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# Chapter 1

# Configuration

# Chapter 2

# Selection

# Chapter 3

# MVA

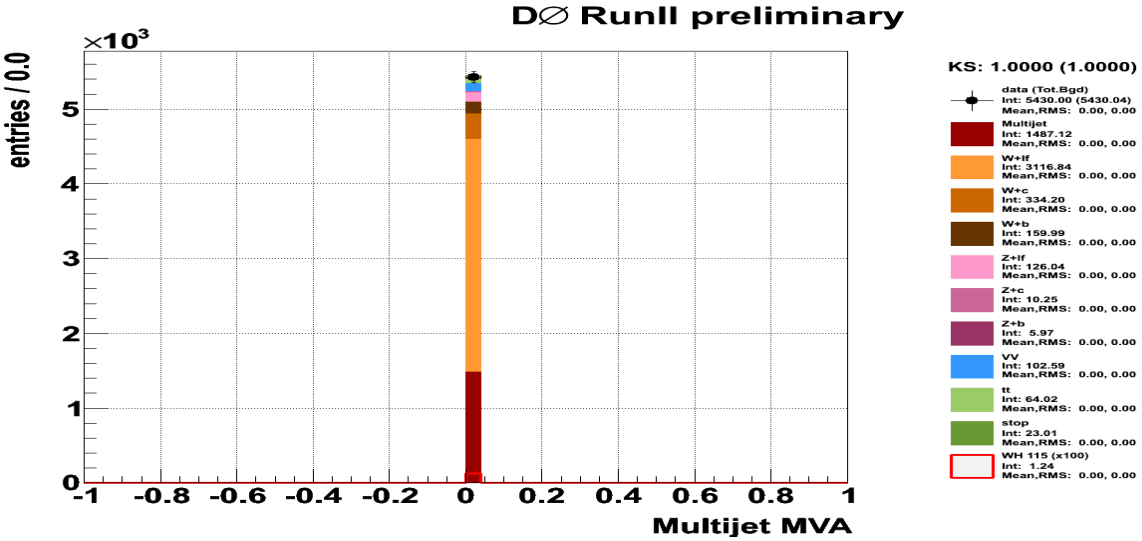



Figure 3.1:

# Chapter 4

# Lepton

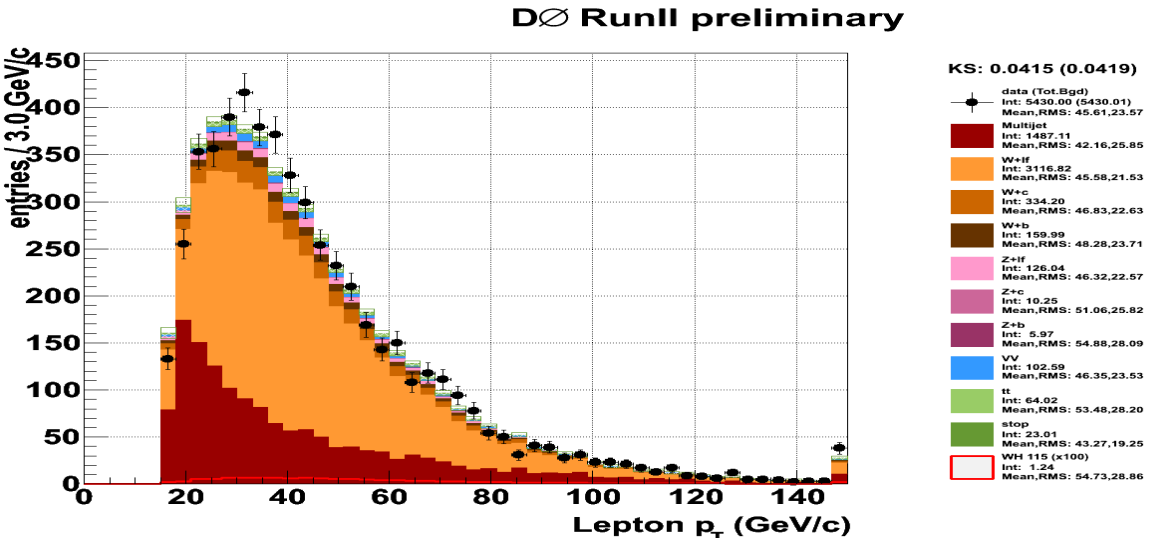
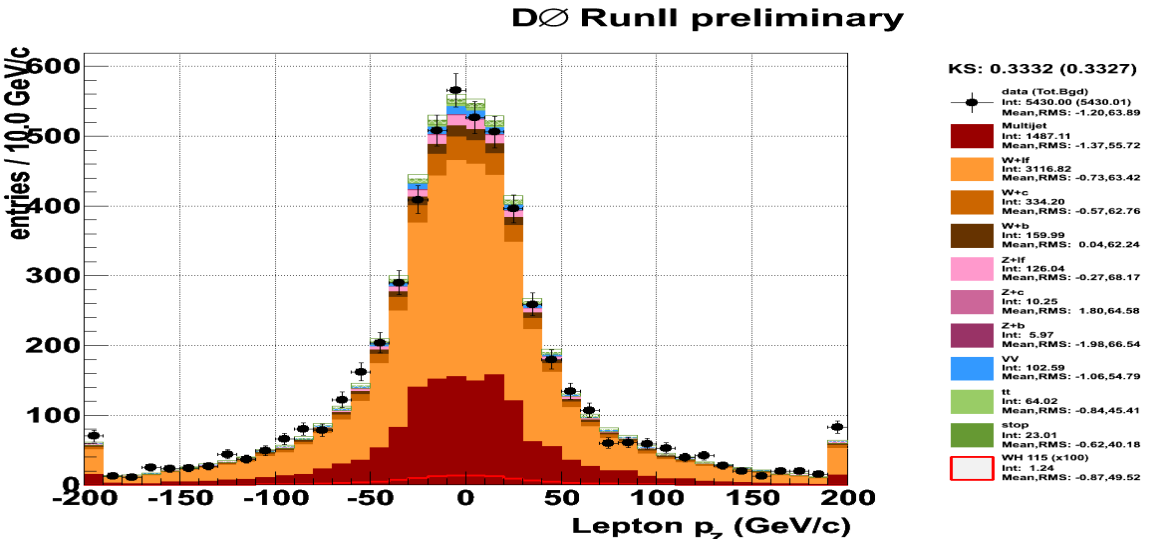



Figure 4.1:

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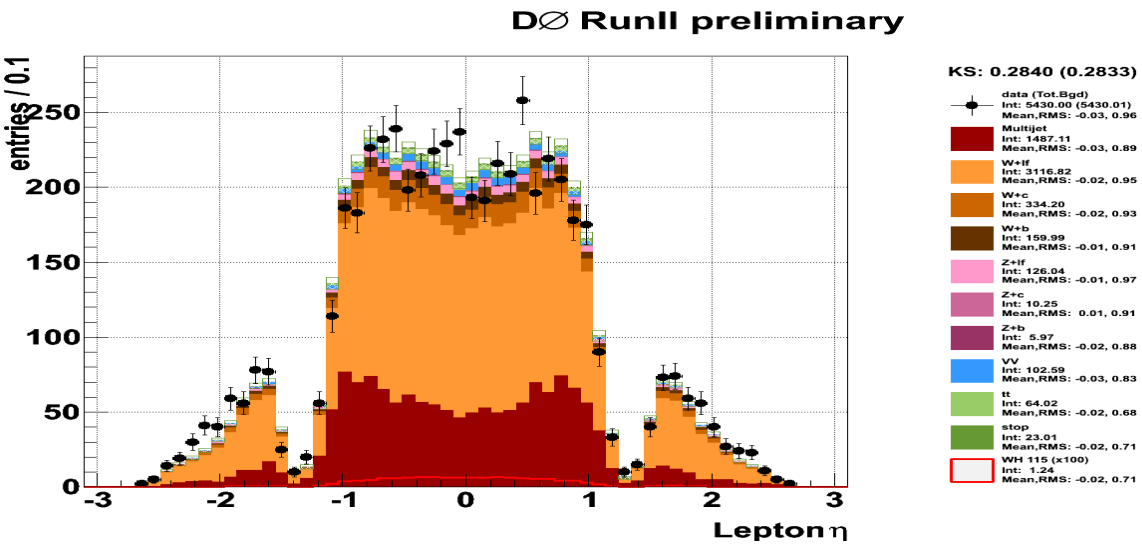


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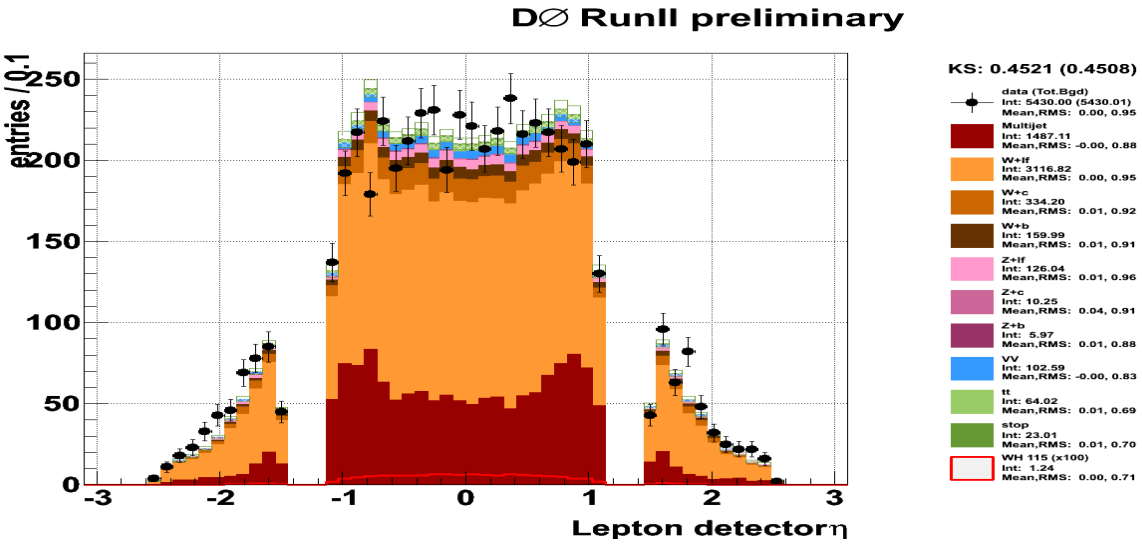


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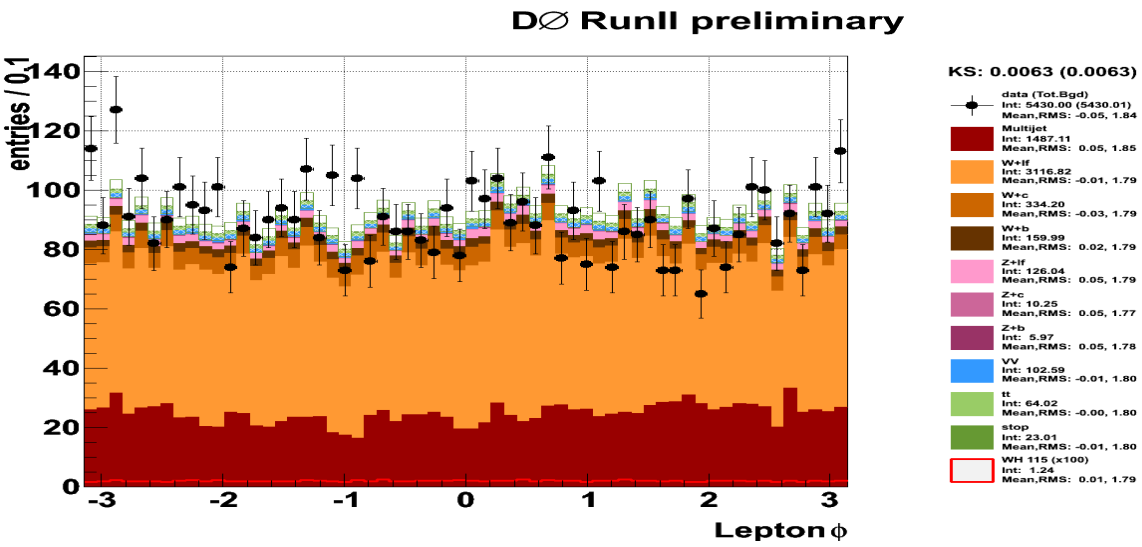

DØ RunII preliminary
entries / 0.1
140
120
100
80
60
40
20
0
-3
-2
-1
0
1
2
3
Lepton φ
KS: 0.0063 (0.0063)
data (Tot.Bgd)
Int: 5430.00 (5430.01)
Mean,RMS: -0.05, 1.84
Multijet
Int: 1487.11
Mean,RMS: 0.05, 1.85
W+lf
Int: 3116.82
Mean,RMS: -0.01, 1.79
W+c
Int: 334.20
Mean,RMS: -0.03, 1.79
W+b
Int: 159.99
Mean,RMS: 0.02, 1.79
Z+lf
Int: 126.04
Mean,RMS: 0.05, 1.79
Z+c
Int: 10.25
Mean,RMS: 0.05, 1.77
Z+b
Int: 5.97
Mean,RMS: 0.05, 1.78
VV
Int: 102.59
Mean,RMS: -0.01, 1.80
tt
Int: 64.02
Mean,RMS: -0.00, 1.80
stop
Int: 23.01
Mean,RMS: -0.01, 1.80
WH 115 (x100)
Int: 1.24
Mean,RMS: 0.01, 1.79

Figure 4.5:

# Chapter 5

# Jets

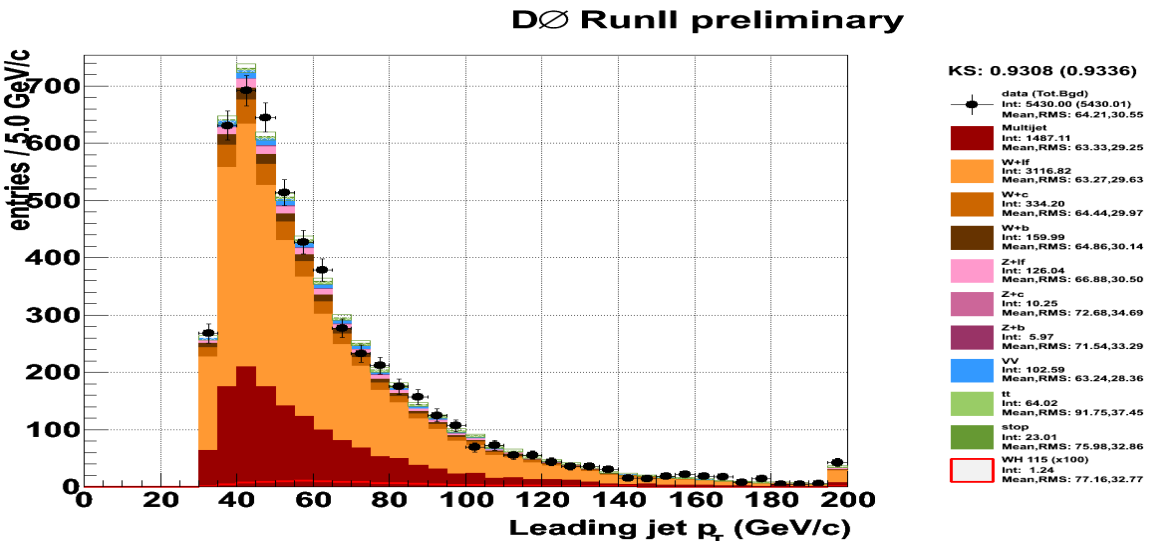
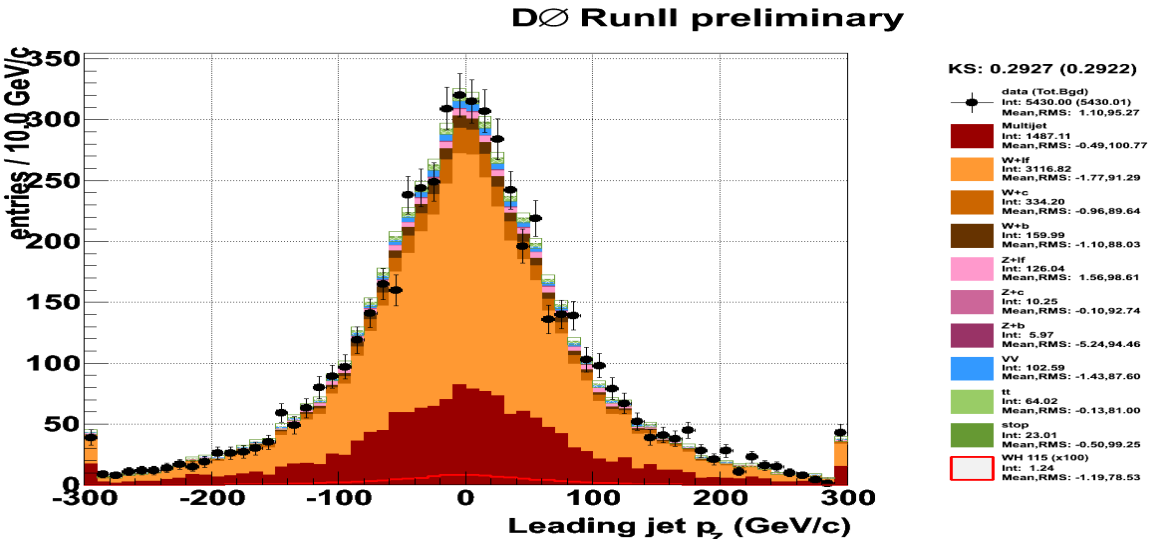



