

Problems trying to generated events at high energies

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--> probe      : PDG-code = 14 (nu mu)
--> nucl. target : Z = 8, A = 16, PDG-Code = 1000080160 (016)
--> hit nucleon  : no set
--> hit quark    : no set
--> probe 4P     : (E =          0, Px =          0, Py =          0, Pz =          0)
--> target 4P    : (E =    14.8951, Px =          0, Py =          0, Pz =          0)
at Ev = 1e+06 GeV
1522310215 NOTICE gevgen : [n] <gEvGen.cxx::GenerateEventsAtFixedInitState (299)> : *** Generating event..... 0
1522310215 NOTICE GEVGDriver : [n] <GEVGDriver.cxx::GenerateEvent (318)> :
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Requesting from event generation thread: genie::EventGenerator/DIS-CC to generate the selected interaction
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1522310215 WARN GEVGDriver : [n] <GEVGDriver.cxx::GenerateEvent (336)> : An unphysical event was generated...
1522310215 WARN GEVGDriver : [n] <GEVGDriver.cxx::GenerateEvent (346)> : The generated unphysical event is rejected
1522310215 WARN GEVGDriver : [n] <GEVGDriver.cxx::GenerateEvent (353)> : Attempting to regenerate the event...
1522310215 NOTICE GEVGDriver : [n] <GEVGDriver.cxx::GenerateEvent (318)> :
```

E [GeV]	Trials
1e5	0
1e6	1
1e7	49
1e8	194

Found a program that is used to compute NLO cross section → DISPred

- It was used by Cooper-Sakkar (2011) → ICECUBE
- Inherit classes from LHAPDF.
- NLO computation of F2, F3 and F1 is performed with QCDNUM (developed by Michiel Botje from NIKHEF!).
- I am implementing it in our homemade code (seems quite easy).