

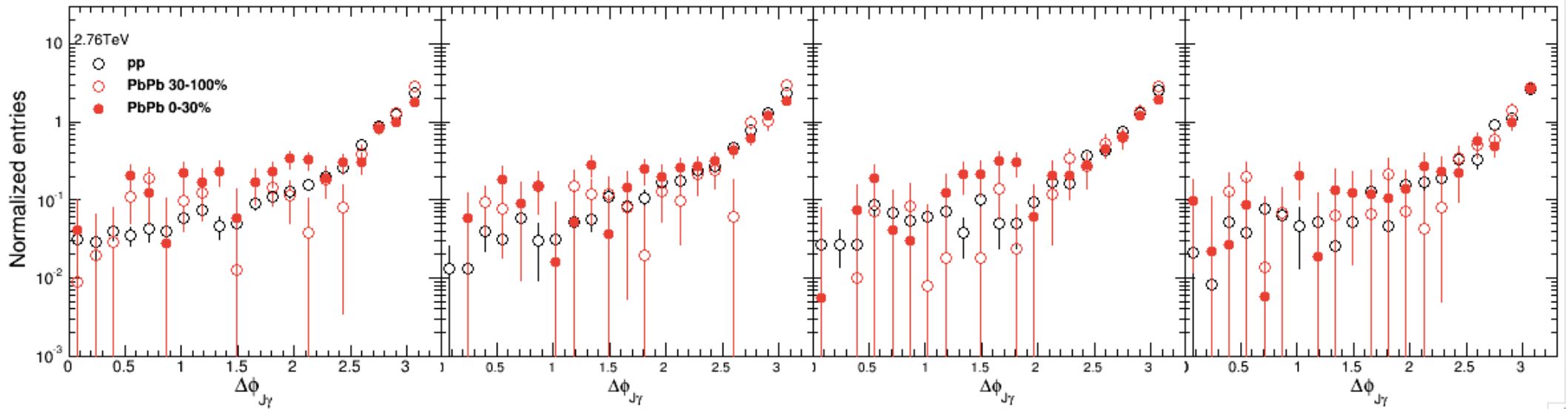
# Reproducing gamma-jet figures for jet threshold 20 GeV

2014.06.19  
yeonjugo

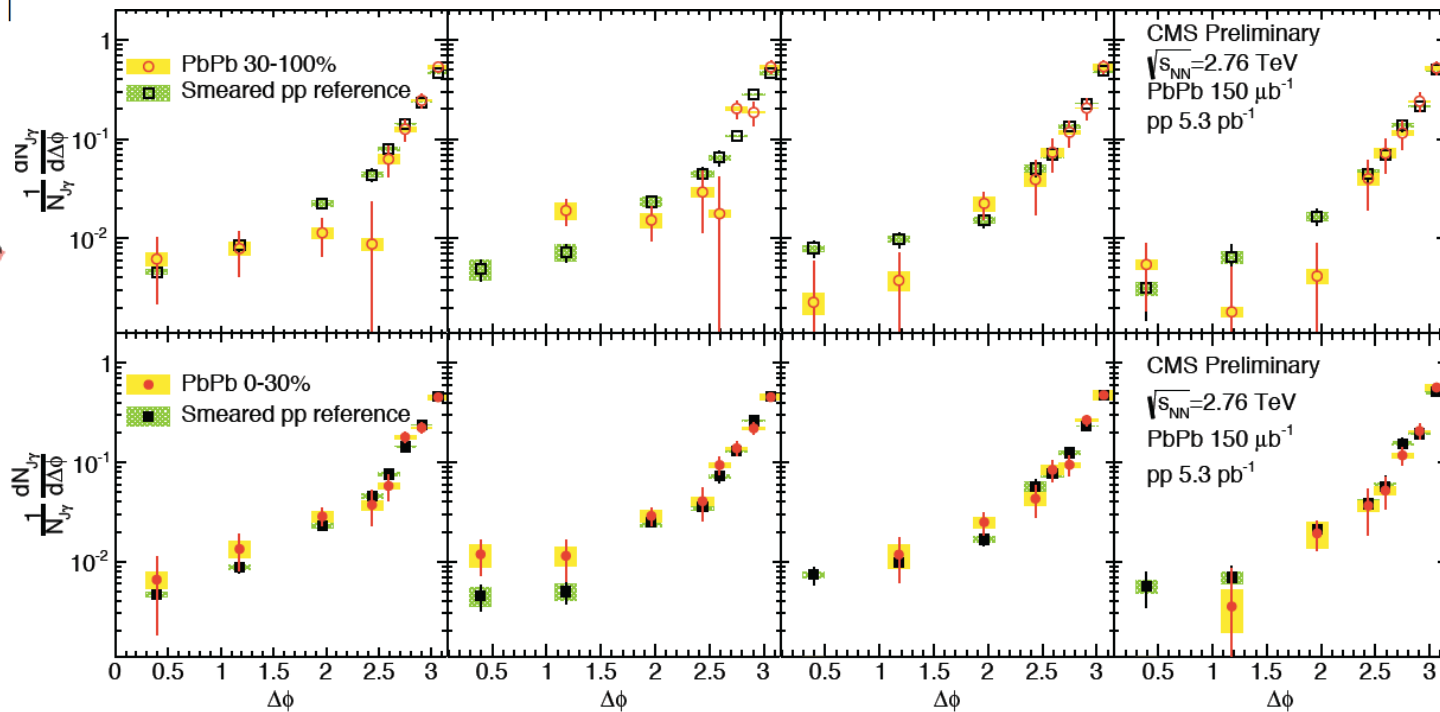
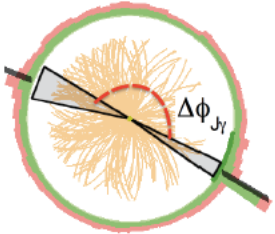


- To prepare new analysis (Fragmentation function & photon-hadron correlation), HIN-13-006 figures are reproduced by jet threshold 20 for the purpose of practicing. (because the new analysis use this threshold.)
- Reproduced figures :
  - : delta phi distribution
  - : xjg distribution
  - :  $\langle xjg \rangle$
  - : Rjg
  - : jet pt distribution

