Status of $\gamma\gamma$->HH analysis

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10 Dec. 2009

$\gamma\gamma$->ZZ Event Generator

- progress

  Developing $\gamma\gamma$->ZZ generator is completed.

  (Luminosity spectrum and Z decay mode are included.)

Z decay mode

lepton : e^+e^-, $\nu_e\overline{\nu}_e$, $\mu^+\mu^-$, $\nu_\mu\overline{\nu}_\mu$, $\tau^+\tau^-$, $\nu_\tau\overline{\nu}_\tau$

quark : uU, dD, sS, cC, bB (capitals are anti-particle)

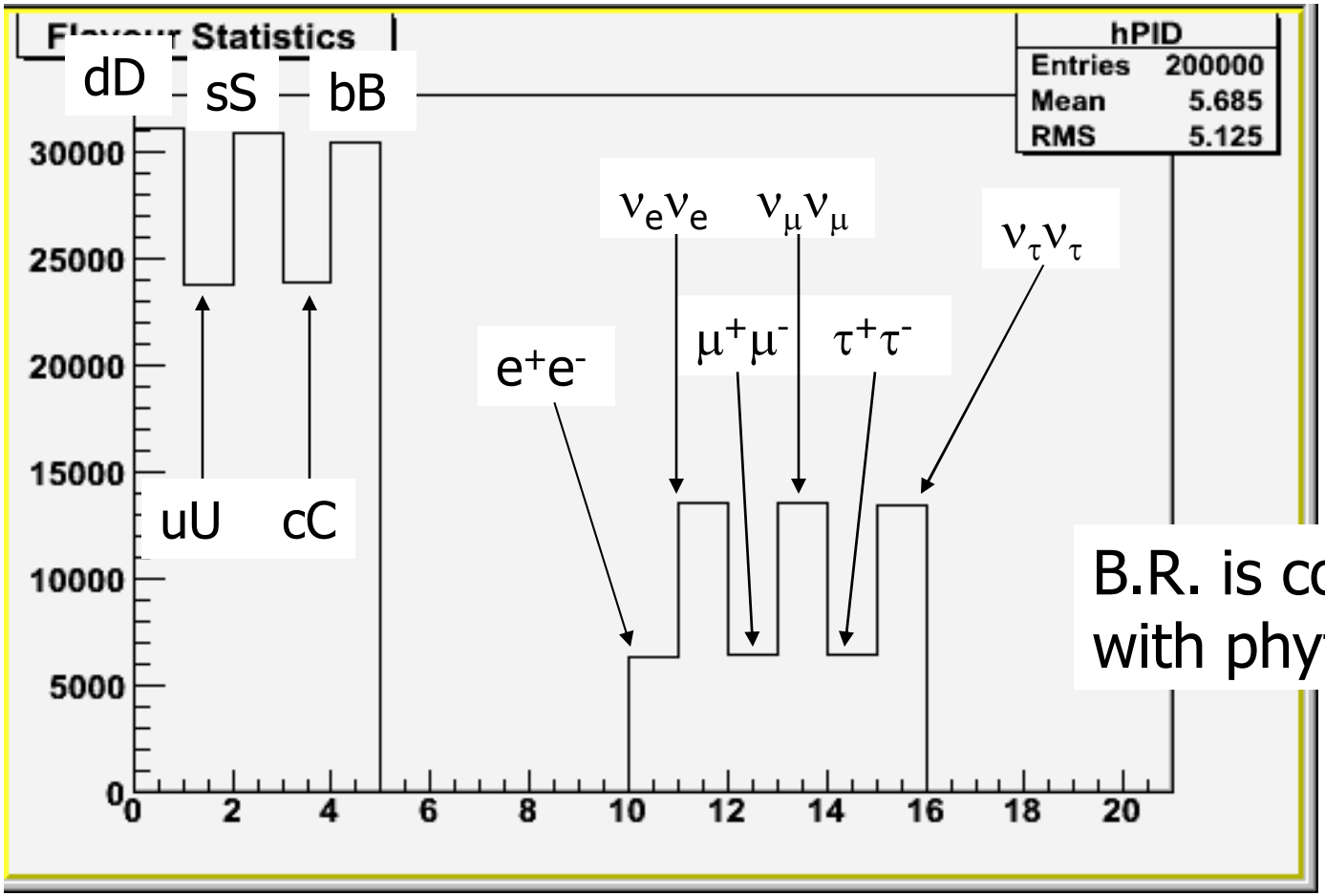
branching ratio are...

```
--> nu_e nu_ebar          :  BR = 0.0668
--> e ebar                :  BR = 0.0336
--> nu_mu nu_mubar        :  BR = 0.0668
--> mu mubar              :  BR = 0.0336
--> nu_tau nu_taubar      :  BR = 0.0668
--> tau taubar            :  BR = 0.0335

--> up upbar              :  BR = 0.1195
--> down downbar          :  BR = 0.1539
--> charm charmbar        :  BR = 0.1193
--> strange strangebar    :  BR = 0.1539
--> bottom bottombar      :  BR = 0.1523
```

Decay mode distribution in generator

of total Z boson : 200,000



B.R. is consistents with phytia.

next plan

- check kinematics and b-tagged jet distribution
- compare with $\gamma\gamma$->HH and $\gamma\gamma$->WW*
- optimize cut criteria