Subject: [FIXED] use MC particle hypothesis in PndRecoKalmanTask
Posted by Lu Cao on Wed, 30 Oct 2013 13:17:44 GMT
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Dear all,

In the rec macro, when I enable the flag to use the MC particle hypothesis as

```
recoKalmanFwd->SetIdealHyp(kTRUE);
```

my analysis macro crashes with the following error message.
Quote:

```
************************************************************
    initialisation for run id 1377867347
************************************************************
-I- FairRunTimeDB::InitContainer() FairBaseParSet
-I- FairRunTimeDB::InitContainer() PndSensorNamePar
-I- FairRunTimeDB::InitContainer() PndMultiFieldPar
-I- FairRunTimeDB::InitContainer() ANAPidSelections
[ERROR  ] init() ANAPidSelections  not initialized
Error in <FairRuntimeDb::initContainers()>: Error occured during initialization
[INFO   ] The number of entries in chain is 2000
[INFO   ]  Branch: PidAlgoIdealCharged  not found in Tree
[INFO   ]  Branch: PidAlgoIdealCharged  not found in Tree
Warning in <PndAnaPidCombiner::PndAnaPidCombiner::ReadTCA()>: No
"PidAlgoIdealCharged" array found.

 *** Break *** segmentation violation
```

Do any experts know how to fix this problem?
I have tried this flag with the other Kalman task "PndRecoKalmanTask* recoKalman", this problem doesn't happen. My PandaRoot is rev#20993. The 4-step simulation codes and the test analysis macro are attached.

Many thanks in advance.

Best,
Lu

File Attachments

1) dspair.dec, downloaded 386 times
2) sim.C, downloaded 393 times
3) dig.C, downloaded 421 times
4) rec.C, downloaded 418 times
5) pid.C, downloaded 421 times
6) mytask.C, downloaded 452 times

Subject: Re: use MC particle hypothesis in PndRecoKalmanTask
Posted by StefanoSpataro on Wed, 30 Oct 2013 15:31:32 GMT
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You need to add the mc track associator for the forward ideal tracker and to uncomment the correlated line in the kalman task:

```
  PndFtsTrackerIdeal* trackFts = new PndFtsTrackerIdeal();
  trackFts->SetRelativeMomentumSmearing(0.05);
  trackFts->SetVertexSmearing(0.05, 0.05, 0.05);
  trackFts->SetTrackingEfficiency(1.);
  trackFts->SetTrackOutput("FtsIdealTrack");
  fRun->AddTask(trackFts);


->PndMCTrackAssociator* trackMCfwd = new PndMCTrackAssociator();
->trackMCfwd->SetTrackInBranchName("FtsIdealTrack");
->trackMCfwd->SetTrackOutBranchName("FtsIdealTrackID");
->fRun->AddTask(trackMCfwd);

  PndRecoKalmanTask* recoKalmanFwd = new PndRecoKalmanTask();
  recoKalmanFwd->SetTrackInBranchName("FtsIdealTrack");
->recoKalmanFwd->SetTrackInIDBranchName("FtsIdealTrackID");
  recoKalmanFwd->SetTrackOutBranchName("FtsIdealGenTrack");
  recoKalmanFwd->SetBusyCut(50); // CHECK to be tuned
  recoKalmanFwd->SetIdealHyp(kTRUE);
  //recoKalmanFwd->SetNumIterations(3);
  fRun->AddTask(recoKalmanFwd);
```

Remember to switch on the idealhyp also for the barrel kalman task:

```
  recoKalman->SetIdealHyp(kTRUE);
```

The default macros in macro/run have such modification (but idealhyp set to kFALSE)

Subject: Re: use MC particle hypothesis in PndRecoKalmanTask
Posted by Lu Cao on Thu, 31 Oct 2013 11:46:54 GMT
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It works fine now.
Many thanks.

Best,
Lu