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Subject: Problems with new GEM Geometry

Posted by [Tobias Stockmanns](#) on Tue, 17 Apr 2018 09:22:25 GMT

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Dear PandaRooters and GEM experts,

in the analysis of the reaction:  $p\bar{p} \rightarrow X_i X_{i\bar{p}} \pi \pi \rightarrow 3\pi 3\pi \pi p\bar{p}$  we see a significant drop in the reconstruction efficiency depending on the GEM geometry we use. With the old geometry (`gem_3Stations_Tube.root`) we get 18.3% (15.2% MCTruth matched) of reconstructable events with all final state particles in the event, while with the new geometry (`gem_3Stations_realistic_v2.root`) this value drops to 6.4% (4.3% MCTruth matched).

It is not clear if this is a real effect of the additional material introduced by the more realistic description of the GEMs or if there is still a bug in the geometry description which causes the drop of a factor 3.

It would be great if an expert on the GEMs could have a look.

Cheers,

Tobias

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