# (PbPb, pp) delta phi dist.

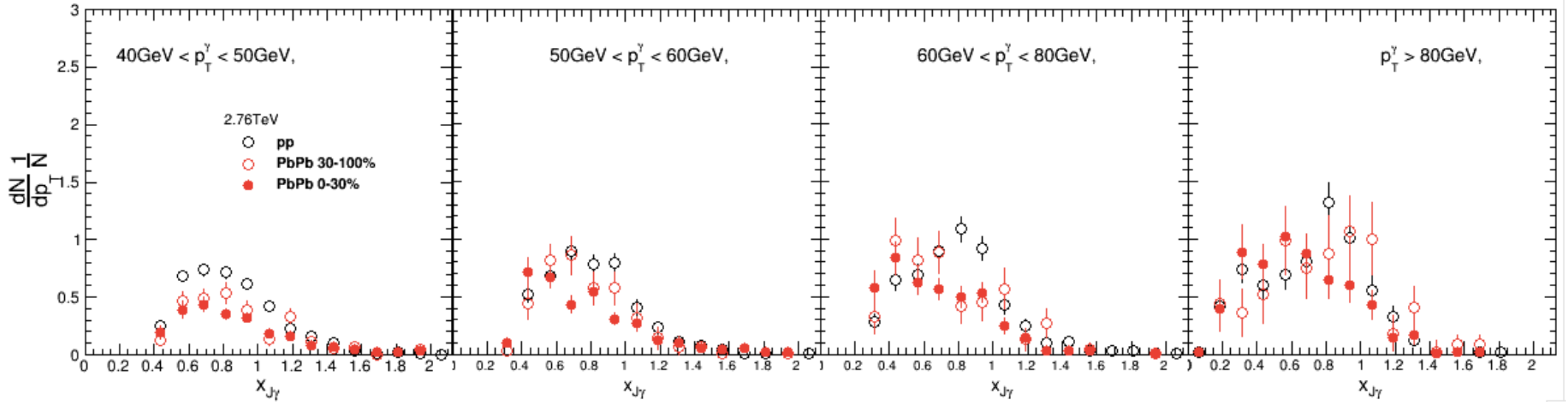


$$\Delta\phi_{JY} = |\phi^{\text{Jet}} - \phi^{\gamma}|$$

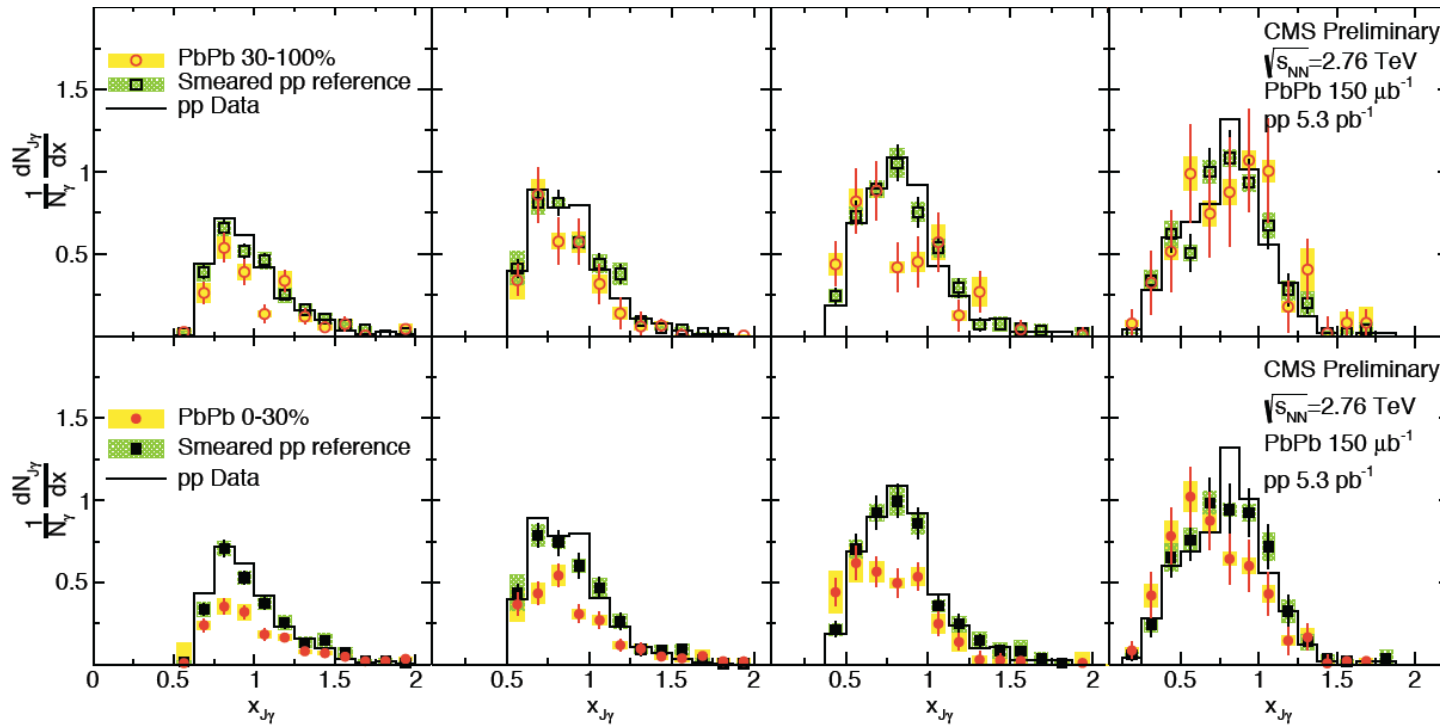


Jet > 30 GeV  
 Figures

# (PbPb, pp) xjg dist.

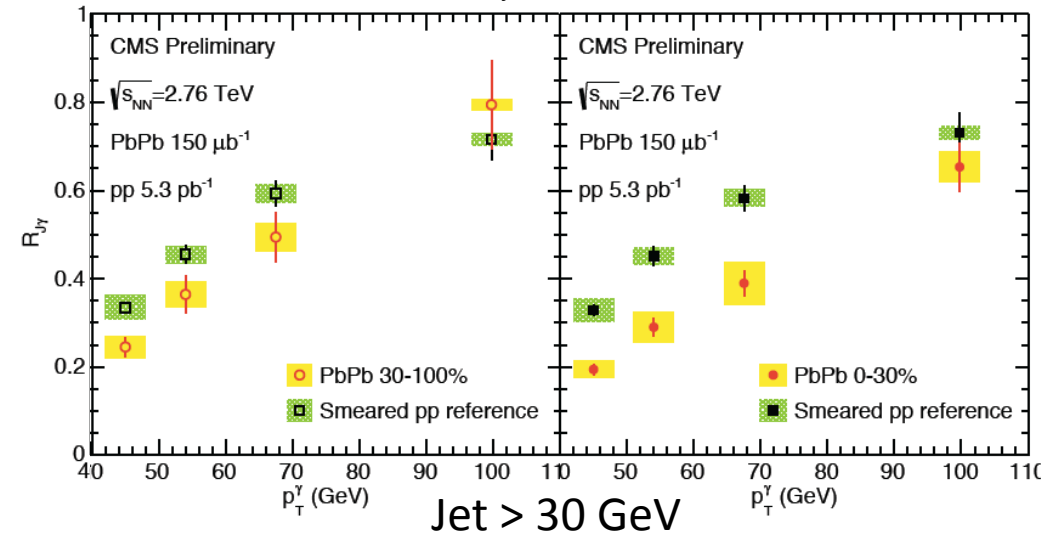
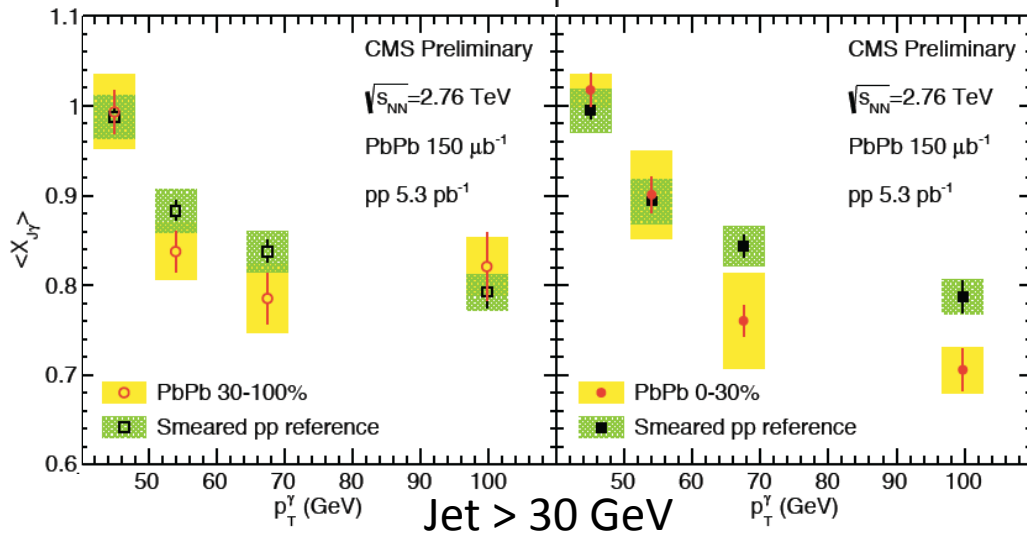
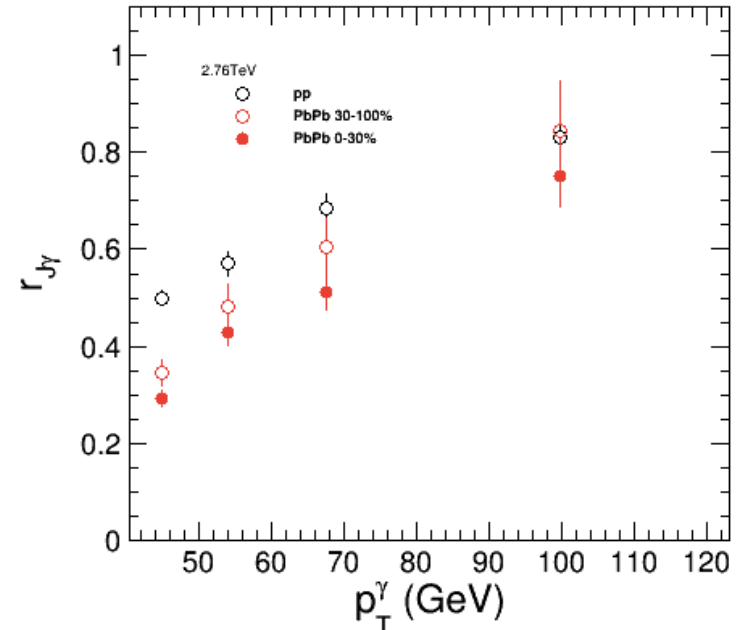
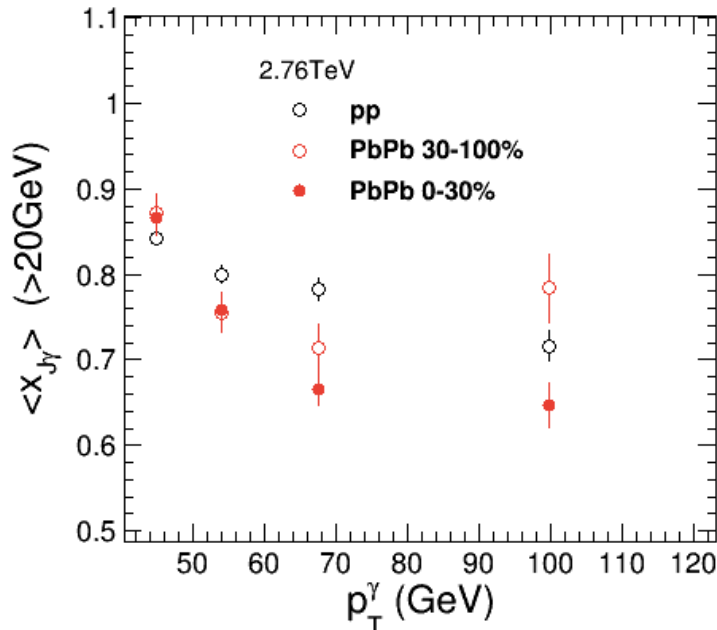


