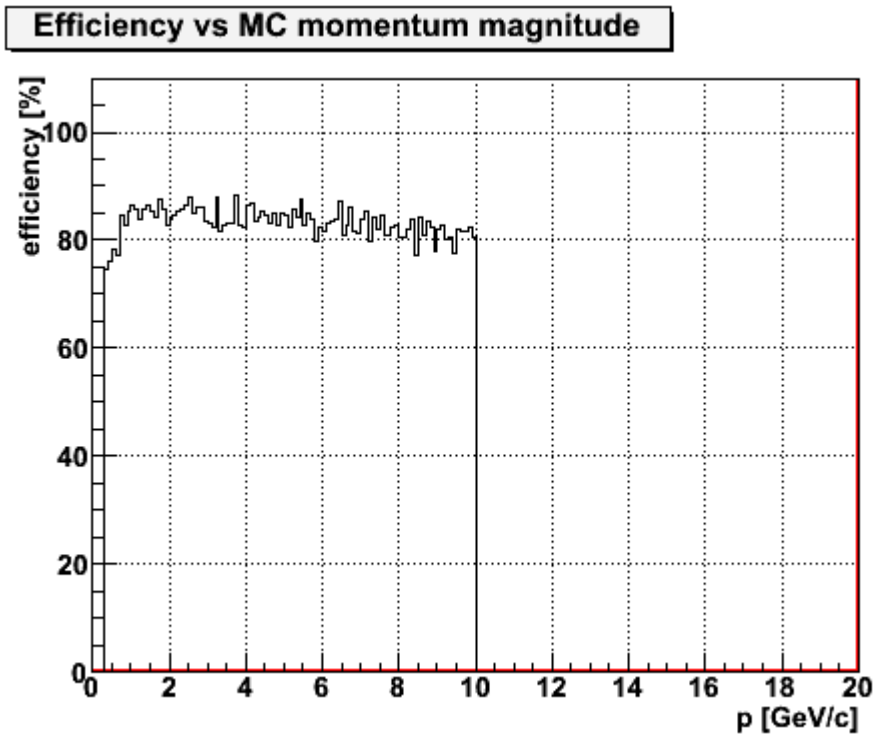
The output file: digi_22Part_n100_BTF.root will contain reconstructed tracks in BarrelTrack and BarrelTrackCand branches of cbmsim tree, and QA histograms in BarrelTrackFinderQA directory.

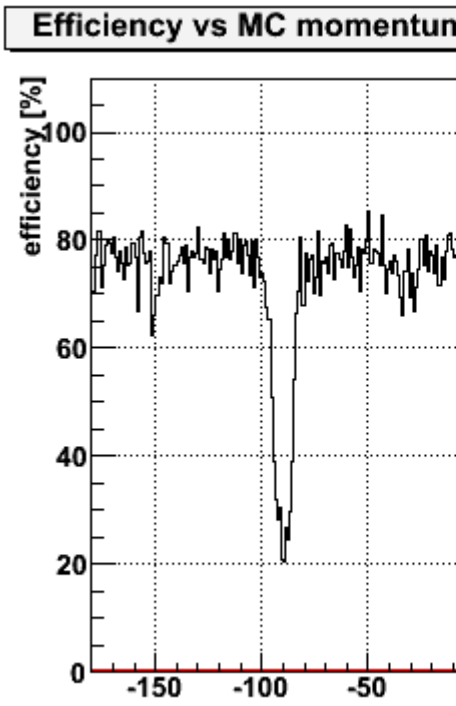
Please test it and report any bugs.

