Subject: Re: Loss of efficiency for electrons at theta~22^deg, due to association failure in EMC
Posted by Ermias on Fri, 20 Feb 2015 23:04:30 GMT
View Forum Message <> Reply to Message

Hi Stefano,

Sorry, I made the wrong assumption about who's working on that part of the code. I didn't mean to offend anyone and I should have known better to check...

For tracks that fail to get associated (emcIndex<0 after the loop over emcHits), I printed out the track MC index, its energy calculated from tracking using pion hypothesis together with the module number and energy of the emcHit with the closest energy to the track.

I only printed out a few hundred events, but It seems like module 3 is contributing to all of the unintended misses in the events I checked. Please let me know if I can provide any other useful feedback...

ps: Do you advise against using oct.14 for any simulation that uses the EMC?

Cheers,
Ermias.

```
pidCandMcIndex= 0    :  trackEnergy= 0.849534   Module= 3    emcHitEnergy= 0.740053
pidCandMcIndex= 0    :  trackEnergy= 4.03095    Module= 3    emcHitEnergy= 3.51169
pidCandMcIndex= 0    :  trackEnergy= 4.97663    Module= 3    emcHitEnergy= 4.8357
pidCandMcIndex= 0    :  trackEnergy= 3.74218    Module= 3    emcHitEnergy= 3.74057
pidCandMcIndex= 0    :  trackEnergy= 2.5047     Module= 3    emcHitEnergy= 2.40757
pidCandMcIndex= 0    :  trackEnergy= 0.405984   Module= 3    emcHitEnergy= 0.347898
pidCandMcIndex= 0    :  trackEnergy= 1.16359    Module= 3    emcHitEnergy= 1.08486
pidCandMcIndex= 0    :  trackEnergy= 2.81498    Module= 3    emcHitEnergy= 2.69472
pidCandMcIndex= 1084 :  trackEnergy= 0.22849    Module= 3    emcHitEnergy= 0.36478
pidCandMcIndex= 1083 :  trackEnergy= 0.428764   Module= 3    emcHitEnergy= 0.36478
pidCandMcIndex= 0    :  trackEnergy= 2.87692    Module= 3    emcHitEnergy= 2.68255
pidCandMcIndex= 0    :  trackEnergy= 1.8808     Module= 3    emcHitEnergy= 1.69046
pidCandMcIndex= 0    :  trackEnergy= 1.2923     Module= 3    emcHitEnergy= 1.2199
pidCandMcIndex= 0    :  trackEnergy= 3.45425    Module= 3    emcHitEnergy= 3.62943
pidCandMcIndex= 0    :  trackEnergy= 4.53307    Module= 3    emcHitEnergy= 3.92069
pidCandMcIndex= 0    :  trackEnergy= 3.95271    Module= 3    emcHitEnergy= 3.83431
pidCandMcIndex= 0    :  trackEnergy= 2.07854    Module= 3    emcHitEnergy= 3.70188
pidCandMcIndex= 0    :  trackEnergy= 0.840579   Module= 3    emcHitEnergy= 0.816676
pidCandMcIndex= 0    :  trackEnergy= 3.44526    Module= 3    emcHitEnergy= 3.43316
pidCandMcIndex= 0    :  trackEnergy= 4.48627    Module= 3    emcHitEnergy= 4.15238
pidCandMcIndex= 0    :  trackEnergy= 3.05255    Module= 3    emcHitEnergy= 3.01602
pidCandMcIndex= 0    :  trackEnergy= 1.46736    Module= 3    emcHitEnergy= 0.845704
pidCandMcIndex= 0    :  trackEnergy= 1.70518    Module= 3    emcHitEnergy= 1.62284
pidCandMcIndex= 0    :  trackEnergy= 1.37598    Module= 3    emcHitEnergy= 1.33291
pidCandMcIndex= 0    :  trackEnergy= 2.54198    Module= 3    emcHitEnergy= 3.89186
pidCandMcIndex= 0    :  trackEnergy= 4.27216    Module= 3    emcHitEnergy= 4.15942
pidCandMcIndex= 0    :  trackEnergy= 1.54658    Module= 3    emcHitEnergy= 1.48835
```

pidCandMcIndex= 0 : trackEnergy= 3.80585 Module= 3 emcHitEnergy= 3.40713
pidCandMcIndex= 0 : trackEnergy= 3.73259 Module= 3 emcHitEnergy= 3.56458
pidCandMcIndex= 0 : trackEnergy= 0.898616 Module= 3 emcHitEnergy= 0.949504
pidCandMcIndex= 0 : trackEnergy= 1.25923 Module= 3 emcHitEnergy= 0.920801
pidCandMcIndex= 0 : trackEnergy= 0.463938 Module= 3 emcHitEnergy= 0.0957954
pidCandMcIndex= 0 : trackEnergy= 2.92428 Module= 3 emcHitEnergy= 3.71379
pidCandMcIndex= 0 : trackEnergy= 0.611837 Module= 3 emcHitEnergy= 0.546316
pidCandMcIndex= 0 : trackEnergy= 4.05194 Module= 3 emcHitEnergy= 4.24035
pidCandMcIndex= 0 : trackEnergy= 0.40836 Module= 3 emcHitEnergy= 0.320374
pidCandMcIndex= 349 : trackEnergy= 0.262772 Module= 3 emcHitEnergy= 0.130423
pidCandMcIndex= 0 : trackEnergy= 4.78844 Module= 3 emcHitEnergy= 4.82905
pidCandMcIndex= 0 : trackEnergy= 0.384974 Module= 3 emcHitEnergy= 0.215389
pidCandMcIndex= 0 : trackEnergy= 1.66274 Module= 3 emcHitEnergy= 1.65131
pidCandMcIndex= 1 : trackEnergy= 0.212189 Module= 3 emcHitEnergy= 0.0214177