$$x_{J\gamma} \equiv \frac{p_T^{jet}}{p_T^\gamma}$$



Jet > 30 GeV  
Figures

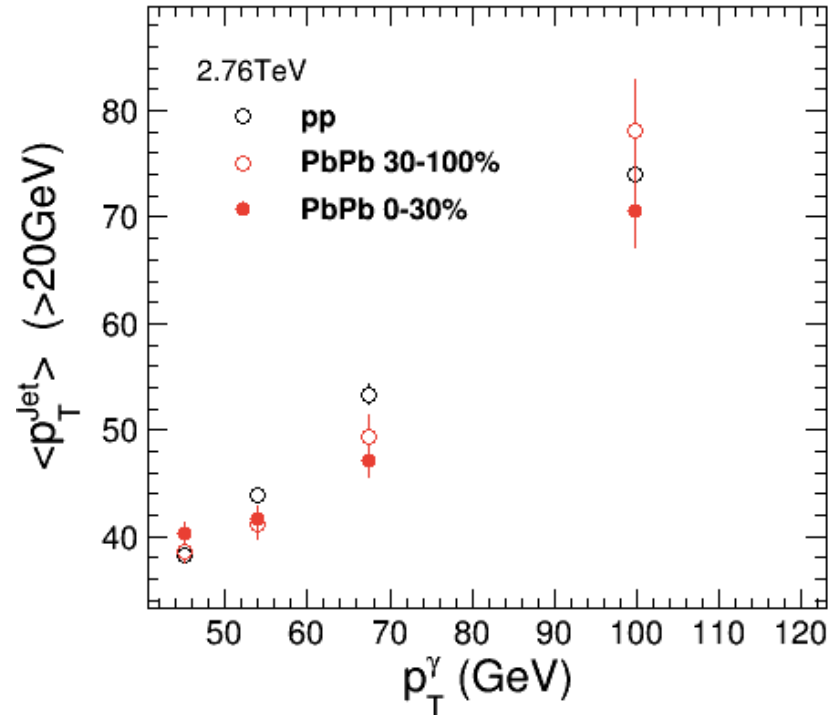
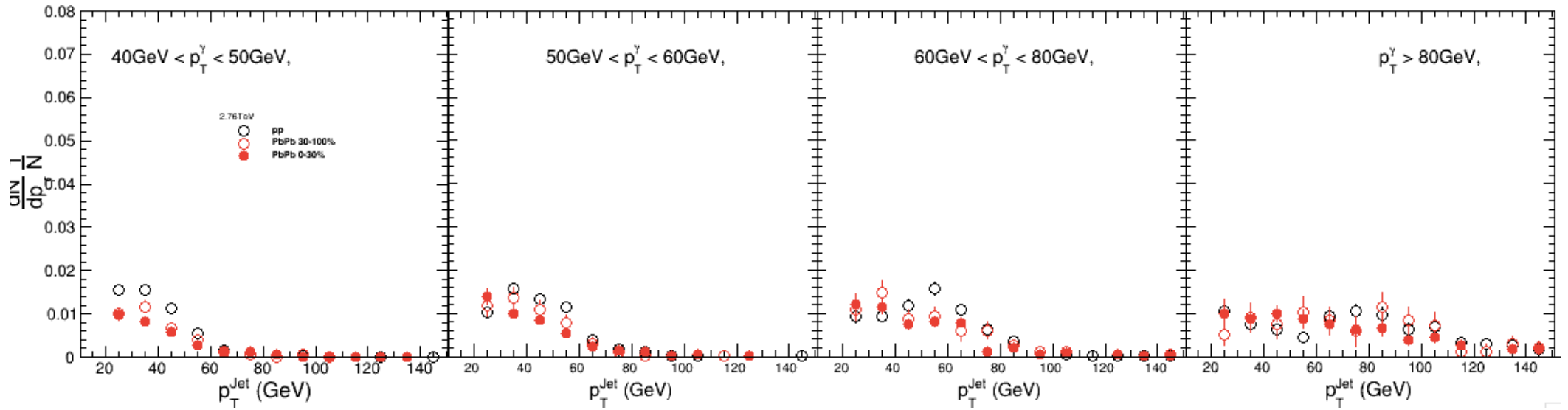
$$R_{J\gamma} = \frac{\text{Number of associated jets}}{\text{Number of triggering } \gamma\text{'s}}$$



