Subject: Re: hyperon fast simualtions
Posted by Karin Schönning on Mon, 12 May 2014 15:38:57 GMT
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OK, I see. I ran some simulations for Lambda Lambdabar at 1.64 GeV/c and 4 GeV/c (with fastsim_opt), and got the following LLbar efficiencies with the different setups in the fast sim:

1.64 GeV/c:

Full: 4.2%
No FS: 3.6%
No Barrel EMC: 4.4%
No MVD/GEM: 0.6%

4 GeV/c:

Full: 4.7%
No FS: 0.8%
No Barrel EMC: 5.0%
No MVD/GEM: 1.5%

some remarks/question marks:

1: The efficiency for the full setup in fastsim is smaller than for the full simulations, which means that the numbers should be taken with a grain of salt. Maybe the relative numbers are relevant though.
2: The efficiency without EMC barrel is slightly better than for the full setup. The difference is within the statistical uncertainty but if the difference remains after running more events (ran only 10000 so far for each case) what could be the reason? As far as I know, the particles are anyway reconstructed before entering the EMC so it shouldn't be because some particles are absorbed by the EMC, right?
3: At low energies, MVD and GEMs are necessary for lambda lambdabar studies.
4. At higher energies, both MVD, GEMs and FS are necesary.

Cheers,
/Karin