
Subject: Re: Evtgen - prob>probmax

Posted by [MartinJGaluska](#) on Mon, 04 Jun 2012 11:24:33 GMT

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Thank you Stefano,

I get the message in 325 out of 500 simulated events. So, I would say, it occurs quite frequently. I have skimmed the documentation and could not find any reference to that output. Looking at the EvtGen source code I found the following method in trunk/pgenerators/EvtGen/EvtGenBase/EvtDecayBase.cc which I believe is responsible for the output:

```
double EvtDecayBase::getProbMax( double prob ) {

    int i;

    //diagnostics
    sum_prob+=prob;
    if (prob>max_prob) max_prob=prob;

    if ( defaultprobmax && ntimes_prob<=500 ) {
        //We are building up probmax with this iteration
        ntimes_prob += 1;
        if ( prob > probmax ) { probmax = prob;}
        if (ntimes_prob==500) {
            probmax*=1.2;
        }
        return 1000000.0*prob;
    }

    if ( prob> probmax*1.0001) {

        report(INFO,"EvtGen") << "prob > probmax:( "<<prob<<" "<<probmax<<" );
        report(INFO,"") << "("<<_modelname.c_str()<<" ) ";
        report(INFO,"") << EvtPDL::name(_parent).c_str()<<" -> ";
        for(i=0;i<_ndaug;i++){
            report(INFO,"") << EvtPDL::name(_daug[i]).c_str() << " ";
        }
        report(INFO,"") << endl;

        if (defaultprobmax) probmax = prob;

    }

    ntimes_prob += 1;

    return probmax;

} //getProbMax
```

The purpose and meaning of this output looks rather cryptic to me. The corresponding header file only adds the following information:

Quote:

```
//Methods to set the maximum probability.
```

Is there a forum specifically for EvtGen? (I only found this website:
<http://evtgen.warwick.ac.uk/cms/contact>) Or should I write an email to the authors?