Figure 5.1:

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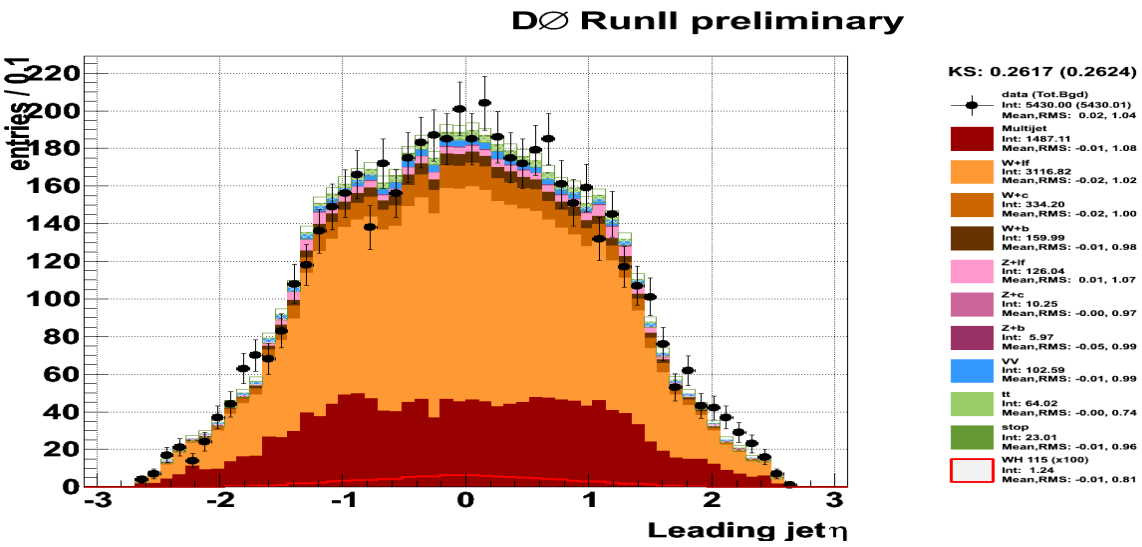


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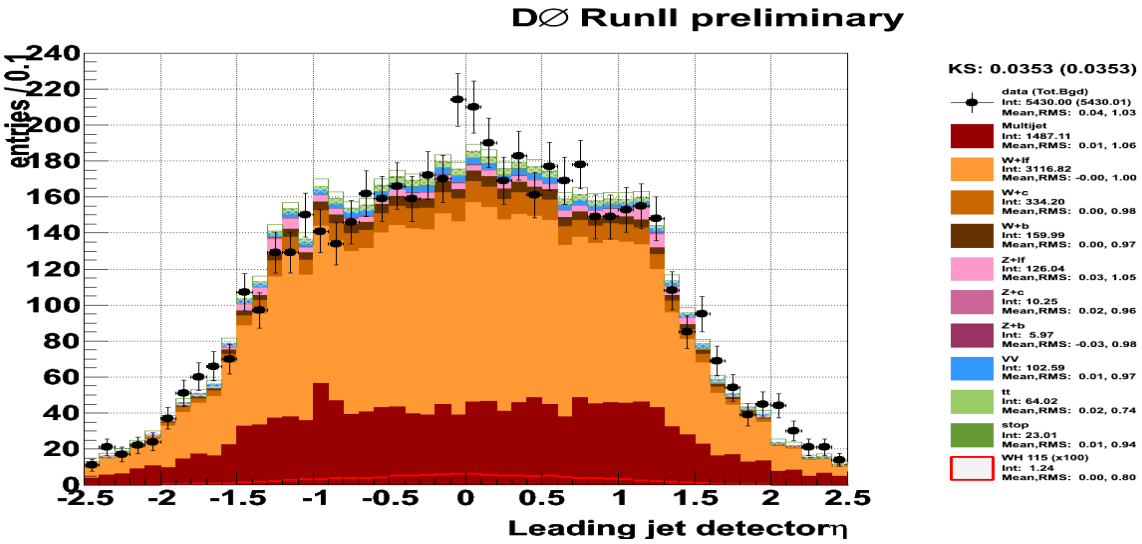


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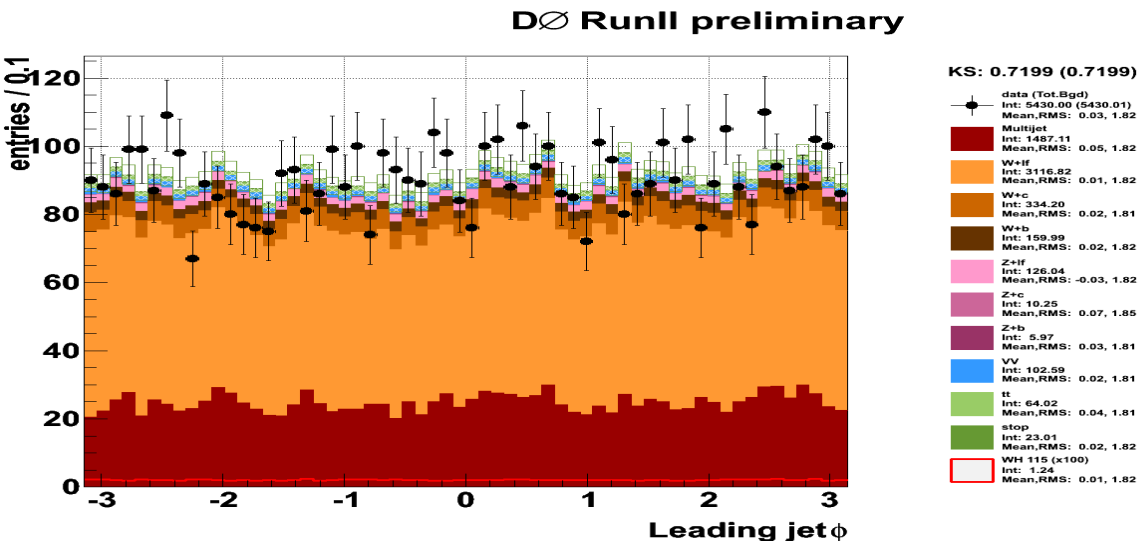


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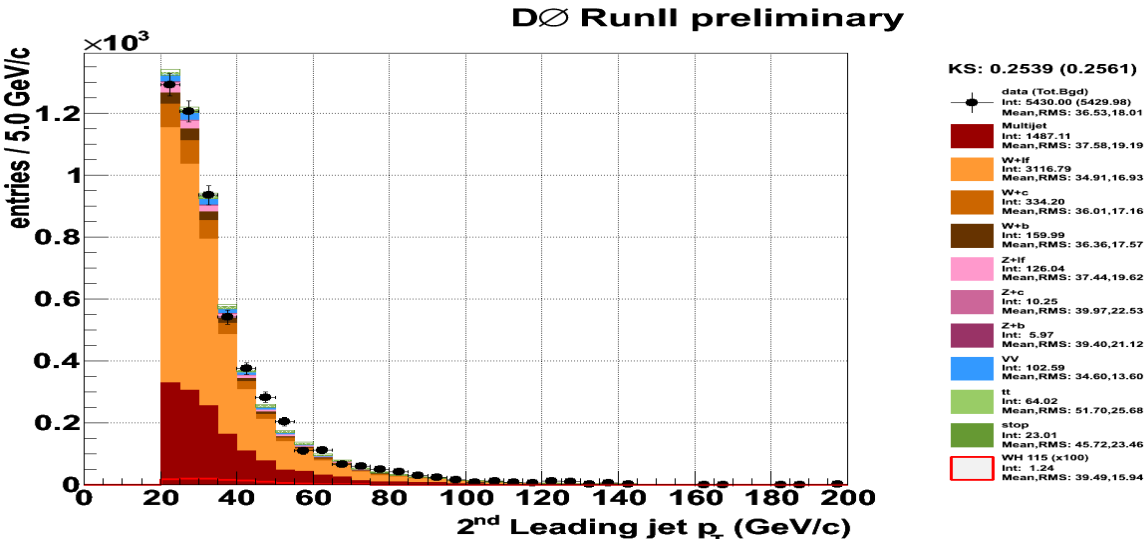


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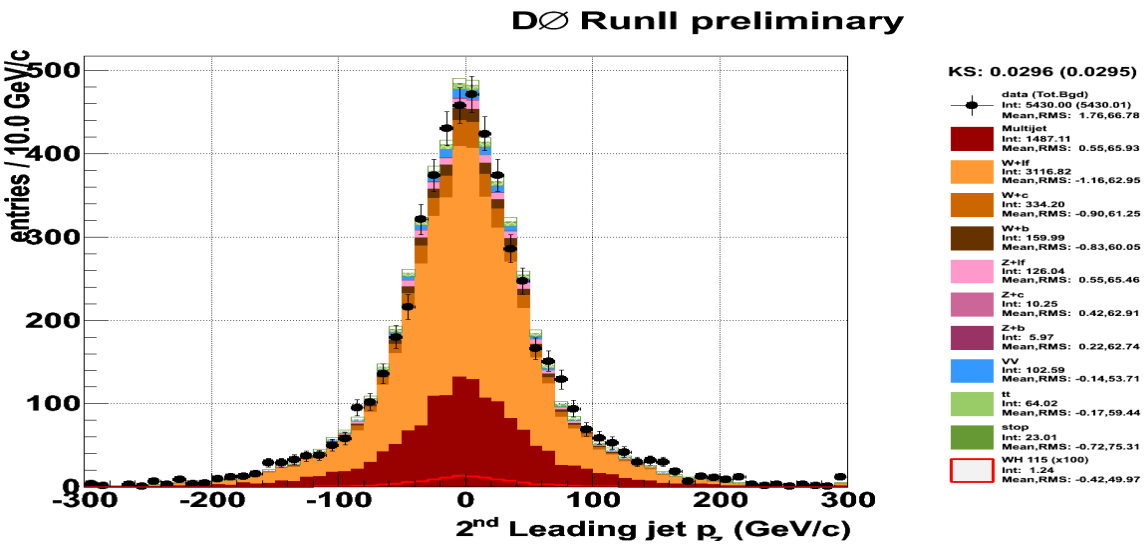


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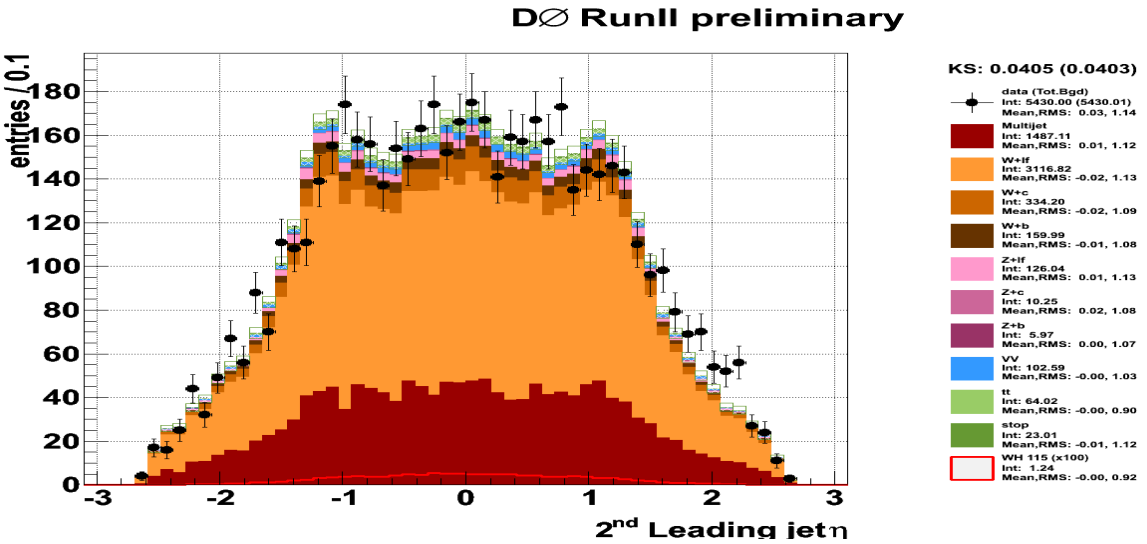


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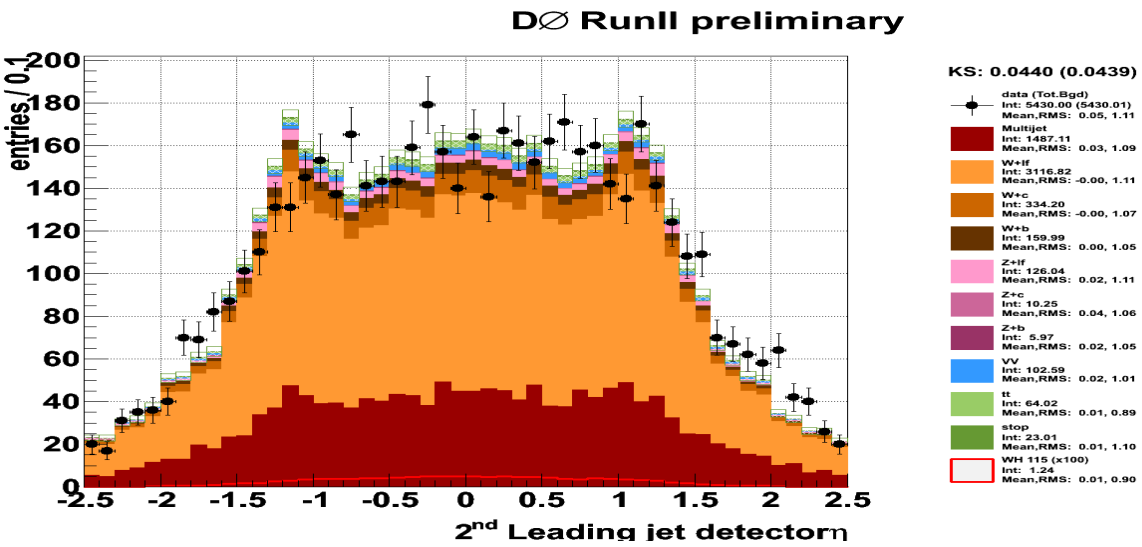


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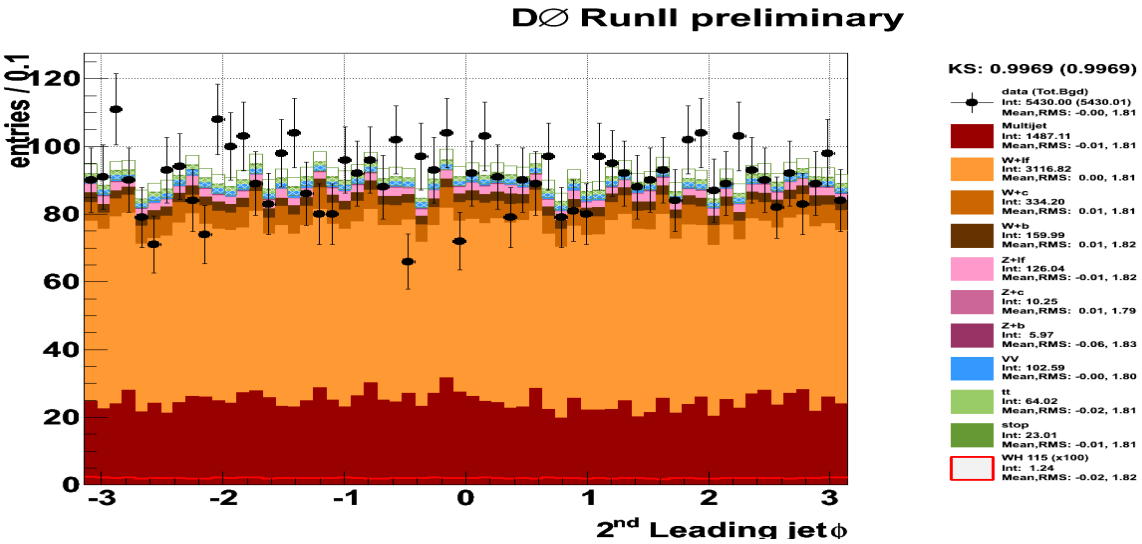


