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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

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## File Attachments

1) [dspair.dec](#), downloaded 376 times

2) [sim.C](#), downloaded 384 times

3) [dig.C](#), downloaded 408 times

4) [rec.C](#), downloaded 408 times

5) [pid.C](#), downloaded 411 times

6) [mytask.C](#), downloaded 441 times

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Subject: Re: use MC particle hypothesis in PndRecoKalmanTask

Posted by [Stefano Spataro](#) 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)

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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

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