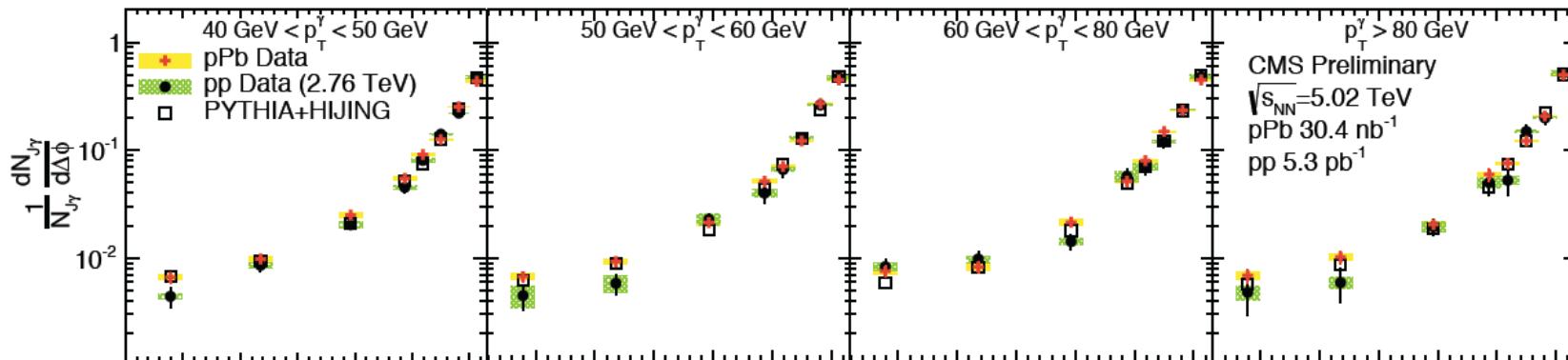
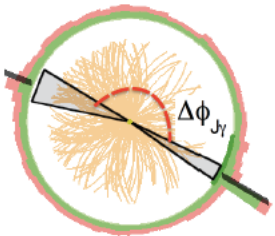
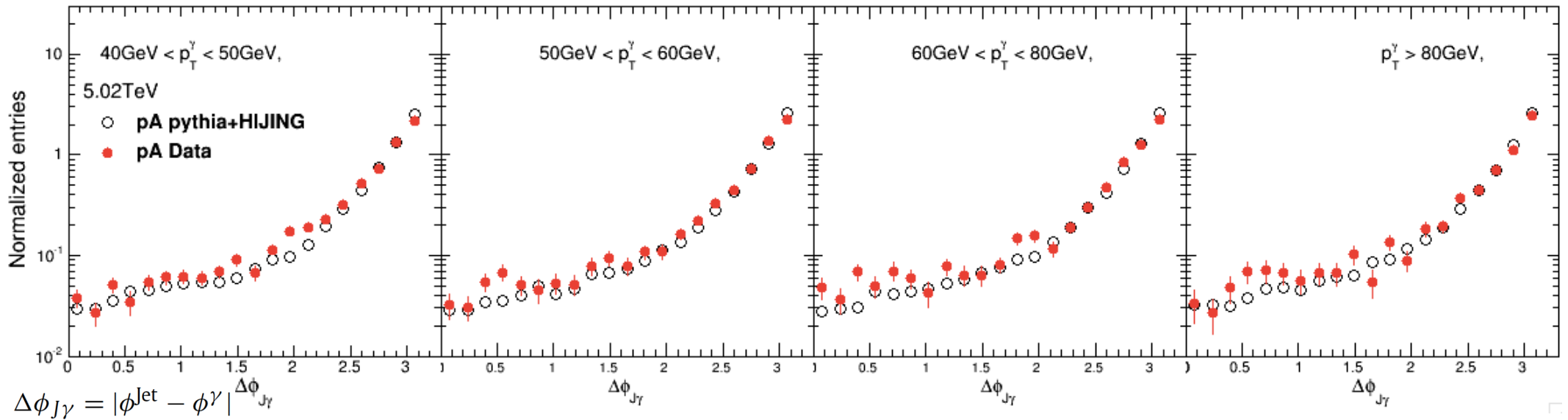
Figures

