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-
GenericIon
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.
