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Subject: Problems with FTF/DPM with Geant4  
Posted by [StefanoSpataro](#) on Wed, 01 Apr 2015 15:30:43 GMT  
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Dear DPM and FTF experts,  
trying to use these event generators with new packages I have found several problems once using geant4, while with geant3 everything seems fine.

In particular, if I run dpm direct with geant4 (macro/qa/dpm4/sim\_complete.C) I have the following error once TGeant4 is created (I believe):

Info in <TG4RootNavMgr::SetNavigator>: TG4RootNavigator created and registered to G4TransportationManager

```
----- EEEE ----- G4Exception-START ----- EEEE -----  
*** G4Exception : PART002  
    issued by : G4ParticleTable::CheckReadiness()  
Illegal use of G4ParticleTable : Access to G4ParticleTable for finding a particle or equivalent  
operation occurs before G4VUserPhysicsList is instantiated and  
assigned to G4RunManager. Such an access is prohibited by  
Geant4 version 8.0. To fix this problem, please make sure that  
your main() instantiates G4VUserPhysicsList and set it to  
G4RunManager before instantiating other user classes such as  
G4VUserPrimaryParticleGeneratorAction.  
*** Fatal Exception *** core dump ***  
----- EEEE ----- G4Exception-END ----- EEEE -----
```

\*\*\* G4Exception: Aborting execution \*\*\*

If I try ftf with geant4 (macro/qa/ftf4/sim\_complete.C):

Info in <TG4RootNavMgr::SetNavigator>: TG4RootNavigator created and registered to G4TransportationManager

```
----- EEEE ----- G4Exception-START ----- EEEE -----  
*** G4Exception : Run0002  
    issued by : G4RunManagerKernel::G4RunManagerKernel()  
!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!  
G4RunManagerKernel fatal exception  
-- Following particles have already been registered  
   before G4RunManagerKernel is instantiated.  
   B+  
   B-  
   B0  
   Bc+
```

Toggle Spoiler

Bc-  
Bs0

D+  
D-  
D0  
Ds+  
Ds-  
Genericlon  
He3  
J/psi  
N(1440)+  
N(1440)0  
N(1520)+  
N(1520)0  
N(1535)+  
N(1535)0  
N(1650)+  
N(1650)0  
N(1675)+  
N(1675)0  
N(1680)+  
N(1680)0  
N(1700)+  
N(1700)0  
N(1710)+  
N(1710)0  
N(1720)+  
N(1720)0  
N(1900)+  
N(1900)0  
N(1990)+  
N(1990)0  
N(2090)+  
N(2090)0  
N(2190)+  
N(2190)0  
N(2220)+  
N(2220)0  
N(2250)+  
N(2250)0  
Upsilon  
a0(1450)+  
a0(1450)-  
a0(1450)0  
a0(980)+  
a0(980)-  
a0(980)0  
a1(1260)+  
a1(1260)-  
a1(1260)0  
a2(1320)+  
a2(1320)-  
a2(1320)0  
alpha

anti\_B0  
anti\_Bs0  
anti\_D0  
anti\_He3  
anti\_N(1440)+  
anti\_N(1440)0  
anti\_N(1520)+  
anti\_N(1520)0  
anti\_N(1535)+  
anti\_N(1535)0  
anti\_N(1650)+  
anti\_N(1650)0  
anti\_N(1675)+  
anti\_N(1675)0  
anti\_N(1680)+  
anti\_N(1680)0  
anti\_N(1700)+  
anti\_N(1700)0  
anti\_N(1710)+  
anti\_N(1710)0  
anti\_N(1720)+  
anti\_N(1720)0  
anti\_N(1900)+  
anti\_N(1900)0  
anti\_N(1990)+  
anti\_N(1990)0  
anti\_N(2090)+  
anti\_N(2090)0  
anti\_N(2190)+  
anti\_N(2190)0  
anti\_N(2220)+  
anti\_N(2220)0  
anti\_N(2250)+  
anti\_N(2250)0  
anti\_alpha  
anti\_b\_quark  
anti\_c\_quark  
anti\_d\_quark  
anti\_dd1\_diquark  
anti\_delta(1600)+  
anti\_delta(1600)++  
anti\_delta(1600)-  
anti\_delta(1600)0  
anti\_delta(1620)+  
anti\_delta(1620)++  
anti\_delta(1620)-  
anti\_delta(1620)0  
anti\_delta(1700)+  
anti\_delta(1700)++  
anti\_delta(1700)-  
anti\_delta(1700)0  
anti\_delta(1900)+