Figures

# (PbPb, pp) jet pt dist.

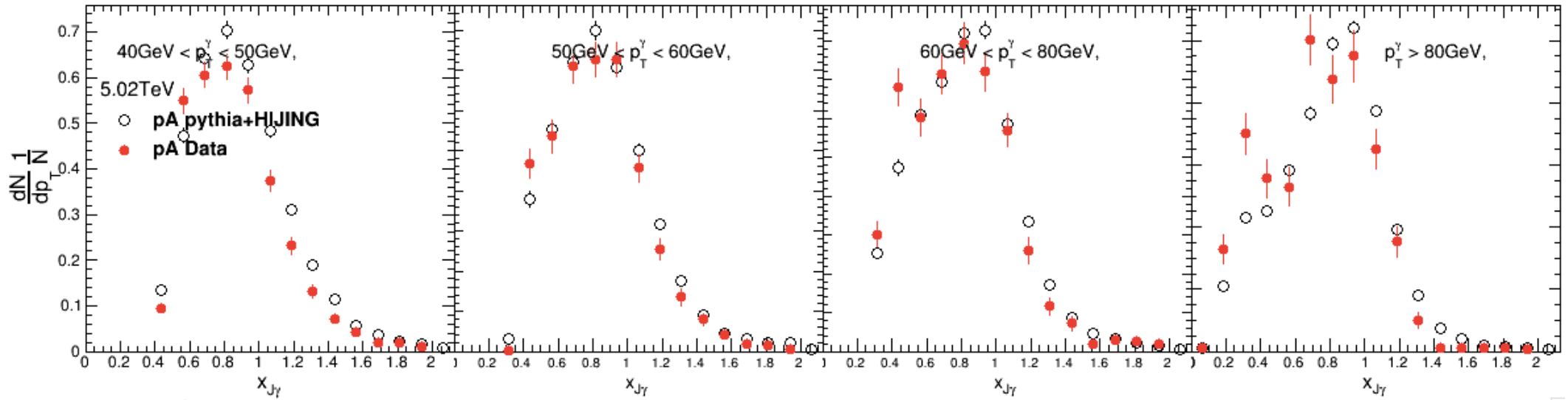


# (pPb) delta phi dist.

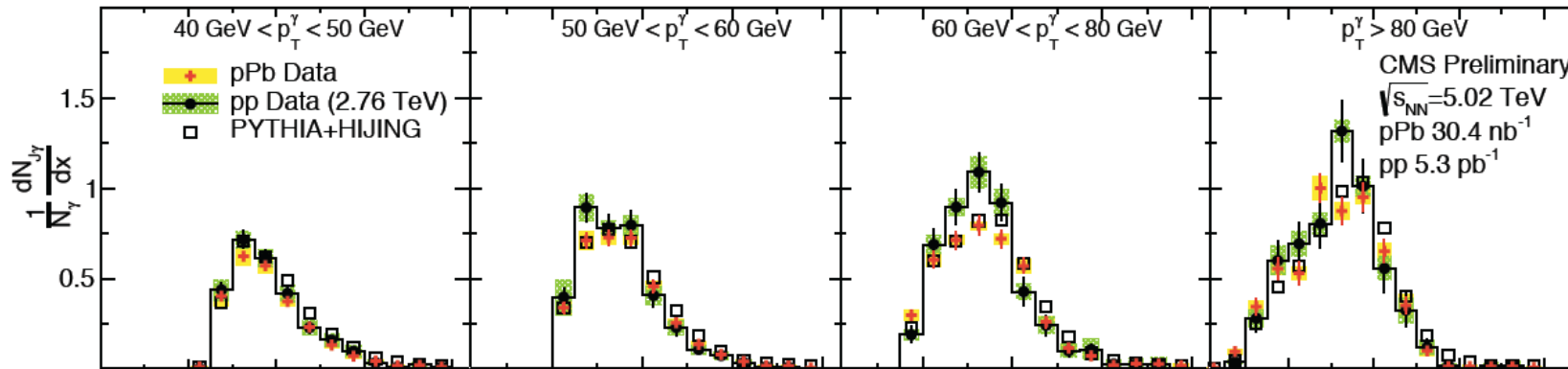


Jet > 30 GeV  
 Figures

# (pPb) xjg dist.



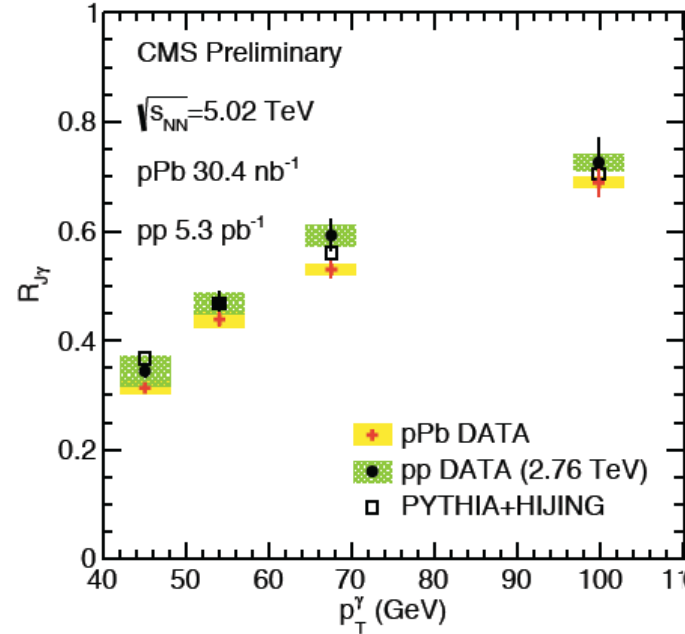
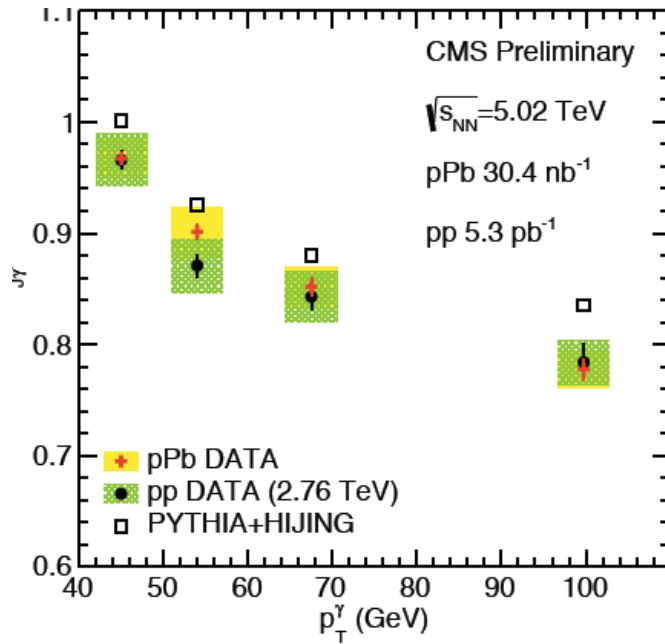
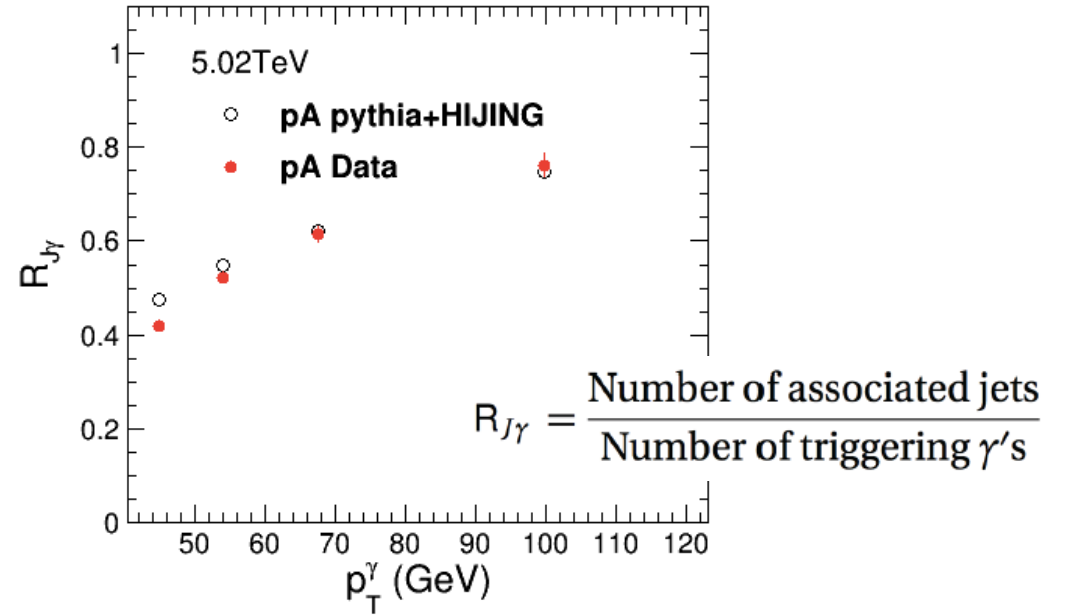
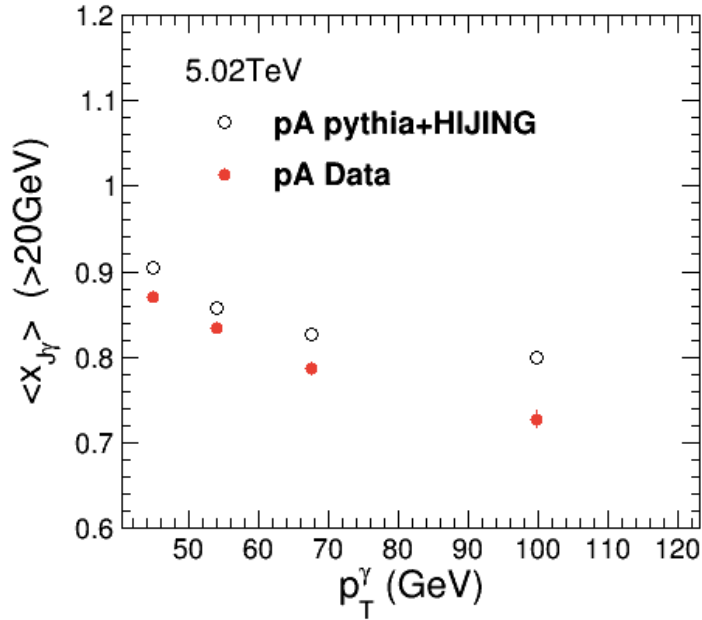
$$x_{J\gamma} \equiv \frac{p_T^{jet}}{p_T^{\gamma}}$$



Jet > 30 GeV  
Figures

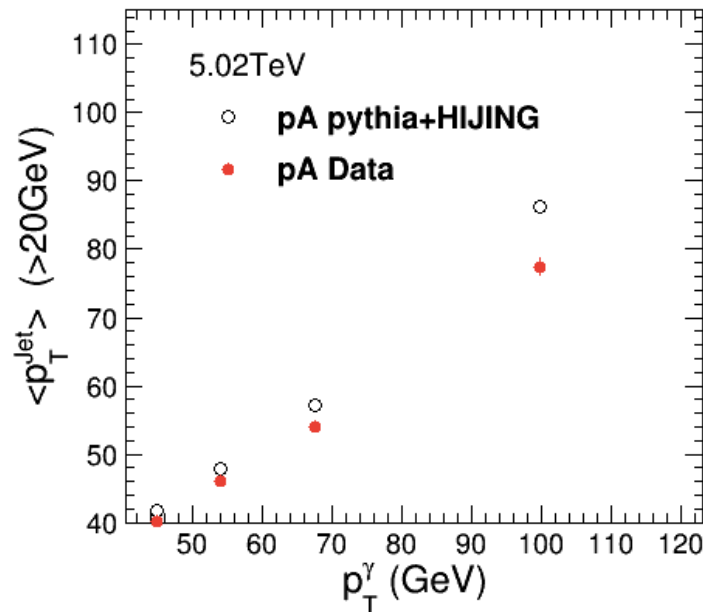
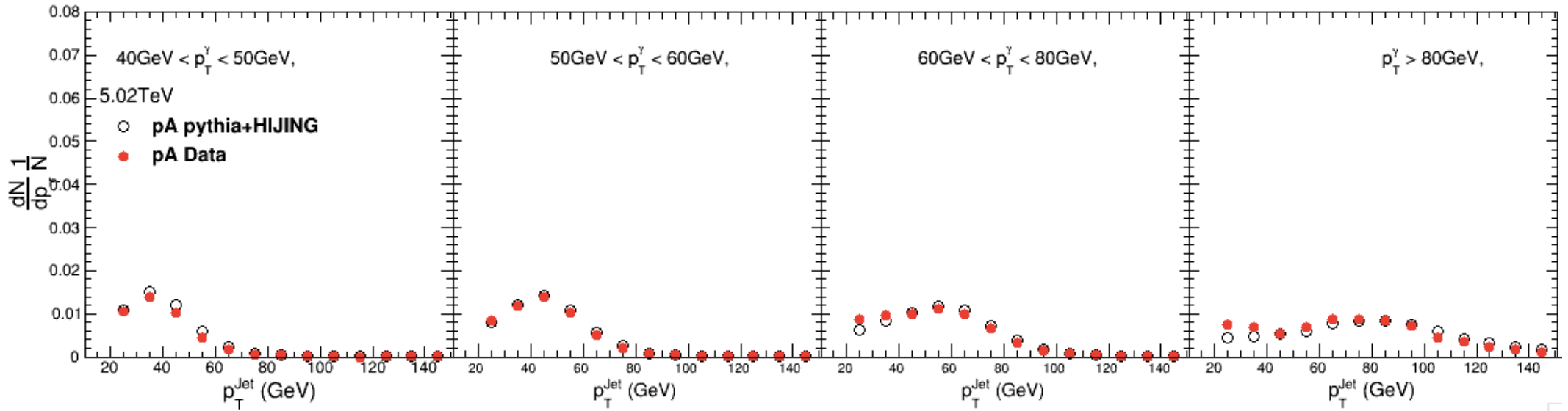