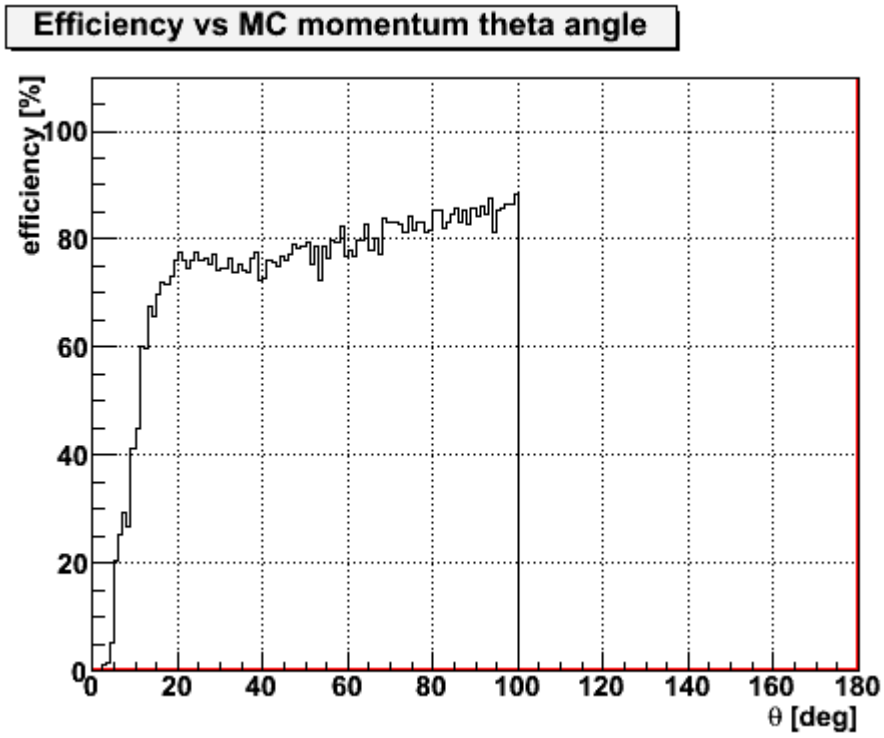
Sincerely yours,
radek

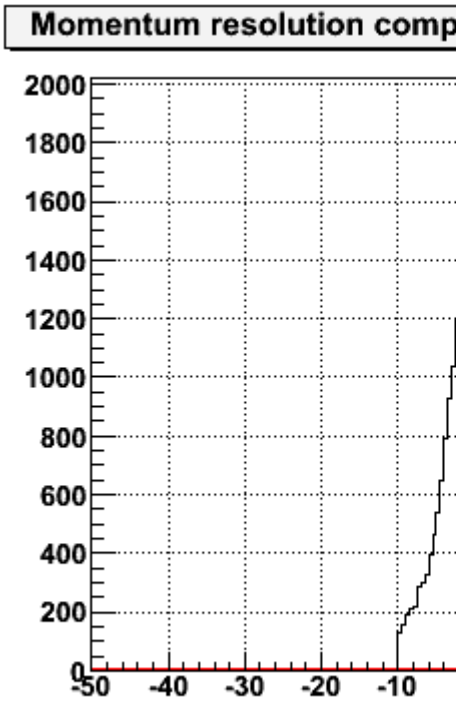
File Attachments

1) eff_and_res.gif, downloaded 1263 times

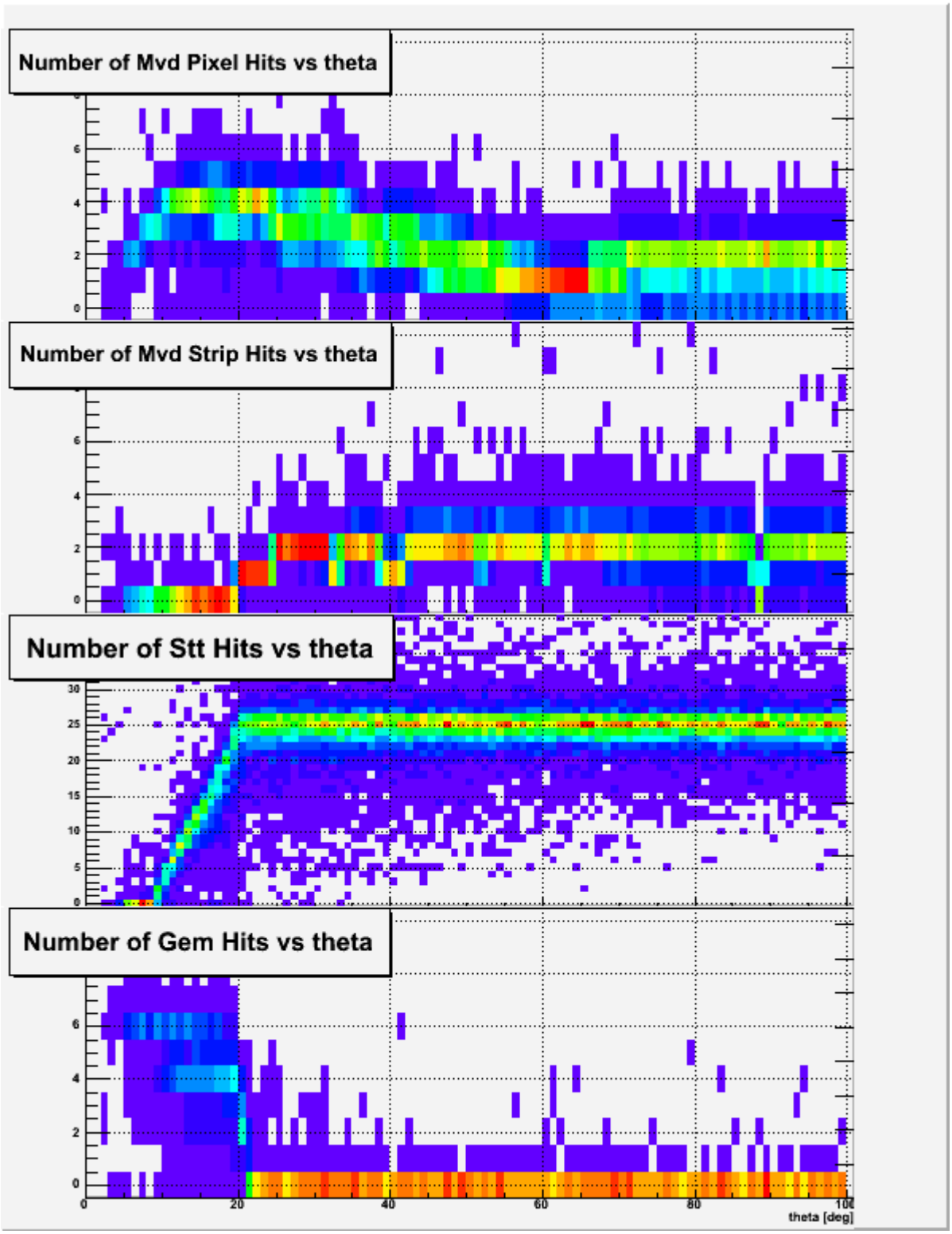








2) detectorHits.gif, downloaded 1332 times


Number of Mvd Pixel Hits vs theta
Number of Mvd Strip Hits vs theta
Number of Stt Hits vs theta
Number of Gem Hits vs theta
theta [deg]