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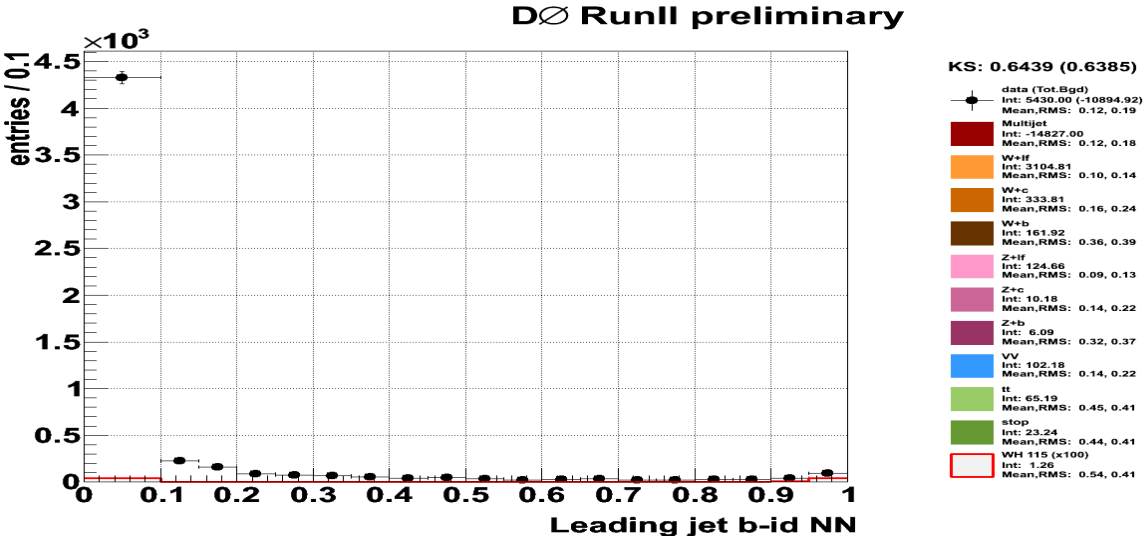


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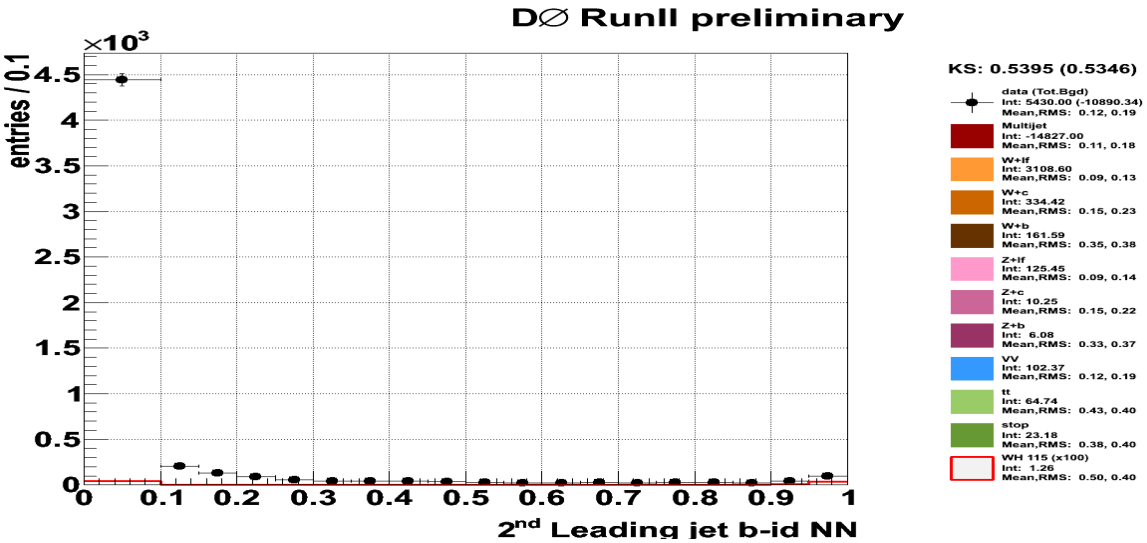


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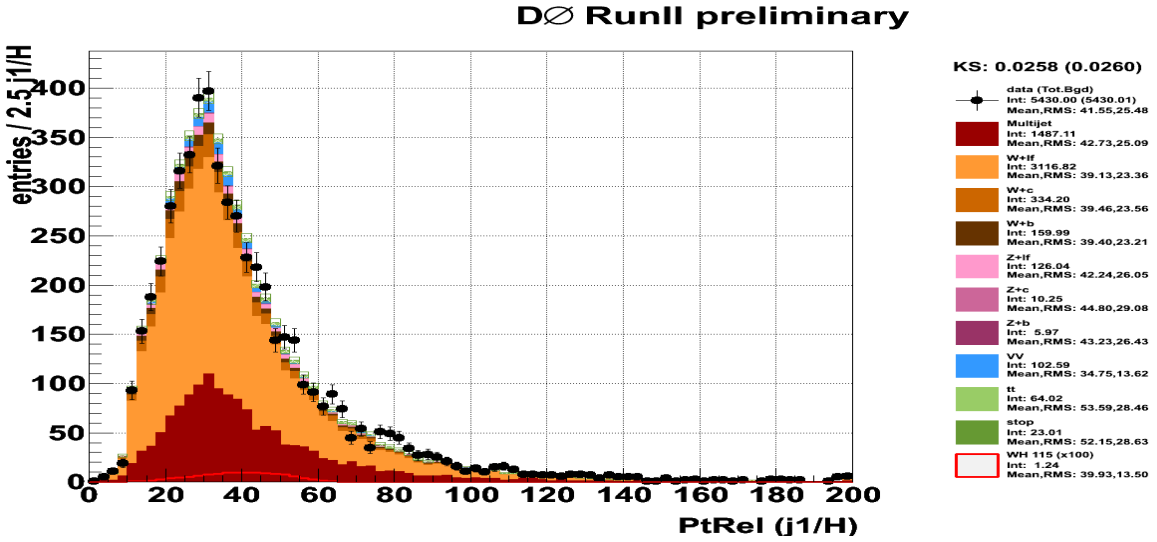


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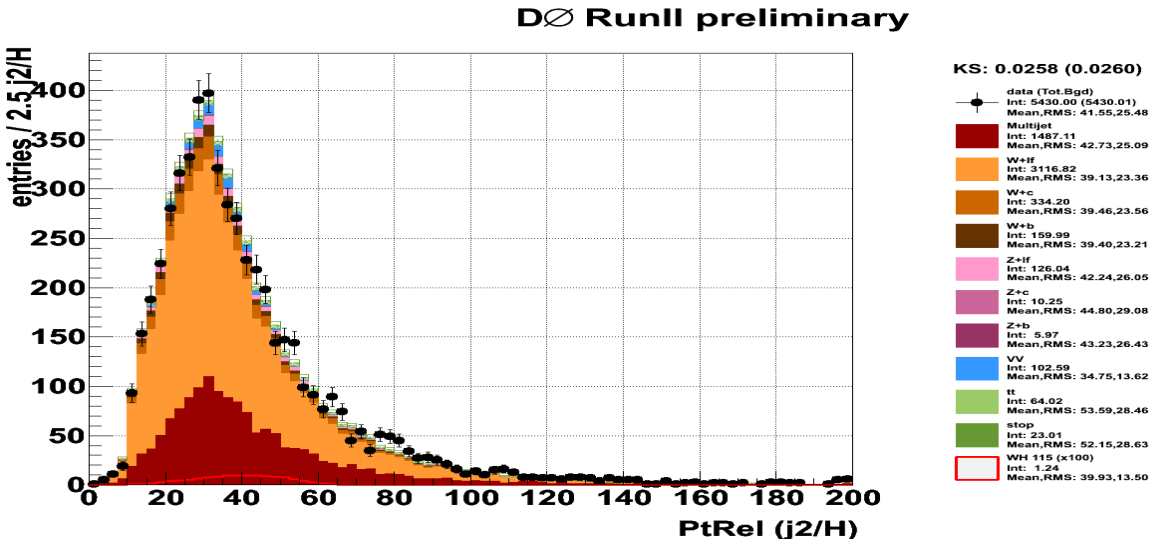


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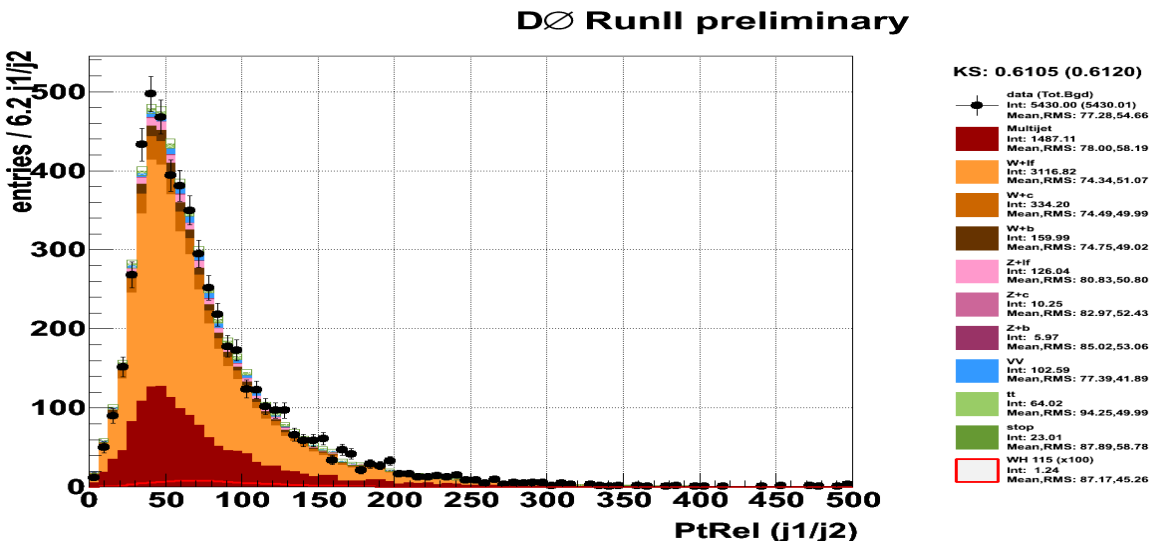


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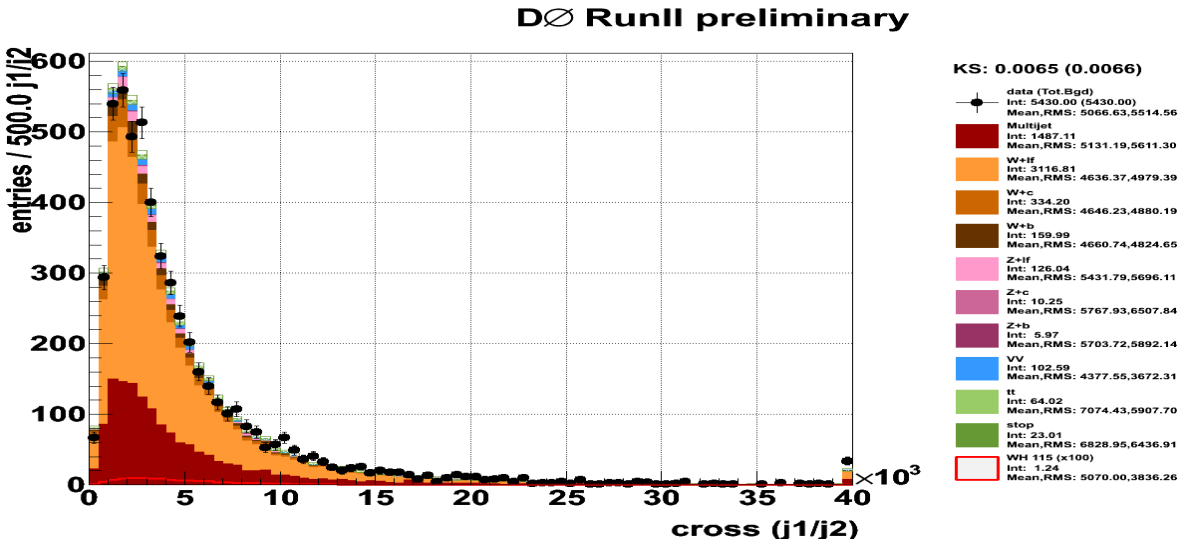


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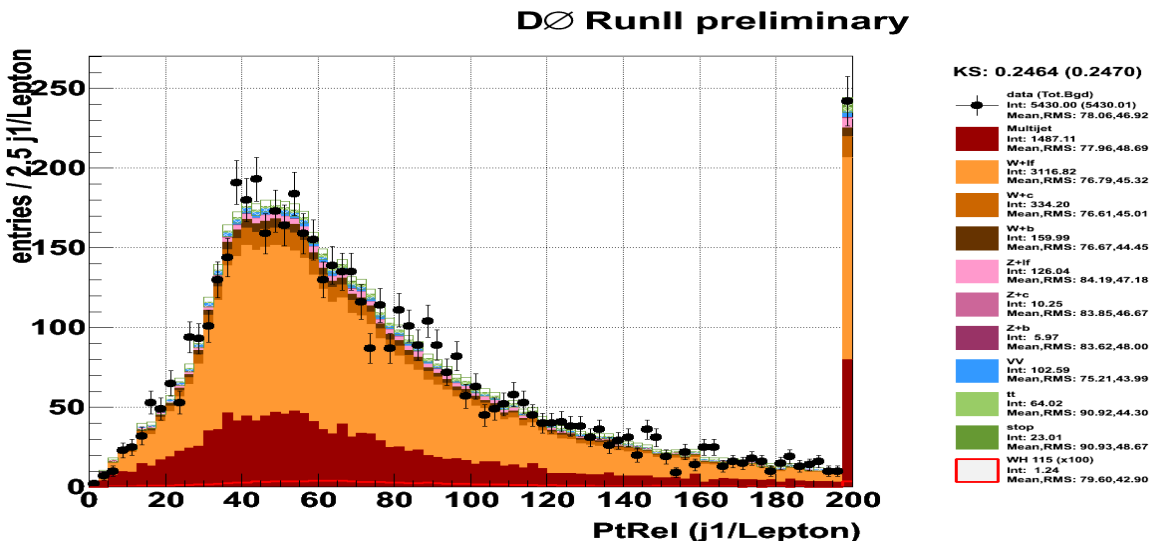


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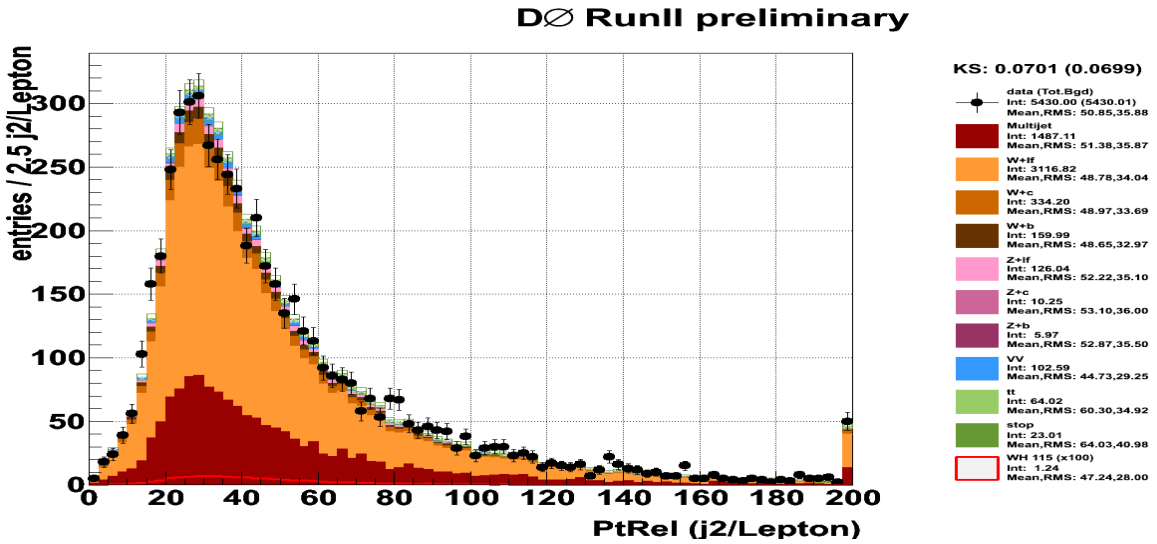


