Subject: Simulation crashes after "singular matrix" in digitization macro
Posted by Christian Leitold on Fri, 04 Sep 2009 12:16:33 GMT
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Hello,

I have discovered a serious problem in our full simulation: So far, in the last few days I have only done short simulations with a limited number of events, never more than about 50. Now, after doing a little bit more, I was very surprised that the simulation suddenly crashed. I think the reason is in some way to related to an error in the digitization run:

```
 DIGI EXECUTION **********
Hit array contains 56 hits
PndEmcMakeCluster, event: 81
********** PndEmcMakeBump, event: 81 **********
 Digi at (250, 262) was a local max. Energy = 0.822928
 Digi at (248, 281) was a local max. Energy = 0.260981
 Digi at (234, 249) was a local max. Energy = 0.507599
EMC header: fired crystals= 56, digi= 31, Total energy= 2.13144 [GeV], Reconstru
cted clusters= 4, Total energy in clusters= 2.10211 [GeV]
-I- PndSttTrackFinderIdeal: all 114, acc. 1, rec. 1
-I- PndSttMatchTracks: rec. 1, quota 100 %
FIT xy **********
hitcounter: 8
Error in <TDecompLU::DecomposeLUCrout>: matrix is singular
-E- pre prefit FAILED 0 24.8538
-I- PndSttHelixHitProducer: 0 track 8 SttHits, 8 HelixHits created.
----------------------------------------
```

This is followed by fitter exceptions and errors in the Kalman task:

```
FitterException thrown with excString:
findpca failure
in line: 354 in file: /home/cleitold/pandaroot/fairsoft/trunk/trackrep/GeaneTrac
kRep.cxx
with fatal flag 0
FitterException Info Output
  *** S/R ERPROP   IERR =    2


    *** Error in subr. TRPROP   2  called bysubr. ERPROP
```

And then I end up with a tcands.root that does not contain a cbmsim tree. The problem occurs as soon as I do a simulation with about 80 to 100 events, even though it might not occur every time I run the simulation, so I suspect there might be a certain per-event probability for it.

Any ideas how to get rid of that kind of problems?

Thanks
Christian