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Subject: Re: Pion off Nuclei [quasi-free]

Posted by [Johannes Siebenson](#) on Tue, 17 Apr 2012 12:09:04 GMT

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Hello,

ok with Pluto v5.40 it seems to work. But now I tried to include production of Lambda and K0S and somehow this does not work. I probably do something wrong. Could you tell me what?

```
//Add our quasi-free composite:
```

```
makeStaticData()->AddParticle(14009, "pi-p",0.938272+0.139570);
```

```
//Creates just a symbolic link:
```

```
makeStaticData()->AddAlias("pi- + p","pi-+p");
```

```
//Add our quasi-free composite:
```

```
makeStaticData()->AddParticle(18016, "Lambda + K0S",1.115683+0.497672);
```

```
//Creates just a symbolic link:
```

```
makeStaticData()->AddAlias("Lambda + K0S","Lambda+K0S");
```

```
//Executes the fermi plugin which adds also nuclei:
```

```
makeDistributionManager()->Exec("nucleus_fermi");
```

```
//Add a new composite particle (target_id*1000 * beam_id)
```

```
//N.B. that "nucleus_fermi" has already added the 12C (with id=614)
```

```
makeStaticData()->AddParticle(614009,"pi- + 12C",11.174862+0.139570);
```

```
//Creates again a symbolic link:
```

```
makeStaticData()->AddAlias("pi- + 12C","pi-+12C");
```

```
//adds a decay by using the "pi- + 12C" particle as created above:
```

```
makeStaticData()->AddDecay(-1, "pi- + 12C -> (K0S + Lambda) + 11B (quasi-free)","pi- + 12C","Lambda + K0S,11B", 1.0);
```

```
//This is the fermi model (contributed by M. Dieterle and L. Witthauer, Basel):
```

```
PFermiMomentumGA * pmodel = new PFermiMomentumGA("pi-p_in_12C@pi- + 12C_to_Lambda + K0S_11B", "Quasi-free particle production <nucleus_fermi>",-1);
```

```
pmodel->Add("q,parent");
```

```
pmodel->Add("pi-,grandparent,beam");
```

```
pmodel->Add("12C,grandparent,target");
```

```
pmodel->Add("11B,daughter,spectator");
```

```
pmodel->Add("q,daughter,composite");
```

```
pmodel->Add("Lambda,granddaughter,participant");
```

```
pmodel->Add("K0S,granddaughter,p2");
```

```
makeDistributionManager()->Add(pmodel);
```

```
//This is our reaction, in this case just a quasi-free elastic reaction:
```

```
PReaction *Reac = new PReaction ("_P1=3.6","pi-","12C","(pi- p) Lambda K0S (11B)","filename");
```

```
//TH2F * histo2 = new TH2F ("histo2","Rap. vs. Pt",50,-1.5,3.5, 50,0,1.5);
```

```
//Reac->Do(histo2,"foreach(pi-); _x = [pi-]->Rapidity(); _y=[pi-]->Pt(); ");
```

```
Reac->Print();
```

```
Reac->loop(1000); // Number of events
```

```
//histo2->Draw("colz");
```

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