anti\_delta(1900)++  
anti\_delta(1900)-  
anti\_delta(1900)0  
anti\_delta(1905)+  
anti\_delta(1905)++  
anti\_delta(1905)-  
anti\_delta(1905)0  
anti\_delta(1910)+  
anti\_delta(1910)++  
anti\_delta(1910)-  
anti\_delta(1910)0  
anti\_delta(1920)+  
anti\_delta(1920)++  
anti\_delta(1920)-  
anti\_delta(1920)0  
anti\_delta(1930)+  
anti\_delta(1930)++  
anti\_delta(1930)-  
anti\_delta(1930)0  
anti\_delta(1950)+  
anti\_delta(1950)++  
anti\_delta(1950)-  
anti\_delta(1950)0  
anti\_delta+  
anti\_delta++  
anti\_delta-  
anti\_delta0  
anti\_deuteron  
anti\_k(1460)0  
anti\_k0\_star(1430)0  
anti\_k1(1270)0  
anti\_k1(1400)0  
anti\_k2(1770)0  
anti\_k2\_star(1430)0  
anti\_k2\_star(1980)0  
anti\_k3\_star(1780)0  
anti\_k\_star(1410)0  
anti\_k\_star(1680)0  
anti\_k\_star0  
anti\_kaon0  
anti\_lambda  
anti\_lambda(1405)  
anti\_lambda(1520)  
anti\_lambda(1600)  
anti\_lambda(1670)  
anti\_lambda(1690)  
anti\_lambda(1800)  
anti\_lambda(1810)  
anti\_lambda(1820)  
anti\_lambda(1830)  
anti\_lambda(1890)  
anti\_lambda(2100)

anti\_lambda(2110)  
anti\_lambda\_b  
anti\_lambda\_c+  
anti\_neutron  
anti\_nu\_e  
anti\_nu\_mu  
anti\_nu\_tau  
anti\_omega-  
anti\_omega\_b-  
anti\_omega\_c0  
anti\_proton  
anti\_s\_quark  
anti\_sd0\_diquark  
anti\_sd1\_diquark  
anti\_sigma(1385)+  
anti\_sigma(1385)-  
anti\_sigma(1385)0  
anti\_sigma(1660)+  
anti\_sigma(1660)-  
anti\_sigma(1660)0  
anti\_sigma(1670)+  
anti\_sigma(1670)-  
anti\_sigma(1670)0  
anti\_sigma(1750)+  
anti\_sigma(1750)-  
anti\_sigma(1750)0  
anti\_sigma(1775)+  
anti\_sigma(1775)-  
anti\_sigma(1775)0  
anti\_sigma(1915)+  
anti\_sigma(1915)-  
anti\_sigma(1915)0  
anti\_sigma(1940)+  
anti\_sigma(1940)-  
anti\_sigma(1940)0  
anti\_sigma(2030)+  
anti\_sigma(2030)-  
anti\_sigma(2030)0  
anti\_sigma+  
anti\_sigma-  
anti\_sigma0  
anti\_sigma\_b+  
anti\_sigma\_b-  
anti\_sigma\_b0  
anti\_sigma\_c+  
anti\_sigma\_c++  
anti\_sigma\_c0  
anti\_ss1\_diquark  
anti\_su0\_diquark  
anti\_su1\_diquark  
anti\_t\_quark  
anti\_triton

anti\_u\_quark  
anti\_ud0\_diquark  
anti\_ud1\_diquark  
anti\_uu1\_diquark  
anti\_xi(1530)-  
anti\_xi(1530)0  
anti\_xi(1690)-  
anti\_xi(1690)0  
anti\_xi(1820)-  
anti\_xi(1820)0  
anti\_xi(1950)-  
anti\_xi(1950)0  
anti\_xi(2030)-  
anti\_xi(2030)0  
anti\_xi-  
anti\_xi0  
anti\_xi\_b-  
anti\_xi\_b0  
anti\_xi\_c+  
anti\_xi\_c0  
b1(1235)+  
b1(1235)-  
b1(1235)0  
b\_quark  
c\_quark  
chargedgeantino  
d\_quark  
dd1\_diquark  
delta(1600)+  
delta(1600)++  
delta(1600)-  
delta(1600)0  
delta(1620)+  
delta(1620)++  
delta(1620)-  
delta(1620)0  
delta(1700)+  
delta(1700)++  
delta(1700)-  
delta(1700)0  
delta(1900)+  
delta(1900)++  
delta(1900)-  
delta(1900)0  
delta(1905)+  
delta(1905)++  
delta(1905)-  
delta(1905)0  
delta(1910)+  
delta(1910)++  
delta(1910)-  
delta(1910)0