# (pPb) $\langle x_{J\gamma} \rangle$ & $R_{J\gamma}$



Jet > 30 GeV  
Figures

# (pPb) jet pt dist.



- PbPb & pp : `gammaJetAnalysis/drawFigures/drawPtDependence.C`
- pPb : `gammaJetAnalysis/drawFigures/drawPtDependencePA.C`

# Timing info. for EmEnriched MC request

2014.06.10  
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- For the MC request, time and CPU informations are measured by testing several events.
- 2 types of Monte Carlo Sample
  - : gamma-jet Signal sample
  - : EmEnriched-Dijet sample

	ptHat30	ptHat50	ptHat80	ptHat120	ptHat170
GEN-SIM-RAW TIME (sec)	– Min event: 54.8458 – Max event: 629.728 – Avg event: 259.509	– Min event: 61.5286 – Max event: 592.673 – Avg event: 256.467	– Min event: 52.0433 – Max event: 346.702 – Avg event: 159.817	– Min event: 45.995 – Max event: 158.882 – Avg event: 122.062	– Min event: 37.3071 – Max event: 173.918 – Avg event: 129.723
RECO TIME (sec)	– Min event: 0.730565 – Max event: 66.9888 – Avg event: 20.4104	– Min event: 0.765947 – Max event: 67.2622 – Avg event: 14.2448	– Min event: 0.642291 – Max event: 67.088 – Avg event: 14.3299	– Min event: 0.746588 – Max event: 70.5162 – Avg event: 14.987	– Min event: 0.753436 – Max event: 68.1064 – Avg event: 14.8651
GEN-SIM-RAW CPU MEMORY	– Min event: 54.0668 – Max event: 629.411 – Avg event: 236.296	– Min event: 61.3567 – Max event: 592.381 – Avg event: 231.99	– Min event: 51.7791 – Max event: 346.52 – Avg event: 133.944	– Min event: 45.84 – Max event: 158.509 – Avg event: 93.9742	– Min event: 37.0994 – Max event: 173.67 – Avg event: 98.573
RECO CPU MEMORY	– Min event: 0.730889 – Max event: 66.9768 – Avg event: 13.037	– Min event: 0.765883 – Max event: 67.2308 – Avg event: 13.1011	– Min event: 0.642903 – Max event: 67.0758 – Avg event: 13.1456	– Min event: 0.746887 – Max event: 70.5043 – Avg event: 13.4703	– Min event: 0.752885 – Max event: 68.0946 – Avg event: 13.5992

10 events were ran.

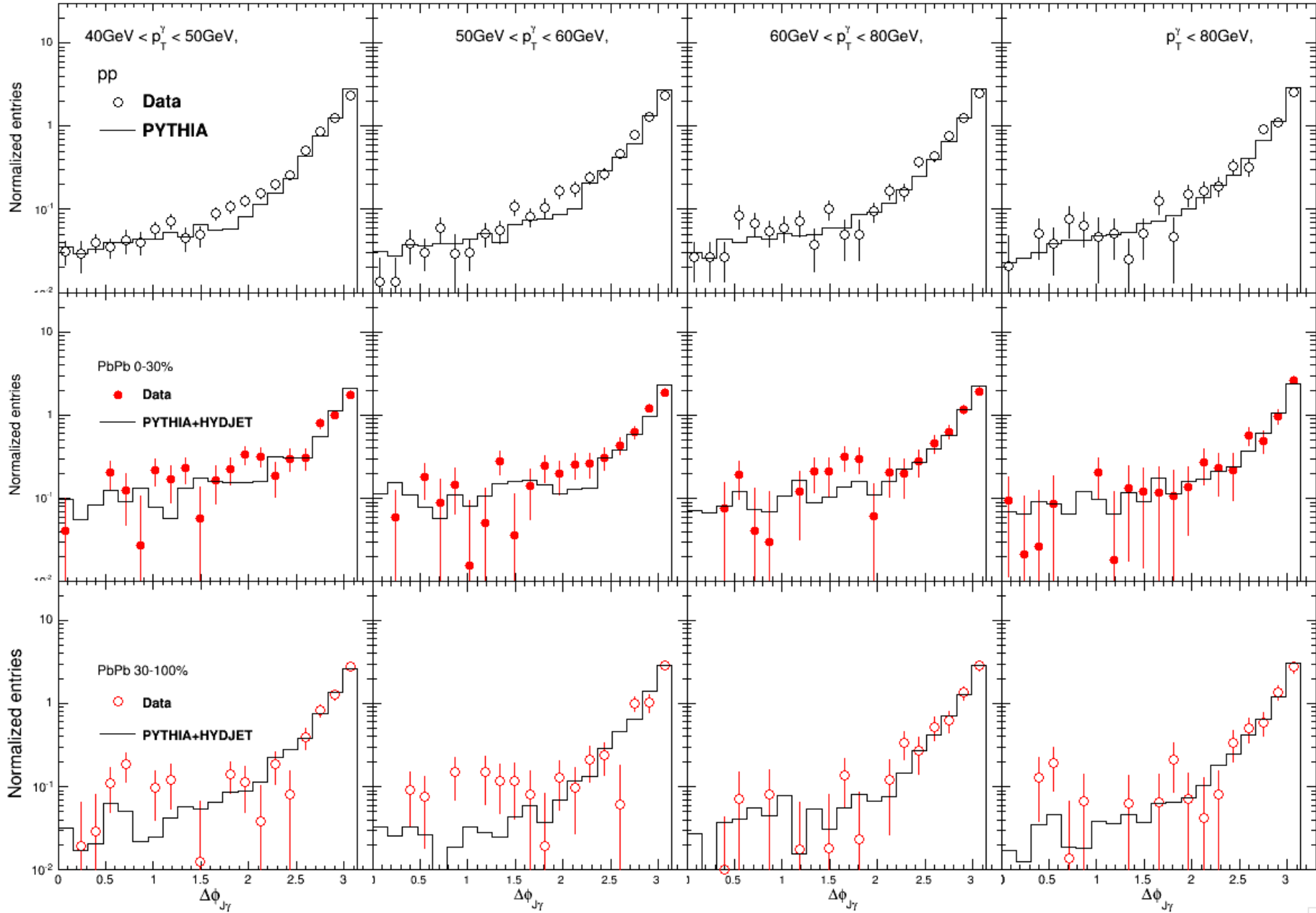
	ptHat30	ptHat50	ptHat80	ptHat120	ptHat170
<b>GEN-SIM-RAW TIME (sec)</b>	Time Summary: - Min event: 23.7679 - Max event: 224.366 - Avg event: 78.4981 - Total job: 3924.9 CPU Summary: - Min event: 23.7634 - Max event: 223.029 - Avg event: 75.9975 - Total job: 3910.29 - Total event: 3799.87	Time Summary: - Min event: 21.6046 - Max event: 210.91 - Avg event: 71.3421 - Total job: 3567.11 CPU Summary: - Min event: 21.6007 - Max event: 209.364 - Avg event: 68.1458 - Total job: 3517.78 - Total event: 3407.29	Time Summary: - Min event: 30.4308 - Max event: 207.796 - Avg event: 74.1167 - Total job: 3705.83 CPU Summary: - Min event: 29.7785 - Max event: 205.688 - Avg event: 70.9348 - Total job: 3657.6 - Total event: 3546.74	Time Summary: - Min event: 26.9619 - Max event: 197.52 - Avg event: 76.7297 - Total job: 3836.49 CPU Summary: - Min event: 26.9559 - Max event: 197.484 - Avg event: 73.8798 - Total job: 3802.87 - Total event: 3693.99	Time Summary: - Min event: 33.8698 - Max event: 226.226 - Avg event: 80.4518 - Total job: 4022.59 CPU Summary: - Min event: 33.8549 - Max event: 226.107 - Avg event: 77.3071 - Total job: 3974.25 - Total event: 3865.35
<b>RECO TIME (sec)</b>	- Min event: 0.604323 - Max event: 137.304 - Avg event: 24.3062 - Total job: 1215.31 CPU Summary: - Min event: 0.603907 - Max event: 137.28 - Avg event: 23.1788 - Total job: 1168.06 - Total event: 1158.94	Time Summary: - Min event: 0.598407 - Max event: 147.96 - Avg event: 26.7225 - Total job: 1336.13 CPU Summary: - Min event: 0.598909 - Max event: 147.935 - Avg event: 24.6526 - Total job: 1242.38 - Total event: 1232.63	Time Summary: - Min event: 0.665461 - Max event: 133.864 - Avg event: 25.6556 - Total job: 1282.78 CPU Summary: - Min event: 0.665899 - Max event: 133.841 - Avg event: 23.5706 - Total job: 1188.11 - Total event: 1178.53	Time Summary: - Min event: 0.704892 - Max event: 139.668 - Avg event: 25.6409 - Total job: 1282.04 CPU Summary: - Min event: 0.704892 - Max event: 139.644 - Avg event: 23.578 - Total job: 1188.47 - Total event: 1178.9	Time Summary: - Min event: 0.66276 - Max event: 145.505 - Avg event: 26.6494 - Total job: 1332.47 CPU Summary: - Min event: 0.662899 - Max event: 145.48 - Avg event: 24.5805 - Total job: 1238.79 - Total event: 1229.03

