Subject: eta prime dalitz
Posted by Michael Kunkel on Wed, 12 Jun 2013 00:46:54 GMT
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Greetings again,

When I attempt to run an etaPrime simulation, namely the dalitz decay of etaprime. I get error
Quote:"Error in <PChannel::Initialization>: No database entry for:
eta' --> dilepton + g"

But if I look in PDalitzDecay.cc eta' is listed.

What our end goal is is to simulate the etaprime dalitz and also the etaprime pi+ pi- dilepton.

Also oddly enough if I try to set etaprime dalitz to QED =1
((PDalitzDecay *)makeDistributionManager()->GetDistribution("eta'_dalitz"))->SetUseQED(1);
This also produces error. Quote:Error: illegal pointer to class object
(PDalitzDecay*)makeDistributionManager()->GetDistribution("eta'_dalitz ")

Here is a working macro. I know this works because I can replace eta' with eta and all is well.

```
void SIMULATE_EtaPrime_Dalitz(){

   double ebeam_min = 1.1725;
   double ebeam_max = 5.44575;
   PBeamSmearing *beam_smear = new PBeamSmearing("beam_smear", "Beam smearing");
   TF1* beam_smear_fn = new TF1("beam_smear_fn", "1./x", ebeam_min, ebeam_max);

   beam_smear->SetReaction("g + p");
   beam_smear->SetMomentumFunction(beam_smear_fn);
   makeDistributionManager()->Add(beam_smear);

   //((PDalitzDecay *
)makeDistributionManager()->GetDistribution("eta'_dalitz"))->SetUseQED(1);

   gROOT->Reset();
   //PUtils::SetSeed(123); //this is to have a fixed SEED. By default, the systime is used....



   PReaction my_reaction("_P1 = 2.2","g","p","p eta' [dilepton [e+ e-] g]","etaP_Aphi",1,0,0,0);


   my_reaction.Loop(1500);



}
```

Subject: Re: eta prime dalitz
Posted by Ingo Froehlich on Wed, 12 Jun 2013 06:18:13 GMT
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Hi,

the problem is known and will be corrected soon. The eta prime Dalitz decay is there in the physics class but missing in the data base. You have to add:

makeStaticData()->AddDecay(-1, "eta' -> g + dilepton", "eta'", "g,dilepton", 0.0009);

in the very beginning of your macro.

Subject: Re: eta prime dalitz
Posted by Michael Kunkel on Sun, 25 Aug 2013 22:03:44 GMT
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Edit: Disregard, didnt have threshold set to an appropriate decimal.

Greetings,

When I apply the above prescription, I get the following warnings
Warning in <PHadronDecayM1::sampleM1>: not enough energy
Warning in <PHadronDecayM1::SampleMass>: failed in [g + p_m1_p_eta'], ecm=1.849045
Warning in <PChannel::Genbod>: No mass sampling model(s) found in g + p --> p + eta'

I do get a distribution and the codes exits successfully, I thought I would report it.

Subject: Re: eta prime dalitz
Posted by Ingo Froehlich on Wed, 28 Aug 2013 09:51:11 GMT
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This happens when the parent does not have sufficient energy (maybe due to the beam smearing?). Anyhow, the false events are resampled.