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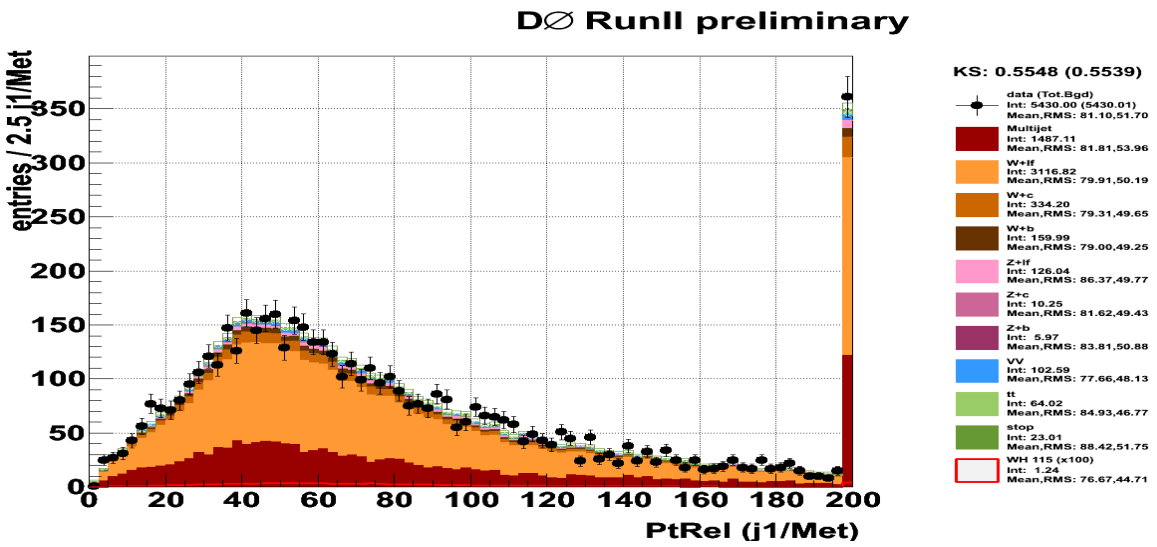


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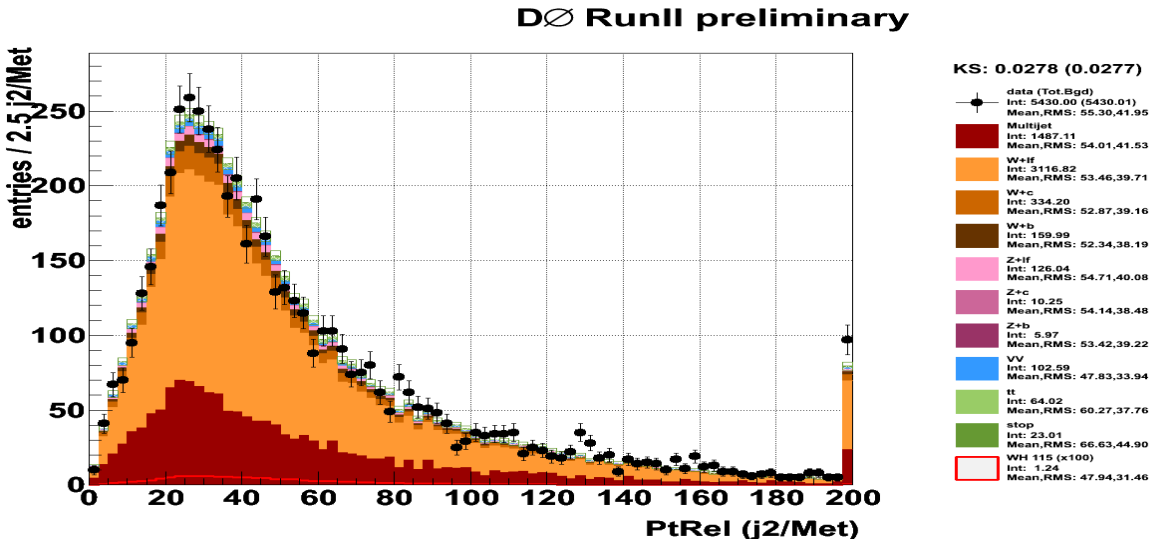


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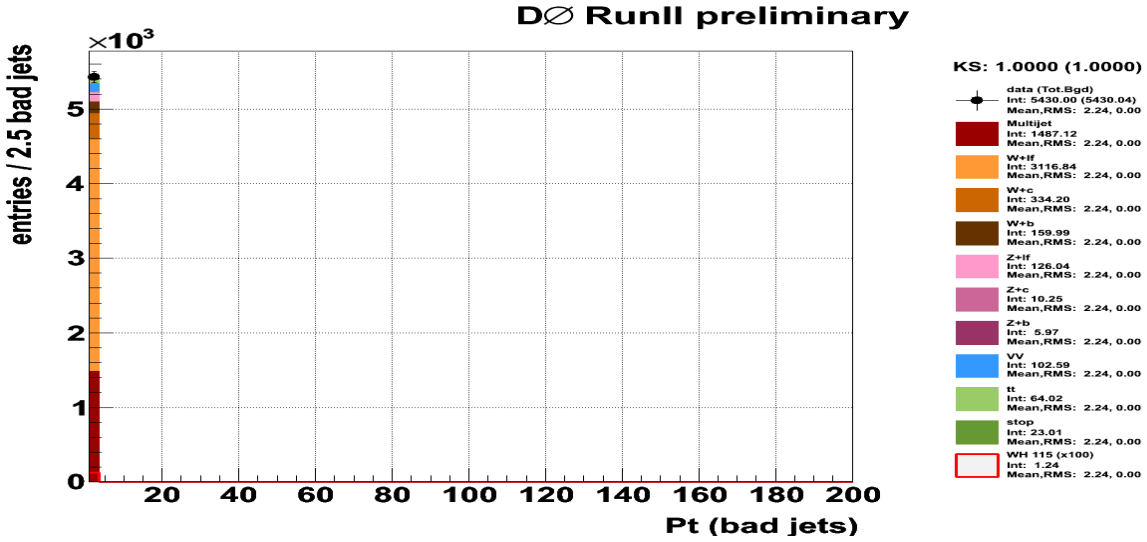


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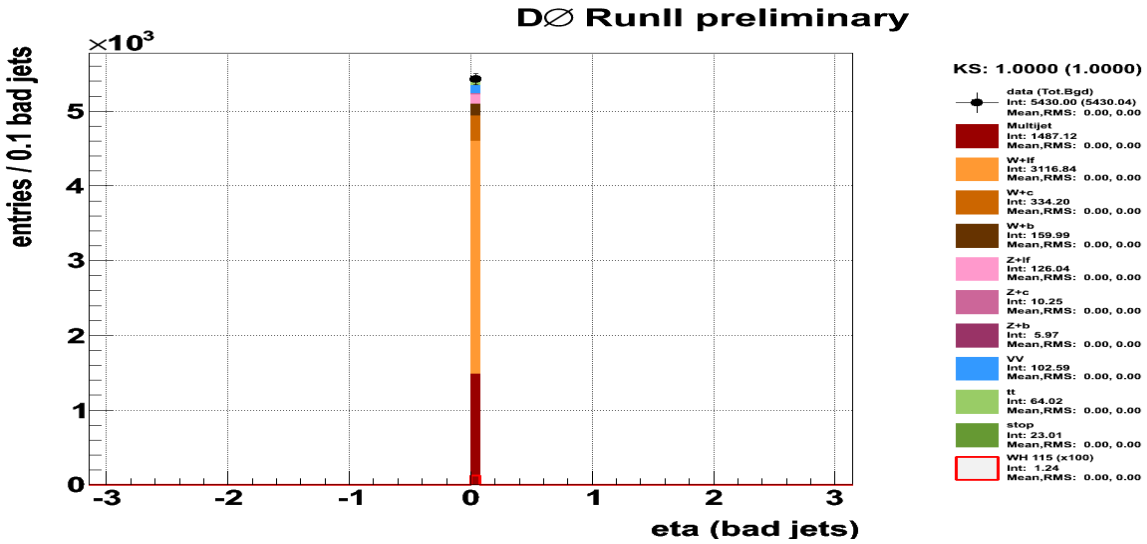


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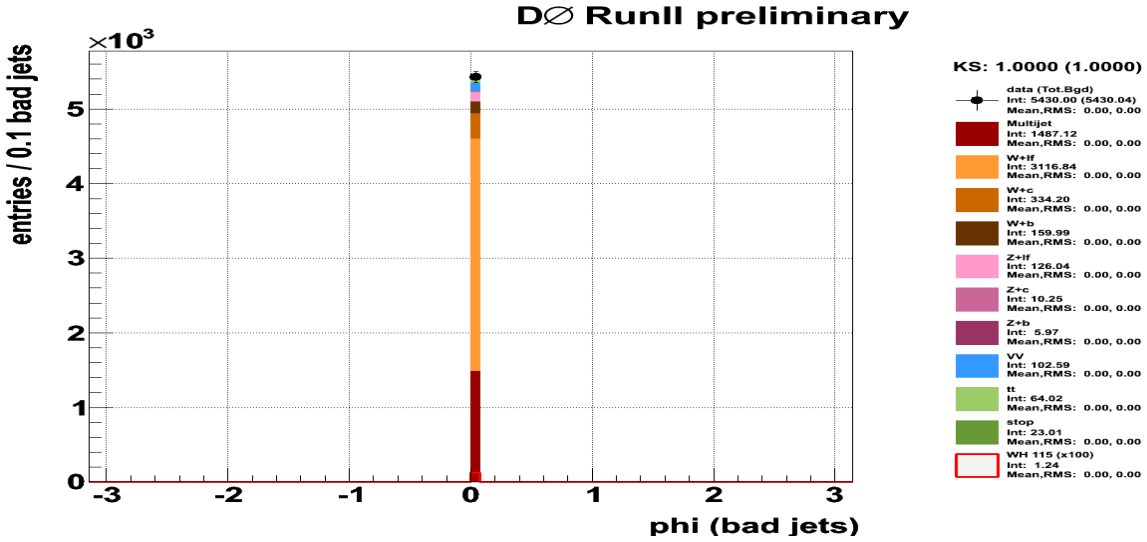


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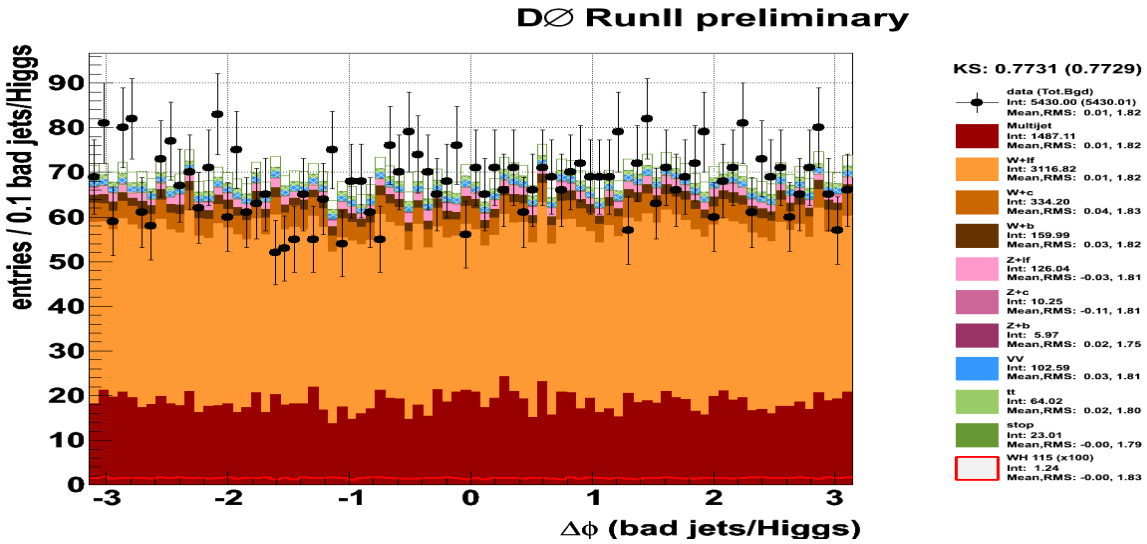


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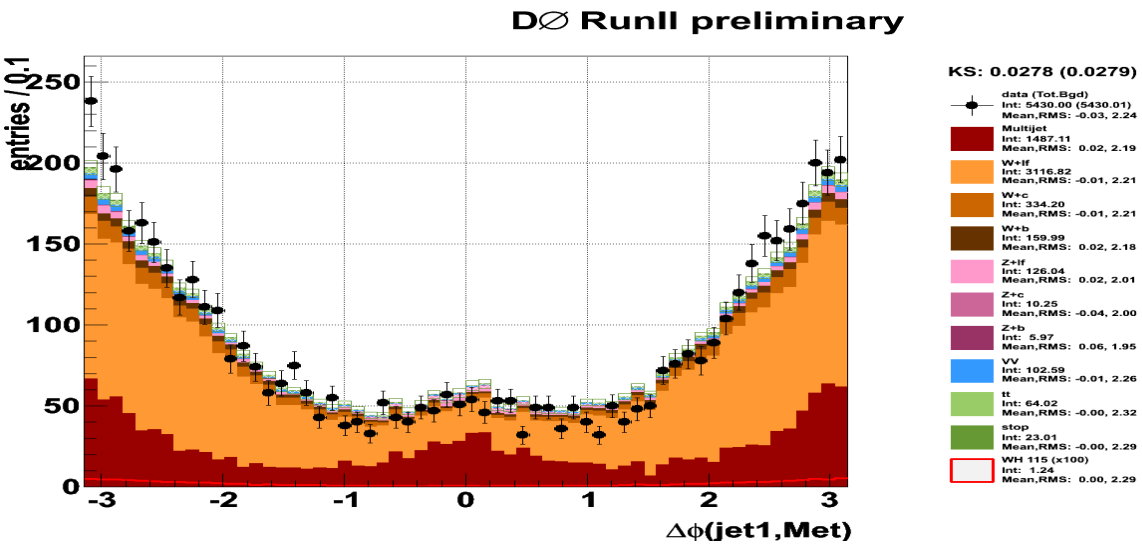


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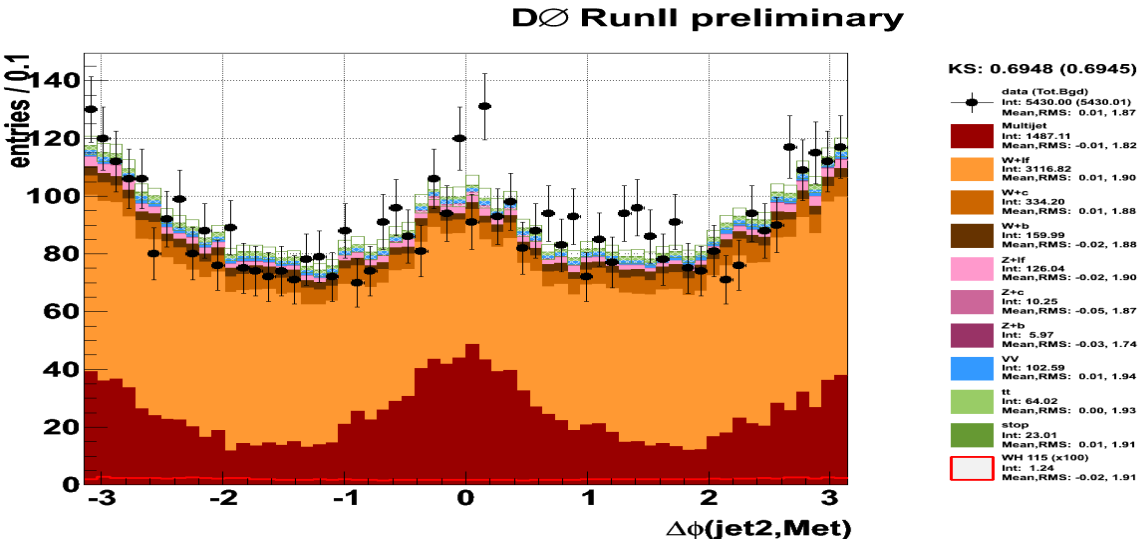