40 events were ran.

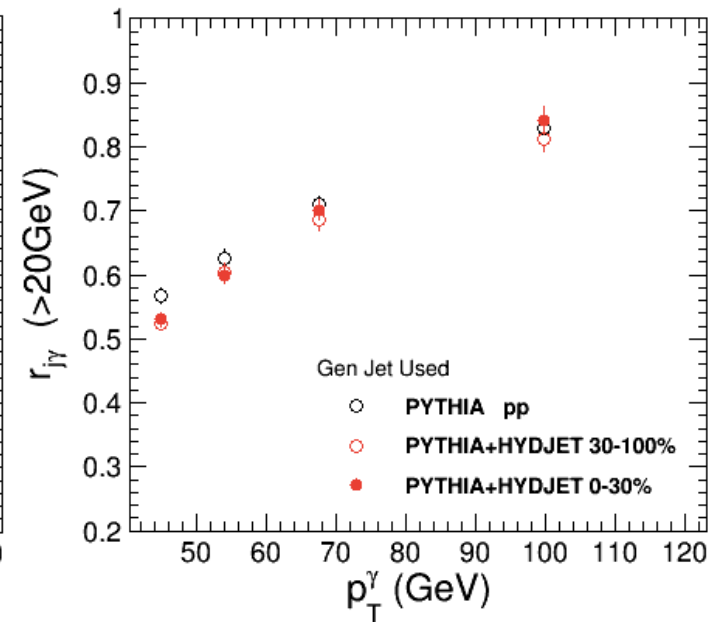
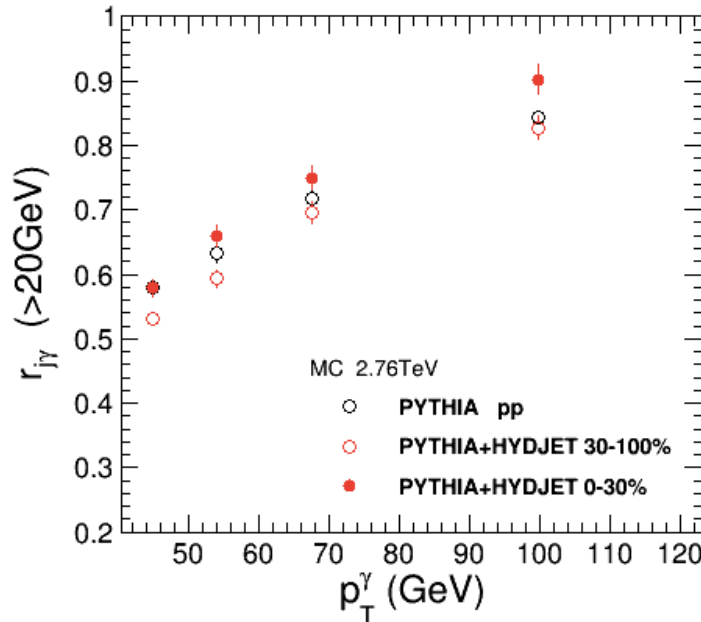
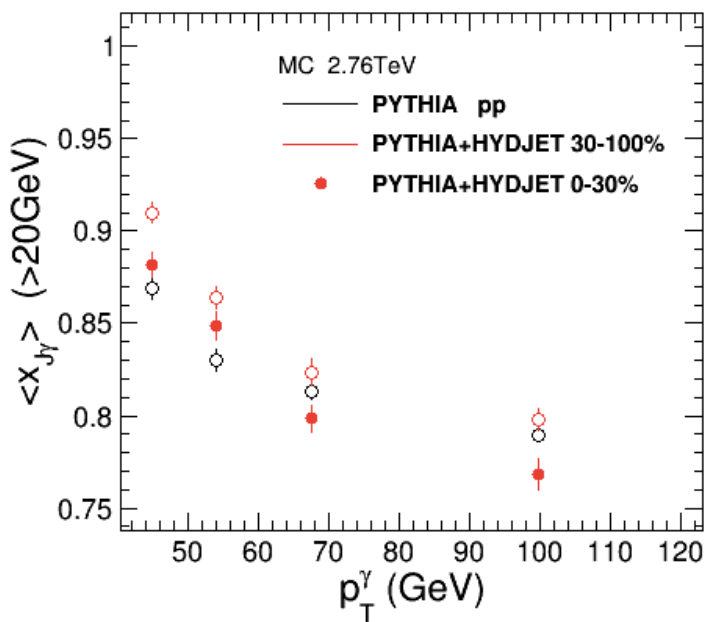
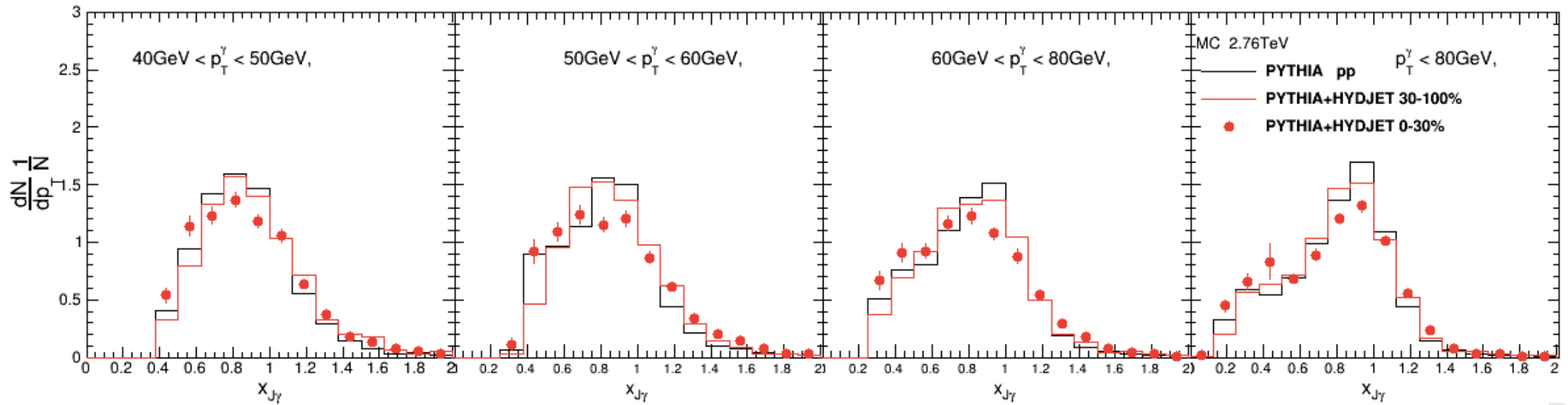
# BACK UP