delta(1920)+  
delta(1920)++  
delta(1920)-  
delta(1920)0  
delta(1930)+  
delta(1930)++  
delta(1930)-  
delta(1930)0  
delta(1950)+  
delta(1950)++  
delta(1950)-  
delta(1950)0  
delta+  
delta++  
delta-  
delta0  
deuteron  
e+  
e-  
eta  
eta(1295)  
eta(1405)  
eta(1475)  
eta2(1645)  
eta2(1870)  
eta\_prime  
etac  
f0(1370)  
f0(1500)  
f0(1710)  
f0(600)  
f0(980)  
f1(1285)  
f1(1420)  
f2(1270)  
f2(1810)  
f2(2010)  
f2\_prime(1525)  
gamma  
geantino  
gluon  
h1(1170)  
h1(1380)  
k(1460)+  
k(1460)-  
k(1460)0  
k0\_star(1430)+  
k0\_star(1430)-  
k0\_star(1430)0  
k1(1270)+  
k1(1270)-  
k1(1270)0

k1(1400)+  
k1(1400)-  
k1(1400)0  
k2(1770)+  
k2(1770)-  
k2(1770)0  
k2\_star(1430)+  
k2\_star(1430)-  
k2\_star(1430)0  
k2\_star(1980)+  
k2\_star(1980)-  
k2\_star(1980)0  
k3\_star(1780)+  
k3\_star(1780)-  
k3\_star(1780)0  
k\_star(1410)+  
k\_star(1410)-  
k\_star(1410)0  
k\_star(1680)+  
k\_star(1680)-  
k\_star(1680)0  
k\_star+  
k\_star-  
k\_star0  
kaon+  
kaon-  
kaon0  
kaon0L  
kaon0S  
lambda  
lambda(1405)  
lambda(1520)  
lambda(1600)  
lambda(1670)  
lambda(1690)  
lambda(1800)  
lambda(1810)  
lambda(1820)  
lambda(1830)  
lambda(1890)  
lambda(2100)  
lambda(2110)  
lambda\_b  
lambda\_c+  
mu+  
mu-  
neutron  
nu\_e  
nu\_mu  
nu\_tau  
omega  
omega(1420)



omega(1650)  
omega-  
omega3(1670)  
omega\_b-  
omega\_c0  
opticalphoton  
phi  
phi(1680)  
phi3(1850)  
pi(1300)+  
pi(1300)-  
pi(1300)0  
pi+  
pi-  
pi0  
pi2(1670)+  
pi2(1670)-  
pi2(1670)0  
proton  
rho(1450)+  
rho(1450)-  
rho(1450)0  
rho(1700)+  
rho(1700)-  
rho(1700)0  
rho+  
rho-  
rho0  
rho3(1690)+  
rho3(1690)-  
rho3(1690)0  
s\_quark  
sd0\_diquark  
sd1\_diquark  
sigma(1385)+  
sigma(1385)-  
sigma(1385)0  
sigma(1660)+  
sigma(1660)-  
sigma(1660)0  
sigma(1670)+  
sigma(1670)-  
sigma(1670)0  
sigma(1750)+  
sigma(1750)-  
sigma(1750)0  
sigma(1775)+  
sigma(1775)-  
sigma(1775)0  
sigma(1915)+  
sigma(1915)-  
sigma(1915)0

sigma(1940)+  
sigma(1940)-  
sigma(1940)0  
sigma(2030)+  
sigma(2030)-  
sigma(2030)0  
sigma+  
sigma-  
sigma0  
sigma\_b+  
sigma\_b-  
sigma\_b0  
sigma\_c+  
sigma\_c++  
sigma\_c0  
ss1\_diquark  
su0\_diquark  
su1\_diquark  
t\_quark  
tau+  
tau-  
triton  
u\_quark  
ud0\_diquark  
ud1\_diquark  
uu1\_diquark  
xi(1530)-  
xi(1530)0  
xi(1690)-  
xi(1690)0  
xi(1820)-  
xi(1820)0  
xi(1950)-  
xi(1950)0  
xi(2030)-  
xi(2030)0  
xi-  
xi0  
xi\_b-  
xi\_b0  
xi\_c+  
xi\_c0

!!

\*\*\* Fatal Exception \*\*\* core dump \*\*\*  
----- EEEE ----- G4Exception-END ----- EEEE -----

\*\*\* G4Exception: Aborting execution \*\*\*

The latter case comes from the fact that FTF is using Geant4 particle table without the G4RunManagerKernel initialization. The first i case I do not understand since it seems to me the DPM code is not using geant4.

I would like to ask the experts to check and fix, in practice now we cannot produce background events with geant4.

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