
Subject: [SOLVED] PVertexFile

Posted by [Michael Kunkel](#) on Wed, 13 Jun 2012 21:01:24 GMT

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Greetings,

I had a question on the format of PVertexFile.
Is it one leaf of array vX:vY:vZ, or separate leaves?

I ask because I am trying to smear vertices along a target that is 400mm in length and 20mm in radius.

I create a uniform distribution of 50M events of a cylinder equally the dimensions mentioned, called vertex.root with separate leaves vX, vY, vZ, tree name "vertex" as prescribed in <http://www-linux.gsi.de/~hadeshyp/pluto/v5.40/PVertexFile.html>

When I attempt to use this

```
//#include "loadPluto.h";  
//Program to generate multiple PLUTO root file  
//Author Michael C. Kunkel  
#include "TH1.h"  
#include "TH2.h"  
#include "TH3.h"  
#include "TChain.h"  
#include "TCanvas.h"  
#include "TF1.h"  
#include "/w/hallb/clasg12/mkunkel/PLUTO/pluto_v5.40/src/PParticle.h"  
#include "/w/hallb/clasg12/mkunkel/PLUTO/pluto_v5.40/src/PReaction.h"  
#include "/w/hallb/clasg12/mkunkel/PLUTO/pluto_v5.40/src/PBeamSmearing.h"  
#include "/w/hallb/clasg12/mkunkel/PLUTO/pluto_v5.40/src/PVertexFile.h"
```

```
void Vertex_Simulation(){  
  
    gROOT->Reset();  
  
    char nam1[60] = "/volatile/clas/clasg12/mkunkel/GG_ETA_SIM/PLUTO_GEN/eta_";  
  
    char nam2[25] = "_gammagamma_vertex";  
  
    for(int ij = 1; ij<=1; ij++){  
        char c[10];  
        sprintf(c, "%d", ij);  
        char creater[75];  
        sprintf(creater, "%s%s%s", nam1, c, nam2);  
        cout << creater<<endl;  
  
        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);
```

```
PReaction my_reaction("_P1 = 2.2", "g", "p", "p eta [g g]", creator, 1, 0, 1, 0);
```

```
//Construct the vertex container:
```

```
PVertexFile *vertex = new PVertexFile();
```

```
vertex->OpenFile("/w/hallb/clasg12/mkunkel/PLUTO/ETA_GAMMAGAMMA_SIM/VERTICES/v  
ertex.root");
```

```
//add to prologue action
```

```
my_reaction.AddPrologueBulk(vertex);
```

```
// my_reaction.Print(); //The "Print()" statement is optional
```

```
my_reaction.Loop(50000);
```

```
}
```

```
}
```

I receive a segmentation fault, if I remove the vertex the code runs correctly.