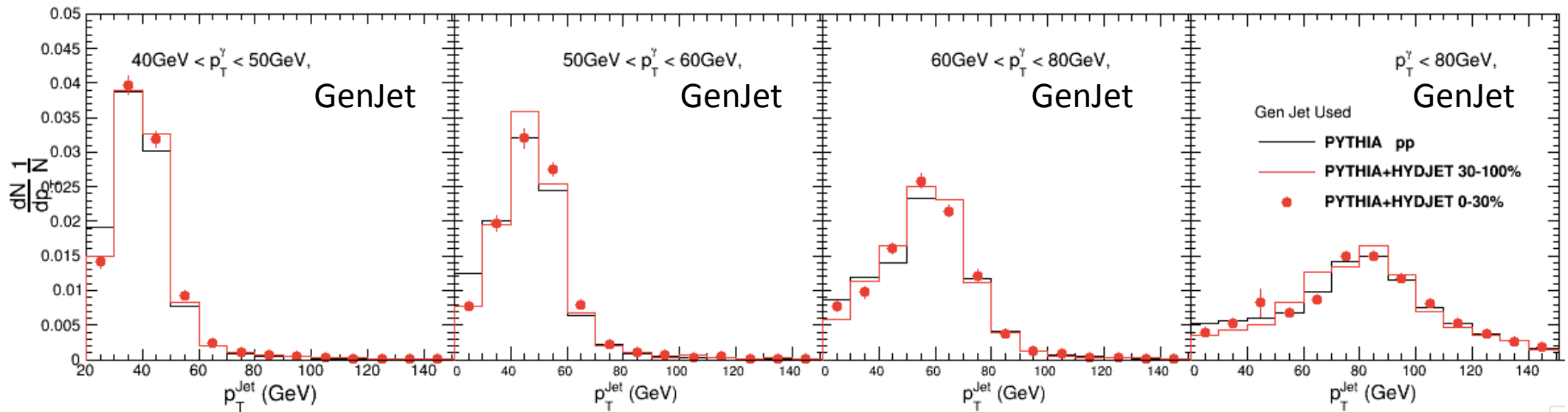
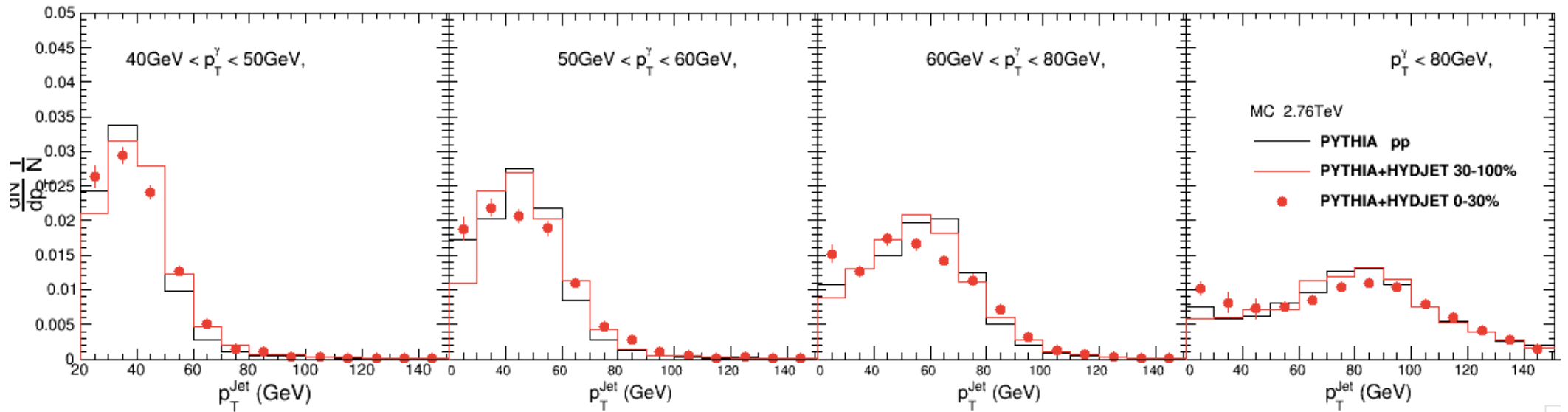
# (PbPb, pp) delta phi dist.



# (PbPb, pp) xjg dist. & $\langle x_{jg} \rangle$ & $R_{jg}$



# (PbPb, pp) jet pt dist.



- EmEnriched30 :

```
<Metric Name="AvgEventCPU" Value="75.9975" />  
<Metric Name="AvgEventTime" Value="78.4981" />  
<Metric Name="MaxEventCPU" Value="223.029" />  
<Metric Name="MaxEventTime" Value="224.366" />  
<Metric Name="MinEventCPU" Value="23.7634" />  
<Metric Name="MinEventTime" Value="23.7679" />
```

- EmEnriched120 :

```
<Metric Name="AvgEventCPU" Value="73.8798" />  
<Metric Name="AvgEventTime" Value="76.7297" />  
<Metric Name="MaxEventCPU" Value="197.484" />  
<Metric Name="MaxEventTime" Value="197.52" />  
<Metric Name="MinEventCPU" Value="26.9559" />  
<Metric Name="MinEventTime" Value="26.9619" />
```

- EmEnriched50 :

```
<Metric Name="AvgEventCPU" Value="68.1458" />  
<Metric Name="AvgEventTime" Value="71.3421" />  
<Metric Name="MaxEventCPU" Value="209.364" />  
<Metric Name="MaxEventTime" Value="210.91" />  
<Metric Name="MinEventCPU" Value="21.6007" />  
<Metric Name="MinEventTime" Value="21.6046" />
```

- EmEnriched170 :

```
<Metric Name="AvgEventCPU" Value="77.3071" />  
<Metric Name="AvgEventTime" Value="80.4518" />  
<Metric Name="MaxEventCPU" Value="226.107" />  
<Metric Name="MaxEventTime" Value="226.226" />  
<Metric Name="MinEventCPU" Value="33.8549" />  
<Metric Name="MinEventTime" Value="33.8698" />
```

- EmEnriched80 :

```
<Metric Name="AvgEventCPU" Value="70.9348" />  
<Metric Name="AvgEventTime" Value="74.1167" />  
<Metric Name="MaxEventCPU" Value="205.688" />  
<Metric Name="MaxEventTime" Value="207.796" />  
<Metric Name="MinEventCPU" Value="29.7785" />  
<Metric Name="MinEventTime" Value="30.4308" />
```

- EmEnriched30 :

```
<Metric Name="AvgEventCPU" Value="23.1788" />  
<Metric Name="AvgEventTime" Value="24.3062" />  
<Metric Name="MaxEventCPU" Value="137.28" />  
<Metric Name="MaxEventTime" Value="137.304" />  
<Metric Name="MinEventCPU" Value="0.603907" />  
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```

- EmEnriched120 :

```
<Metric Name="AvgEventCPU" Value="23.578" />  
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<Metric Name="MaxEventTime" Value="139.668" />  
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```

- EmEnriched50 :

```
<Metric Name="AvgEventCPU" Value="24.6526" />  
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<Metric Name="MaxEventCPU" Value="147.935" />  
<Metric Name="MaxEventTime" Value="147.96" />  
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```

- EmEnriched170 :

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<Metric Name="MaxEventCPU" Value="145.48" />  
<Metric Name="MaxEventTime" Value="145.505" />  
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- EmEnriched80 :

```
<Metric Name="AvgEventCPU" Value="23.5706" />  
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