Subject: Re: Beam Smearing
Posted by Ingo Fröhlich on Thu, 12 Apr 2012 19:14:20 GMT
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Hmm, I did a quick test with the recent version (v5.40.1) using the following macro:

```
{

    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", "-3.82136e-03 + 7.24636e-02/x",
ebeam_min, ebeam_max);

    beam_smear->SetReaction("g + p");
    beam_smear->SetMomentumFunction(beam_smear_fn);
    makeDistributionManager()->Add(beam_smear);

    TH1F * histo1 = new TH1F ("histo1","c.m.",100,1.,4.);

    PReaction my_reaction("_P1 = 2.2","g","p","p eta [dilepton [e+ e-] g]","eta_dalitz",1,0,0,0);
    my_reaction.Do(histo1,"_x = [g+p]->M()");

    my_reaction.Print();
    my_reaction.Loop(10000);

}
```

The output is as follows:

```
 Reaction of 7 Particles interacting via 3 Channels
   Reaction Particles:
     0. quasi-particle (g beam and p target)
     1. p
     2. eta
     3. dilepton
     4. g
     5. e+
     6. e-
   Reaction Channels:
     1. g + p --> p + eta
        Interaction model(s):
        [beam_smear] Beam smearing
        [g + p_fix_p_eta] 2-body fixed mass, partial width {/}
        [g + p_genbod_p_eta] Pluto build-in genbod {/genbod}
     2. eta --> dilepton + photon (Dalitz)
        Interaction model(s):
        [eta_dalitz] Dalitz decay {/}
        [eta_genbod_g_dilepton] Pluto build-in genbod {/genbod}
     3. dilepton --> e+ + e-
        Interaction model(s):
```

[dilepton_fixed_e-_e+] Fixed product masses {/}
[dilepton_genbod_e-_e+] Pluto build-in genbod {/genbod}
[eta_dilepton_helicity] Helicity angle of the dilepton decay of eta
Bulk Classes:
Epilogue: <PProjector>
Output Files:
Root : eta_dalitz.root, all particles on file.
PReaction: calculating widths in PData...
Info in <PUtilsREngine::PUtilsREngine>: Random seed set to 60606
20% done in 1.261318 sec
40% done in 1.520687 sec
60% done in 1.780155 sec
80% done in 2.042362 sec
100% done in 1.300976 sec
CPU time 1.300000 sec

Are you using maybe an older version?

## File Attachments

1) c1.png, downloaded 1229 times