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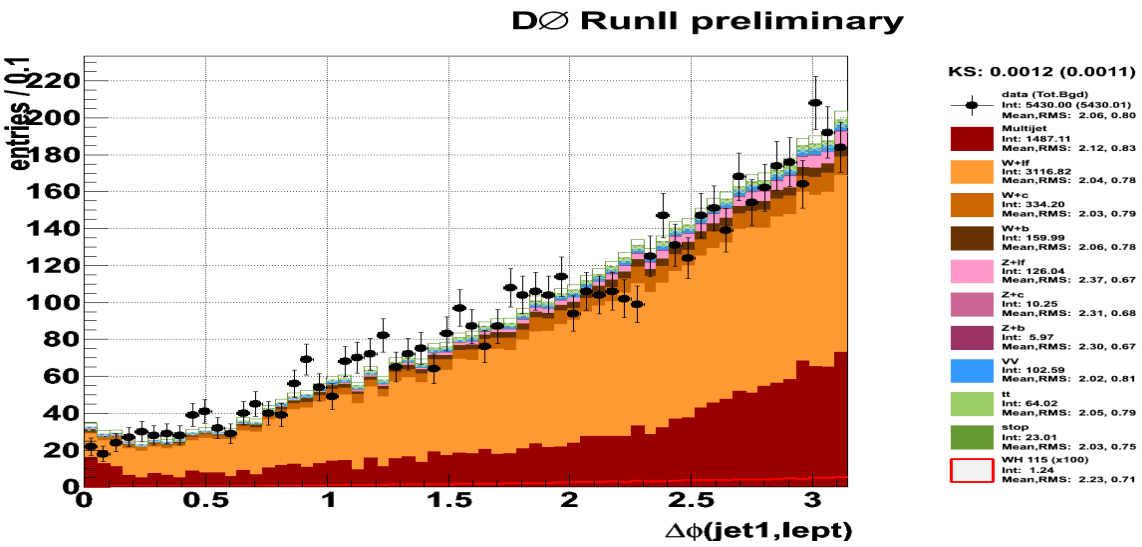


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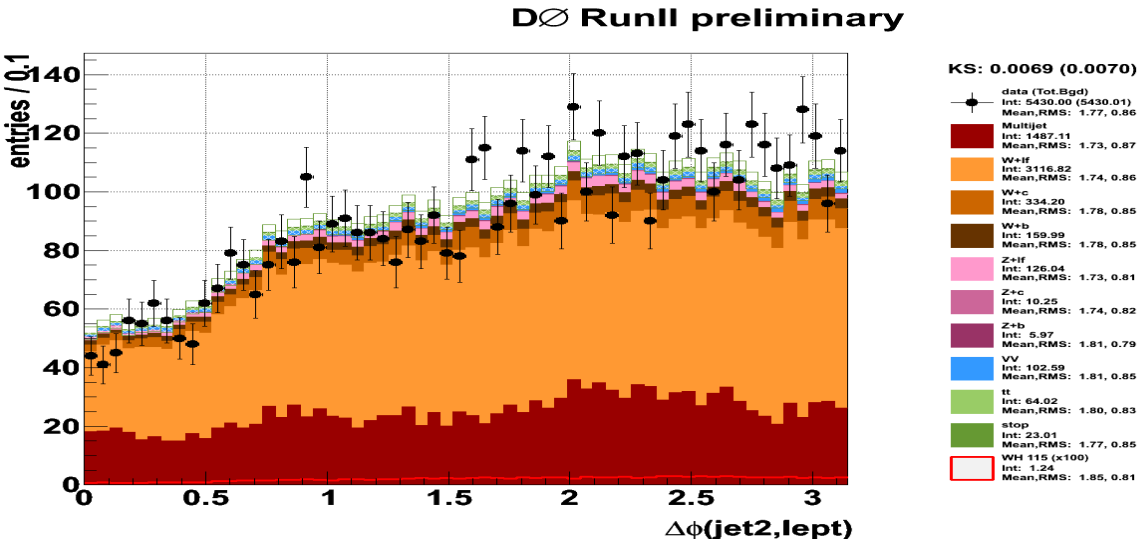


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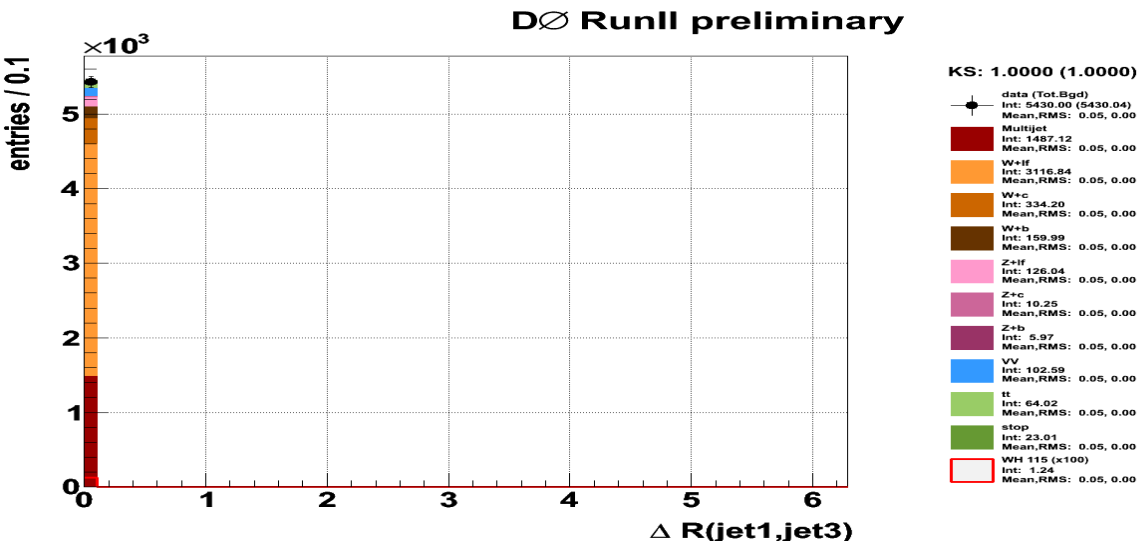


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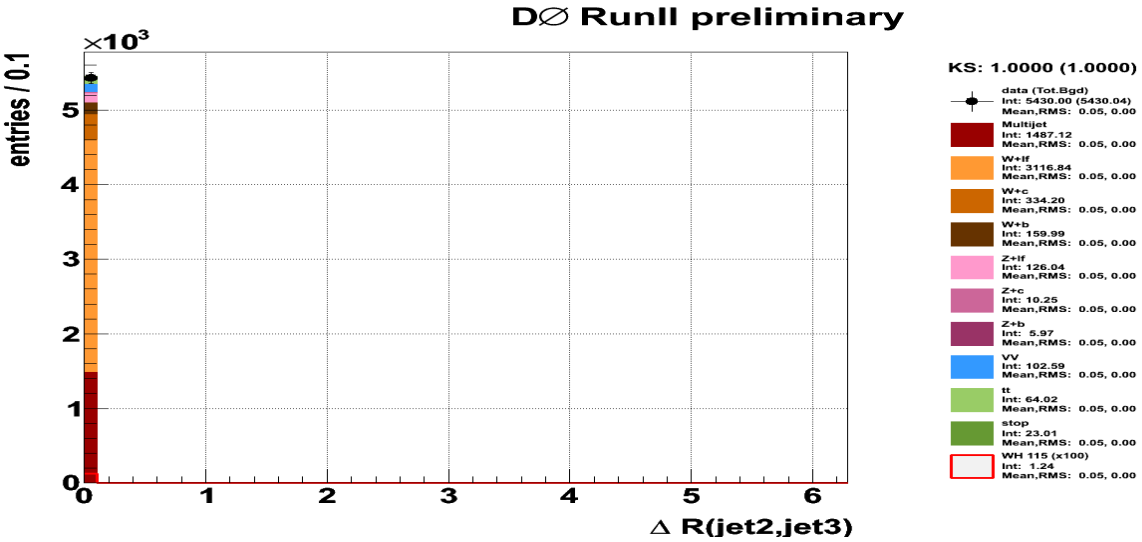



Figure 5.30:

# Chapter 6

# W

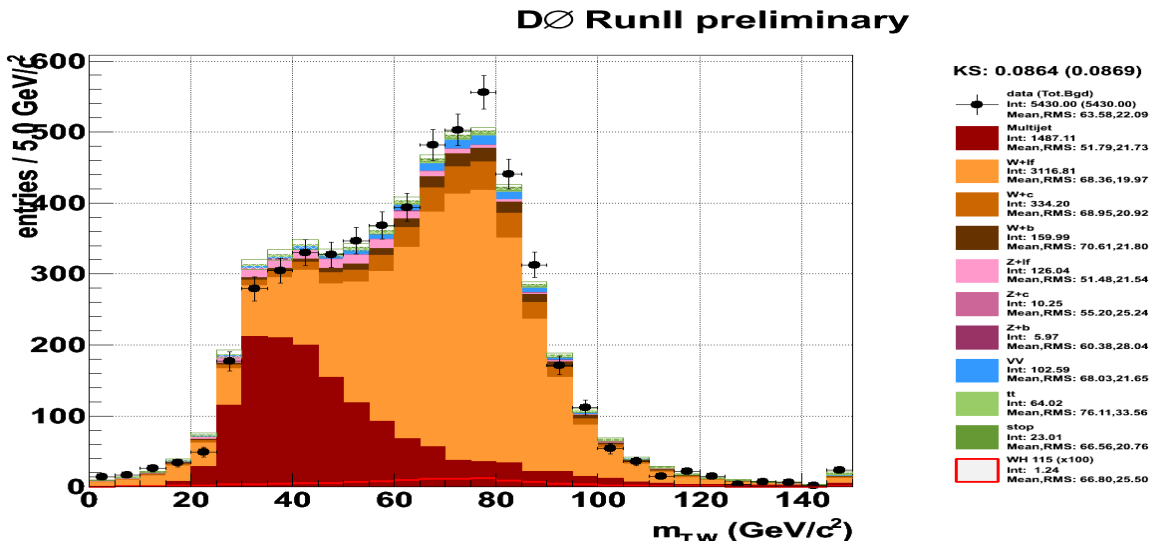



Figure 6.1:

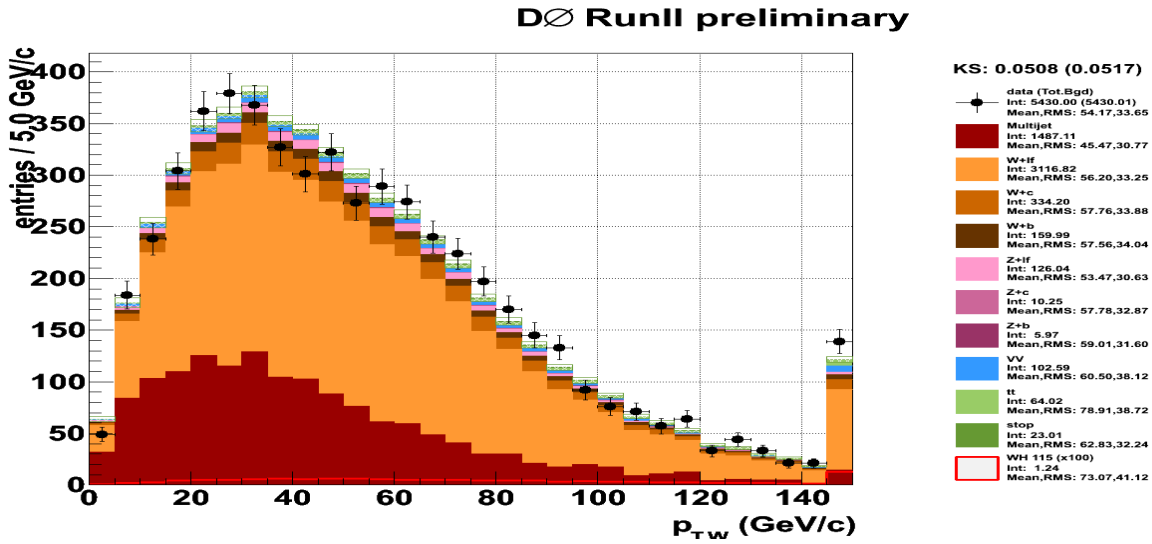



Figure 6.2:

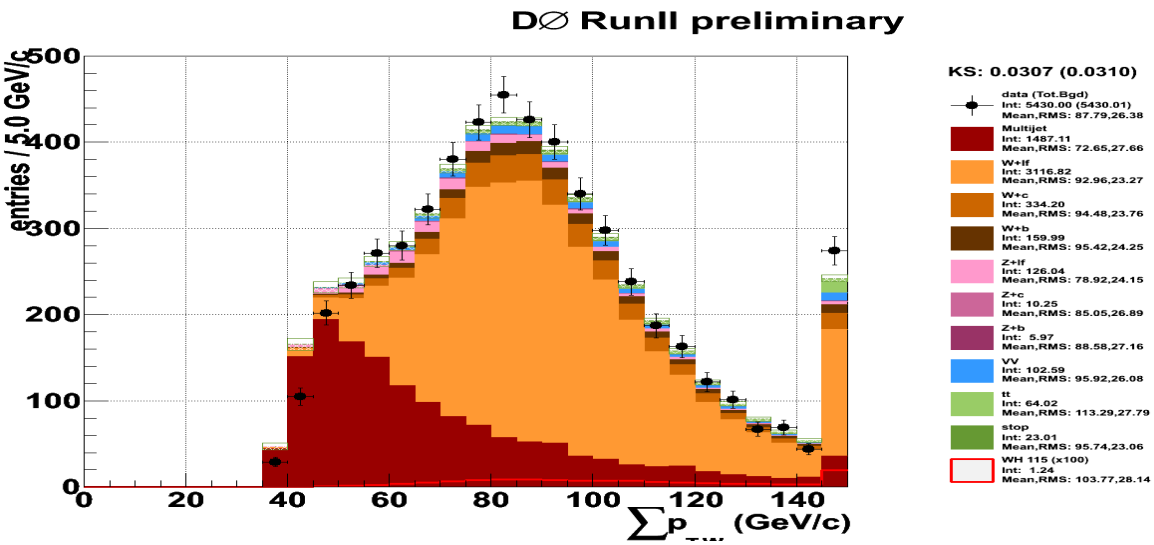



Figure 6.3:

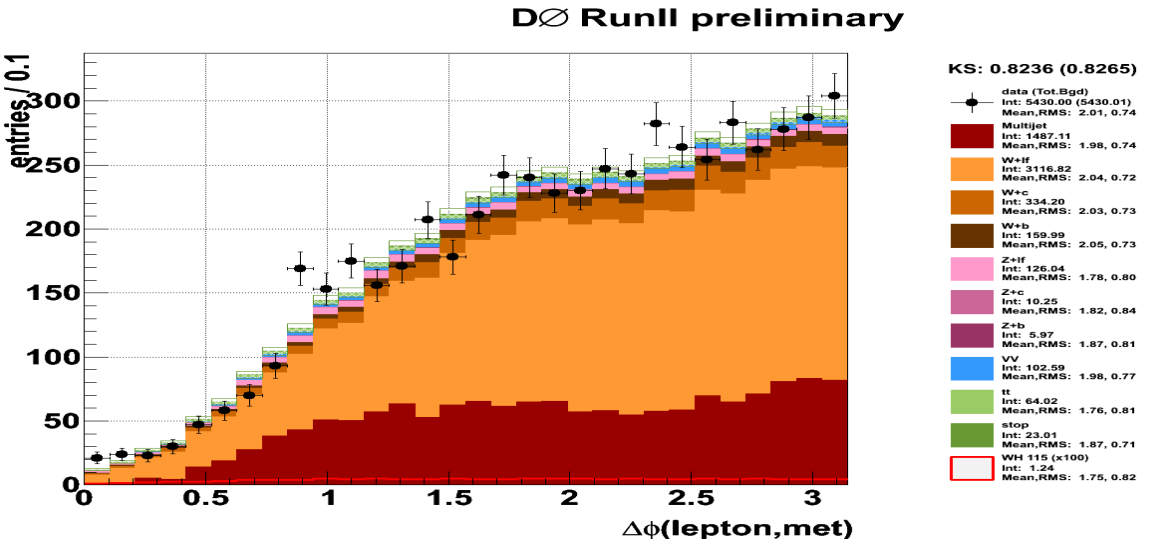



Figure 6.4:

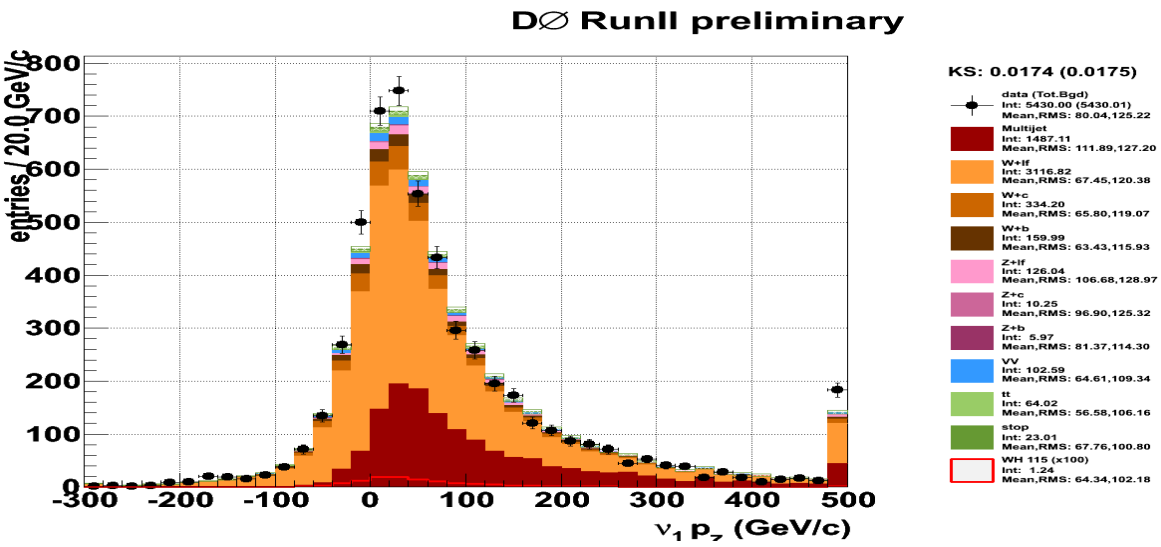



Figure 6.5:

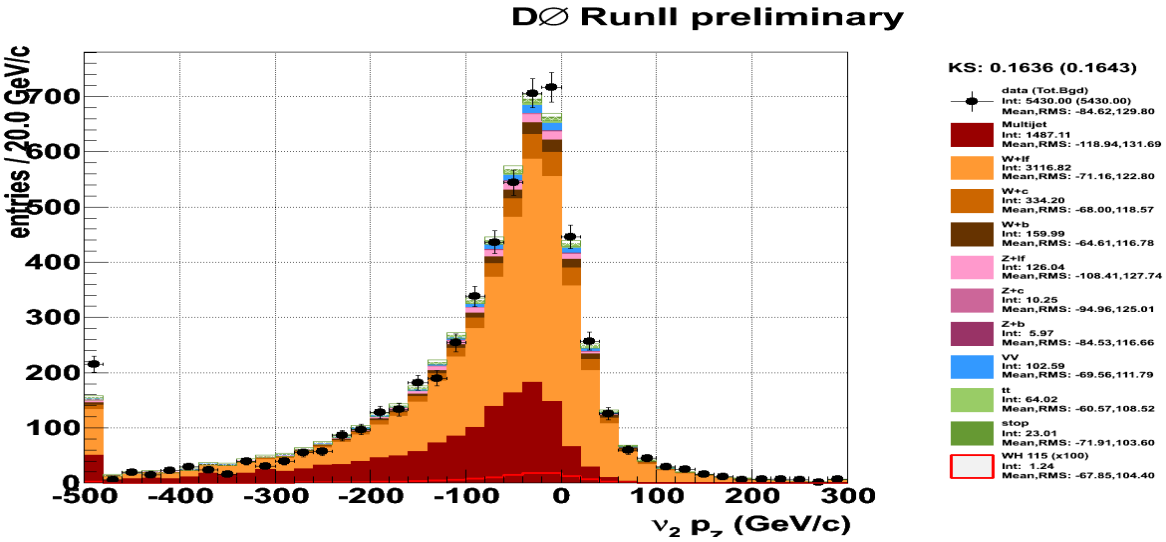



Figure 6.6:

# Chapter 7

# H

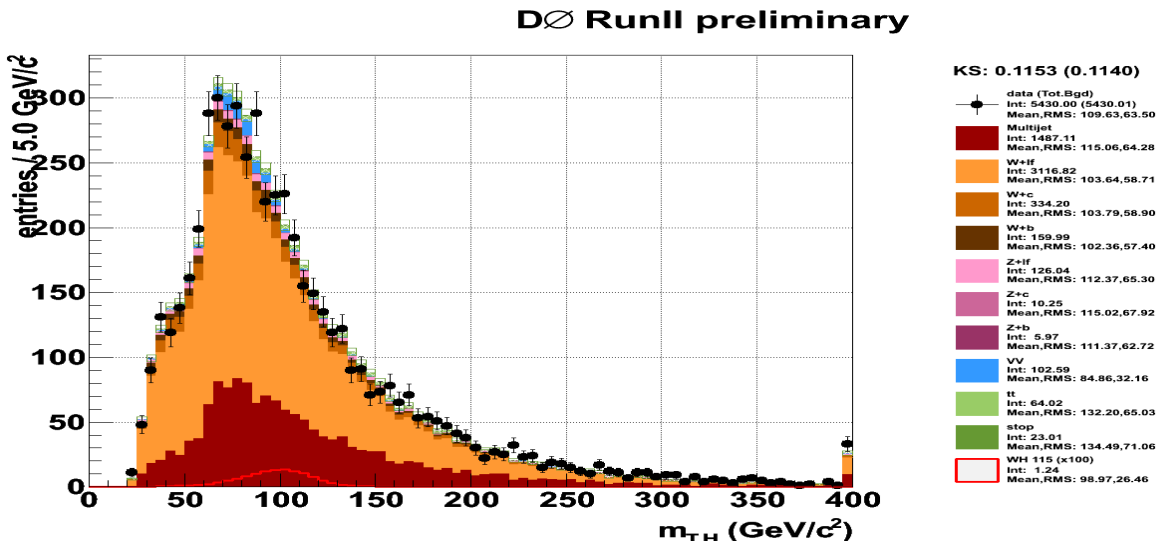
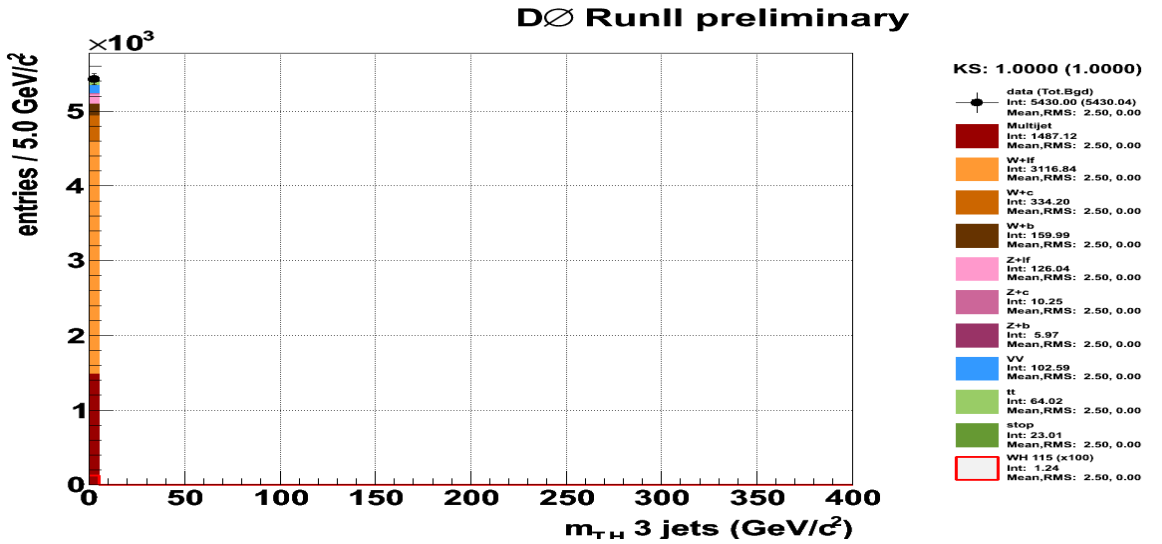



Figure 7.1:

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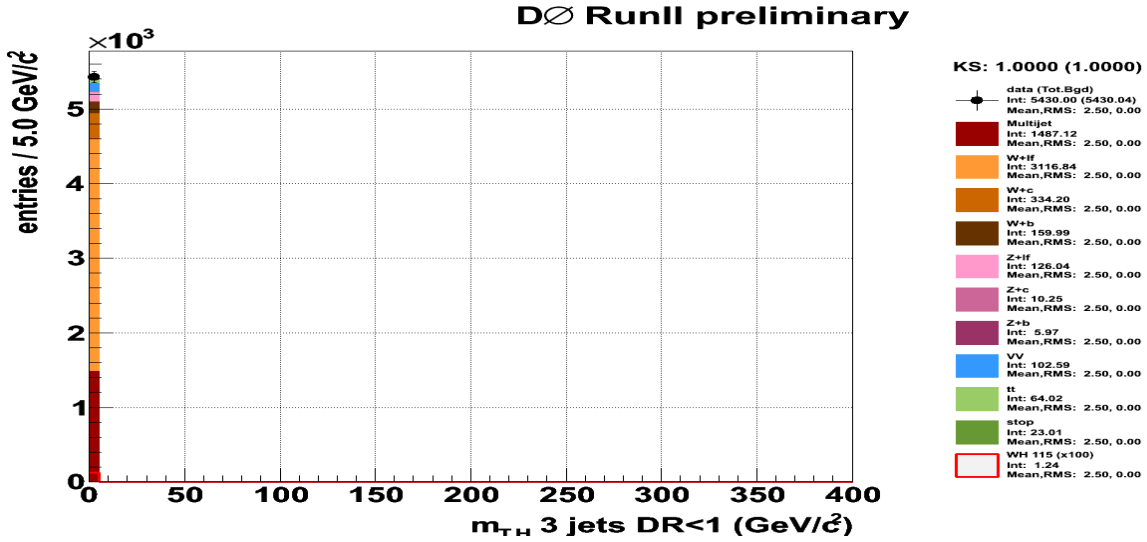


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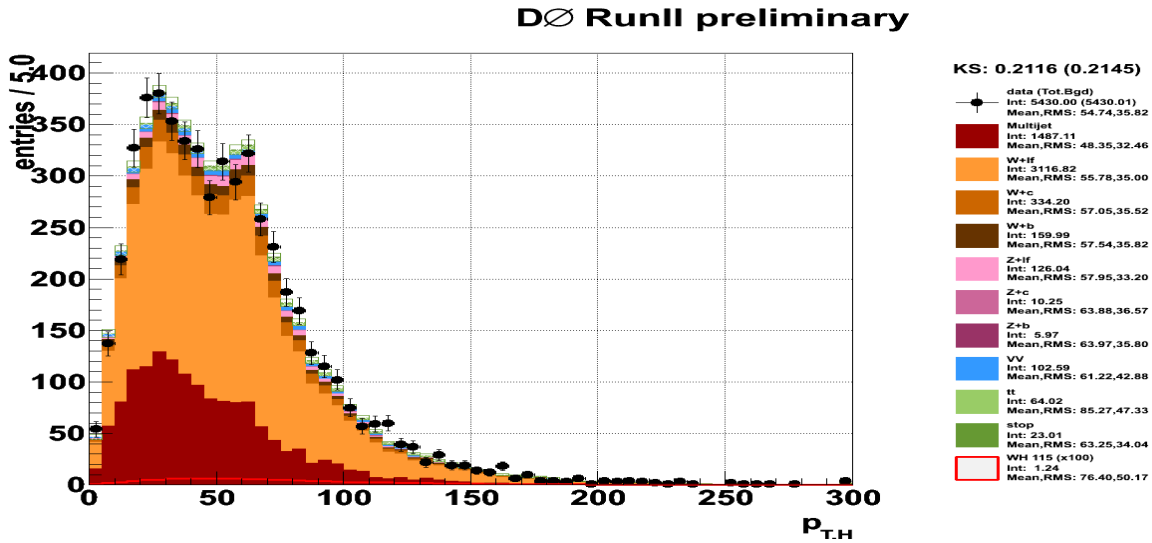


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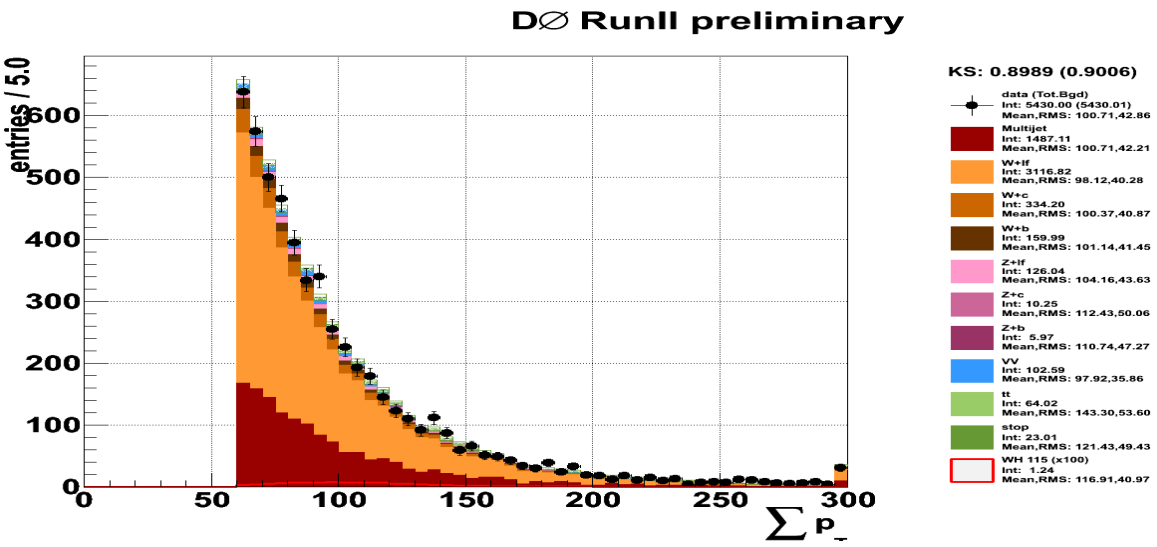
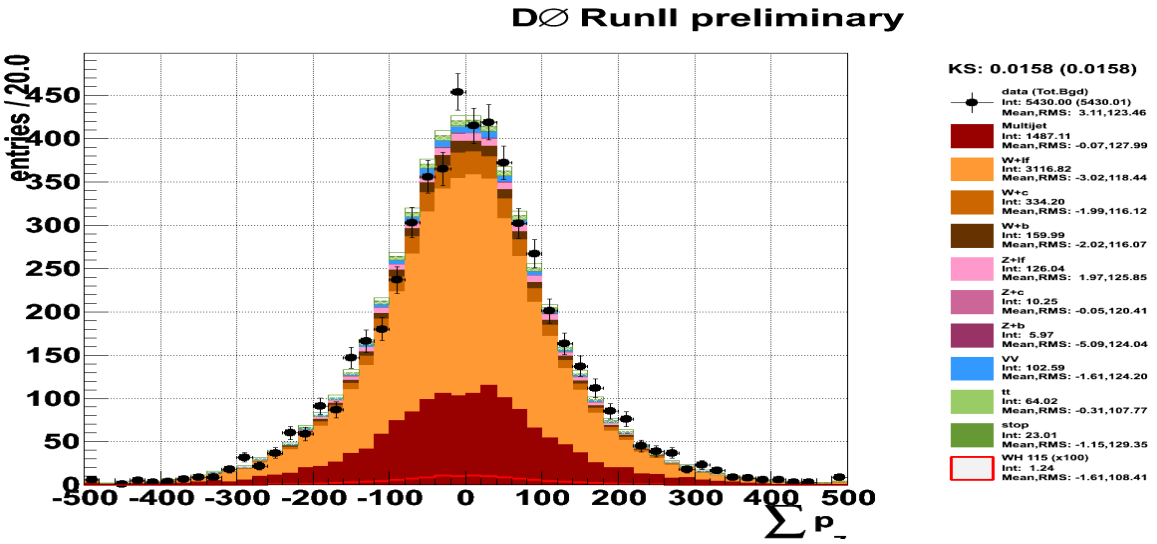



Figure 7.5:

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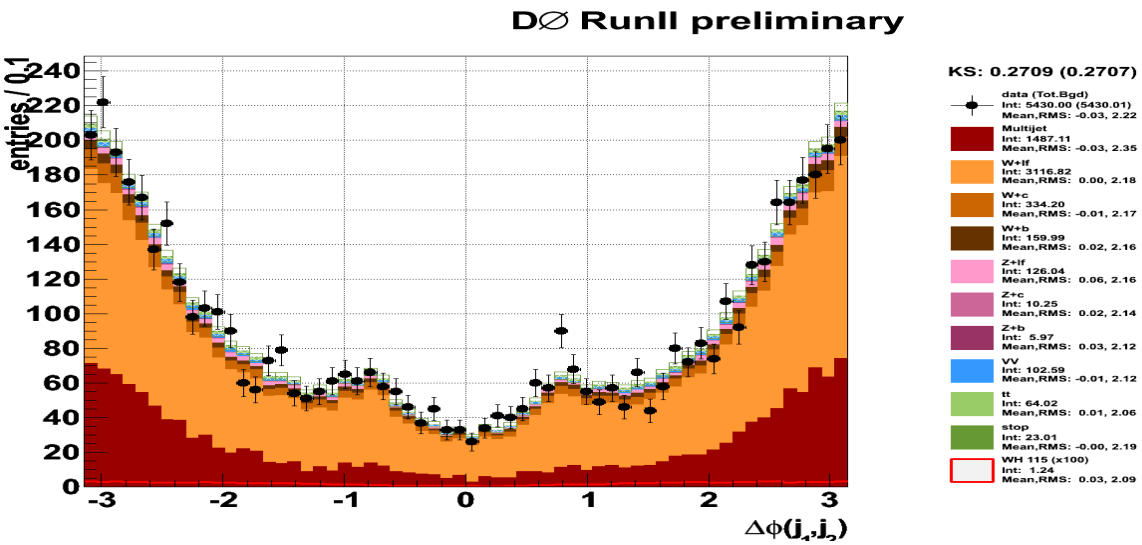



Figure 7.7:

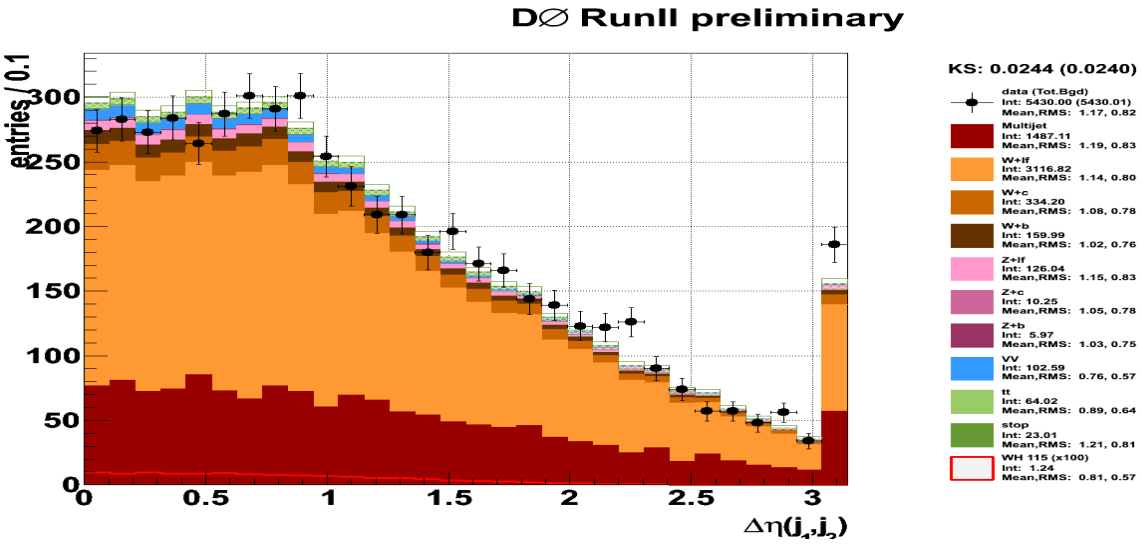



Figure 7.8:

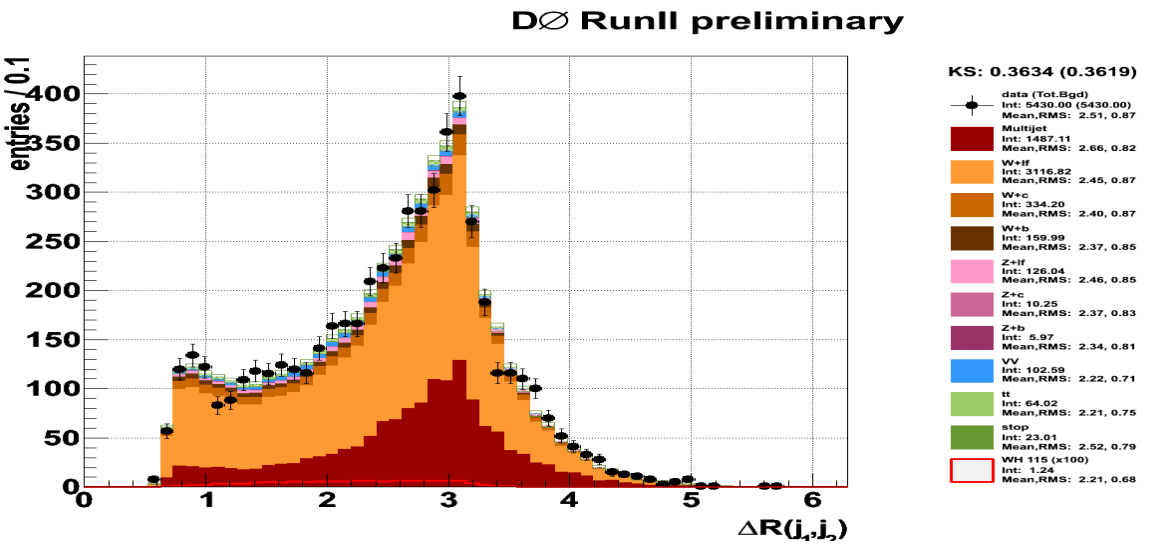



Figure 7.9:

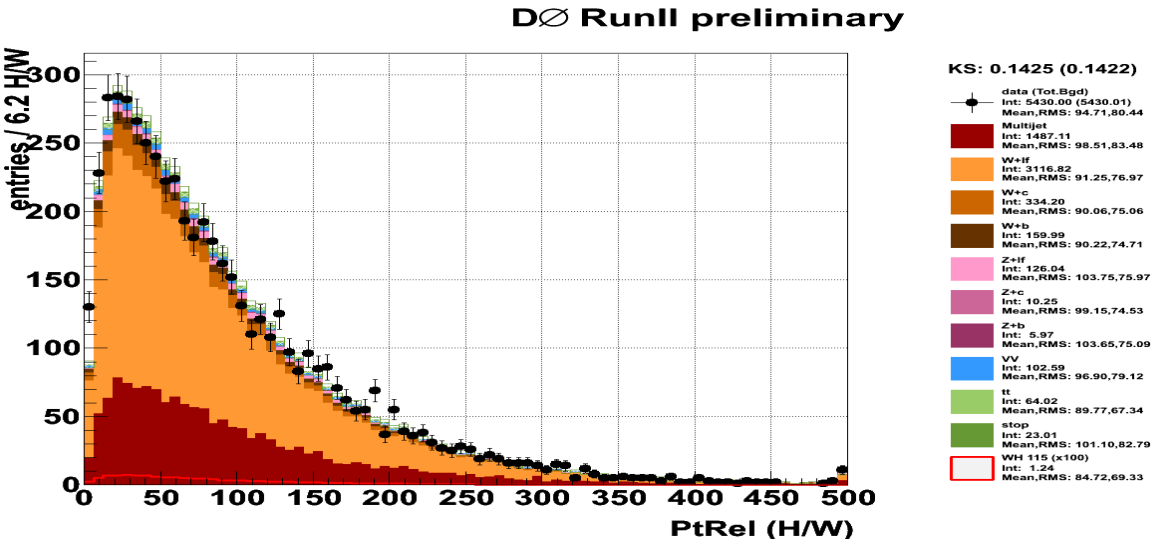



Figure 7.10:

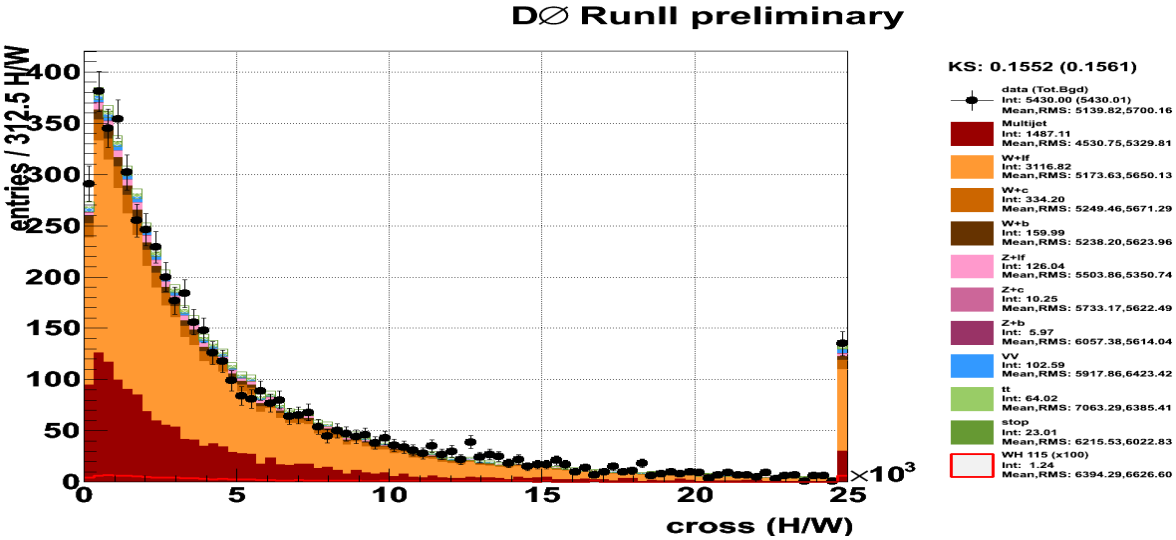



Figure 7.11:

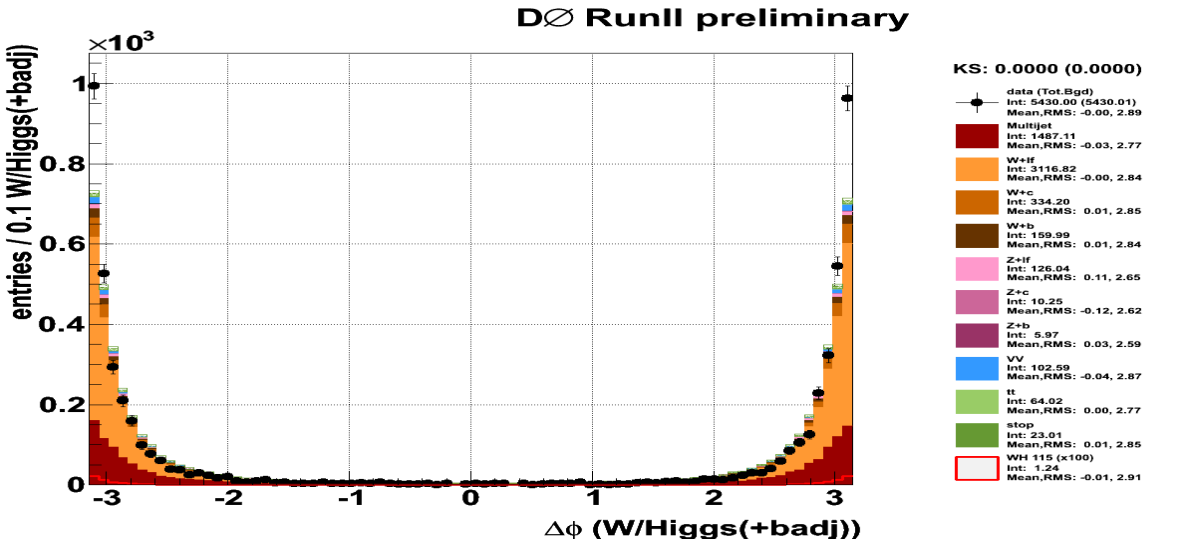



Figure 7.12:

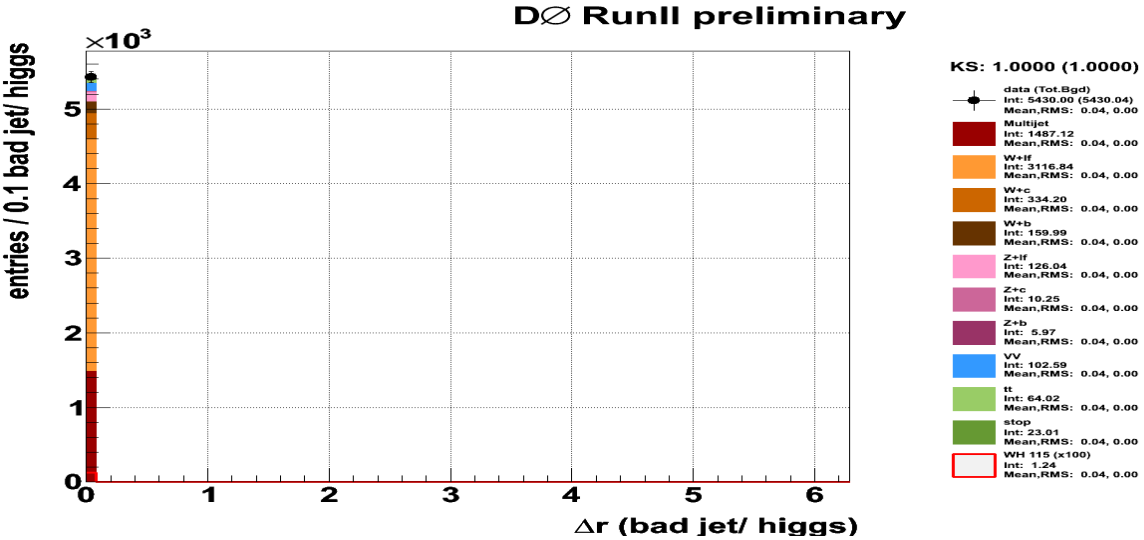

DØ RunII preliminary
×10³
entries / 0.1 bad jet/ higgs
0
1
2
3
4
5
0
1
2
3
4
5
6
Δr (bad jet/ higgs)
KS: 1.0000 (1.0000)
data (Tot.Bgd)
Int: 5430.00 (5430.04)
Mean,RMS: 0.04, 0.00
Multijet
Int: 1487.12
Mean,RMS: 0.04, 0.00
W+lf
Int: 3116.84
Mean,RMS: 0.04, 0.00
W+c
Int: 334.20
Mean,RMS: 0.04, 0.00
W+b
Int: 159.99
Mean,RMS: 0.04, 0.00
Z+lf
Int: 126.04
Mean,RMS: 0.04, 0.00
Z+c
Int: 10.25
Mean,RMS: 0.04, 0.00
Z+b
Int: 5.97
Mean,RMS: 0.04, 0.00
VV
Int: 102.59
Mean,RMS: 0.04, 0.00
tt
Int: 64.02
Mean,RMS: 0.04, 0.00
stop
Int: 23.01
Mean,RMS: 0.04, 0.00
WH 115 (x100)
Int: 1.24
Mean,RMS: 0.04, 0.00

Figure 7.13:

# Chapter 8

# Top

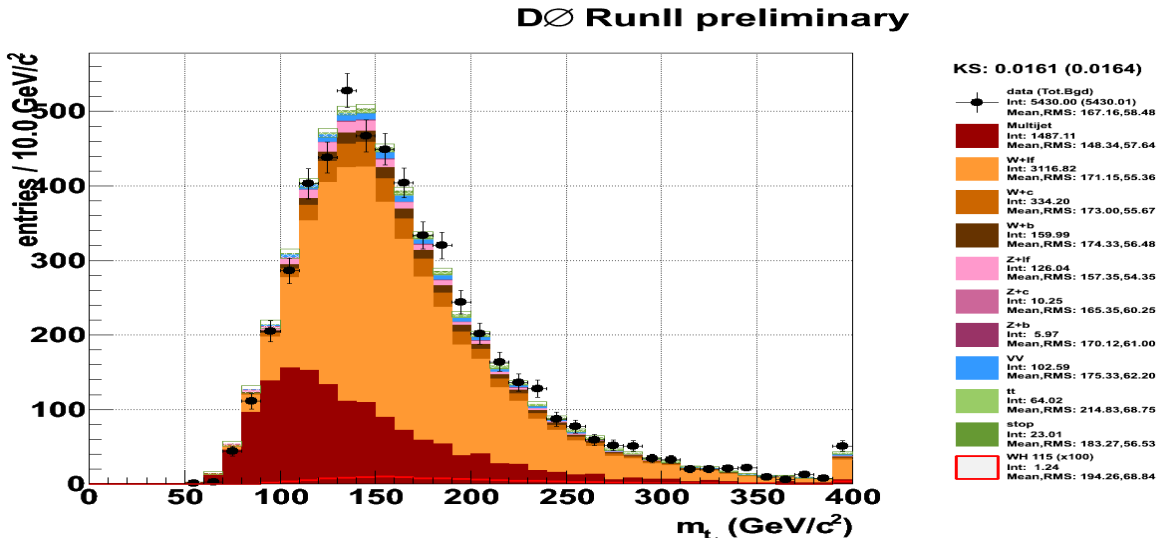



Figure 8.1:

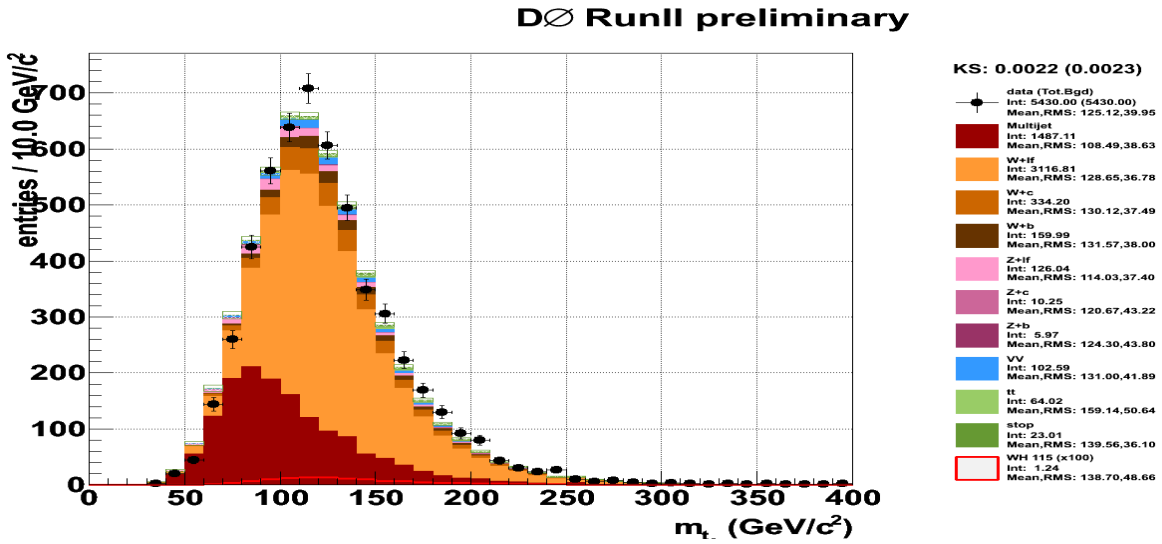



Figure 8.2:

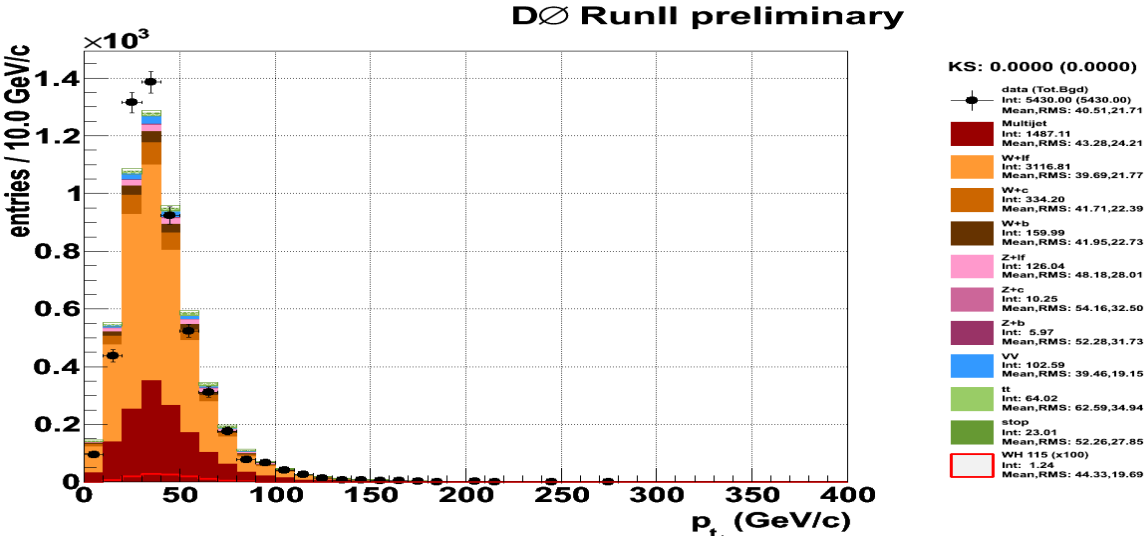



Figure 8.3:

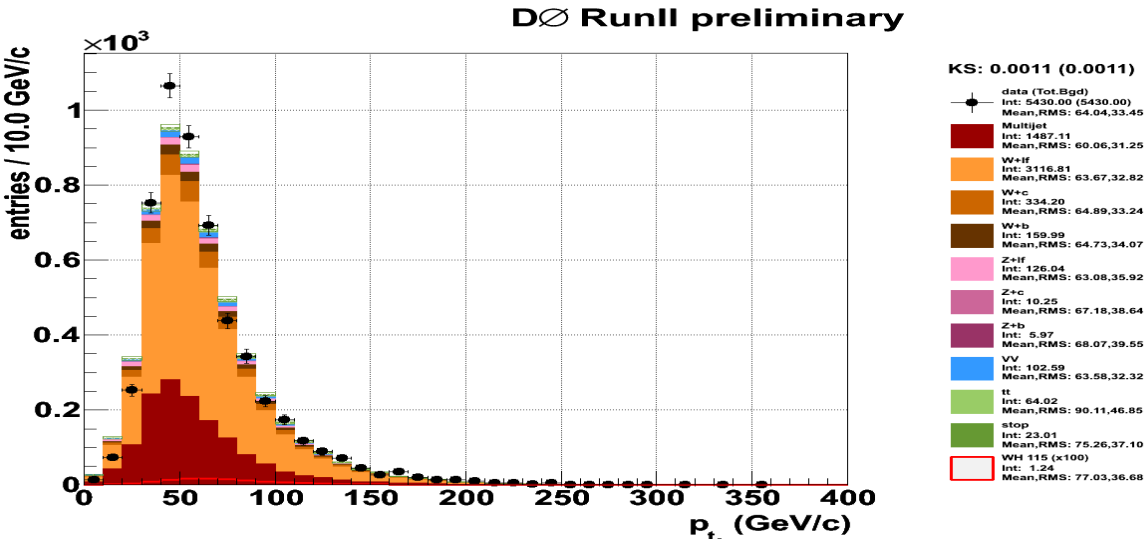



Figure 8.4:

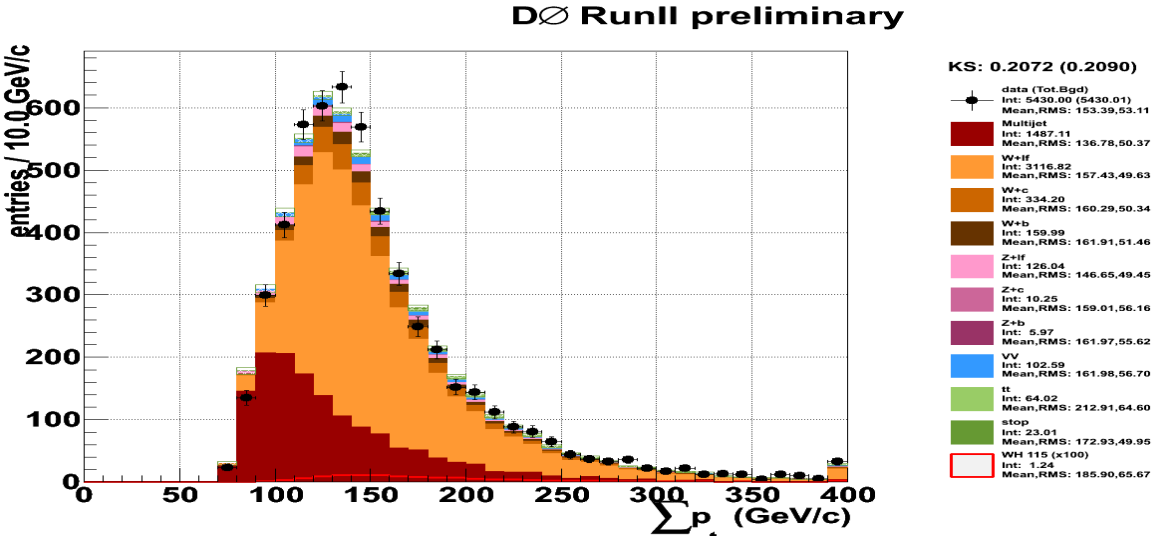



Figure 8.5:

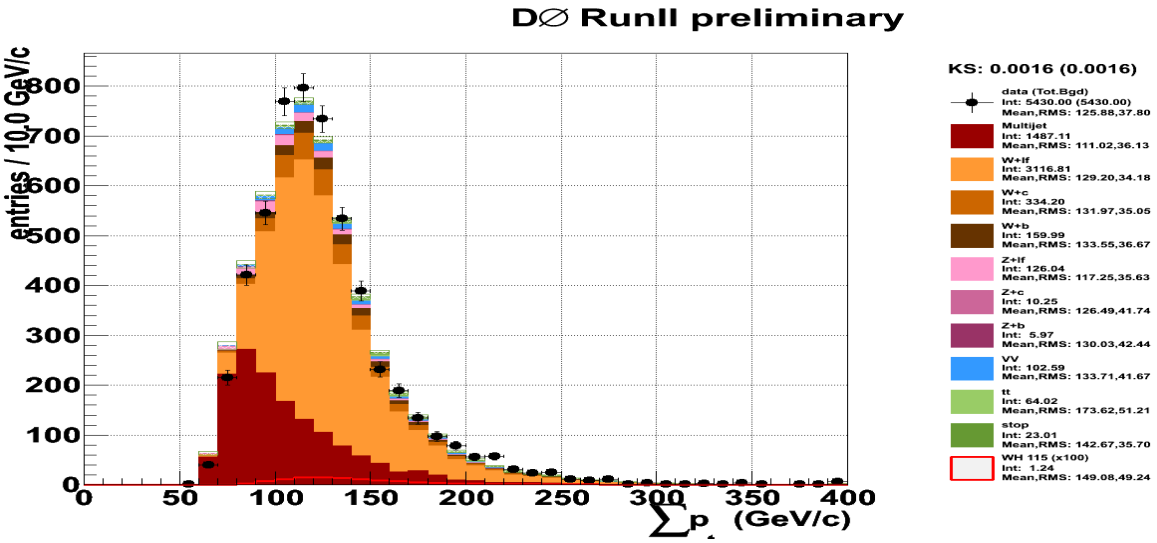



Figure 8.6:

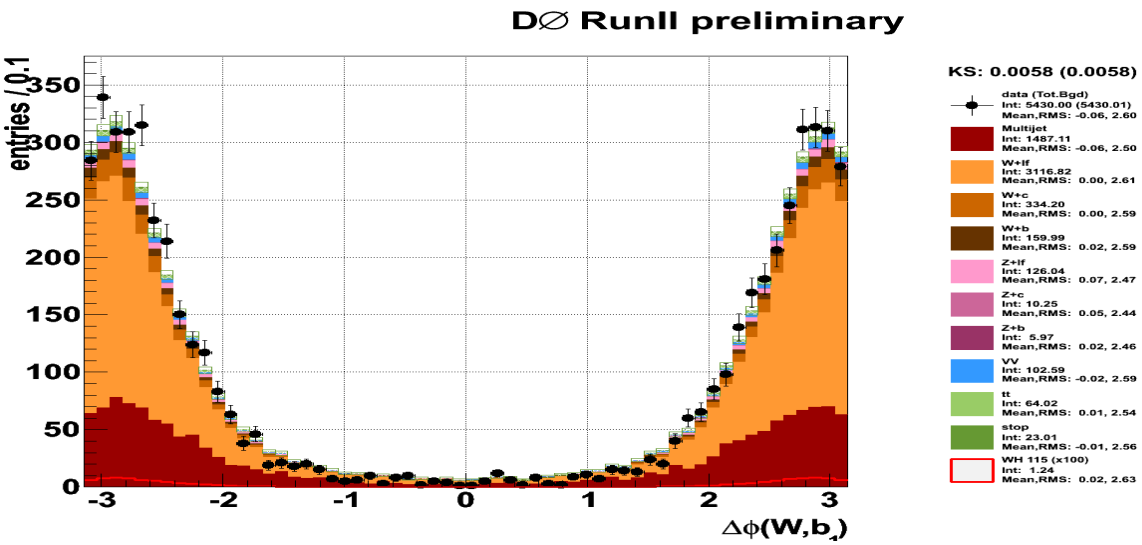



Figure 8.7:

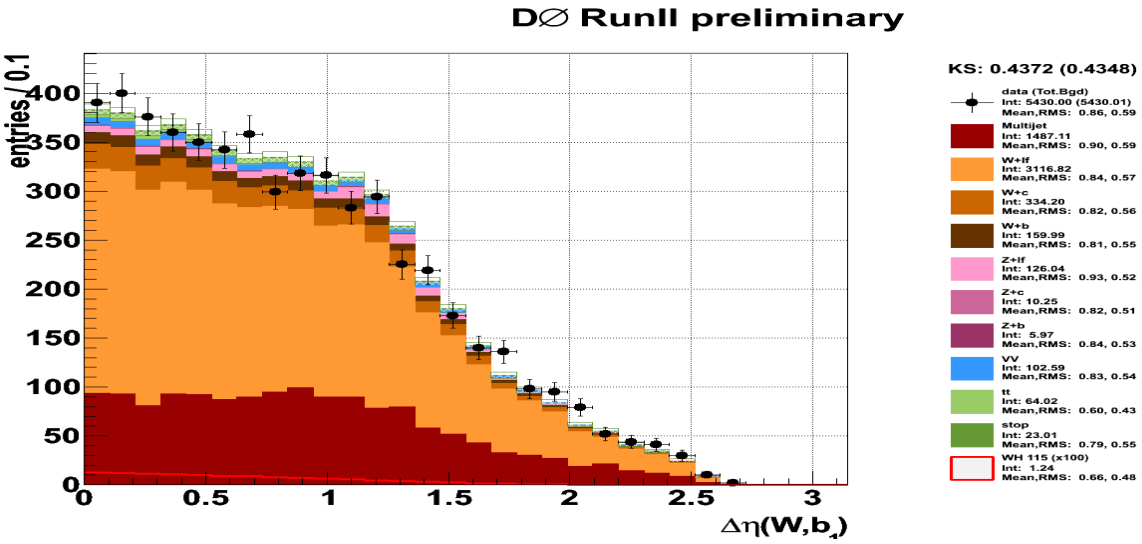



Figure 8.8:

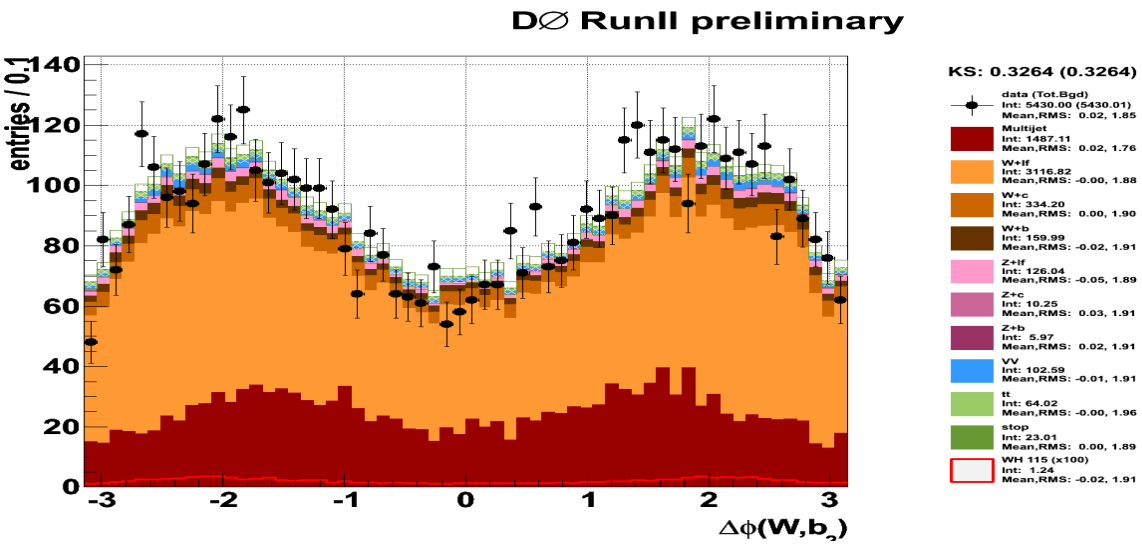



Figure 8.9:

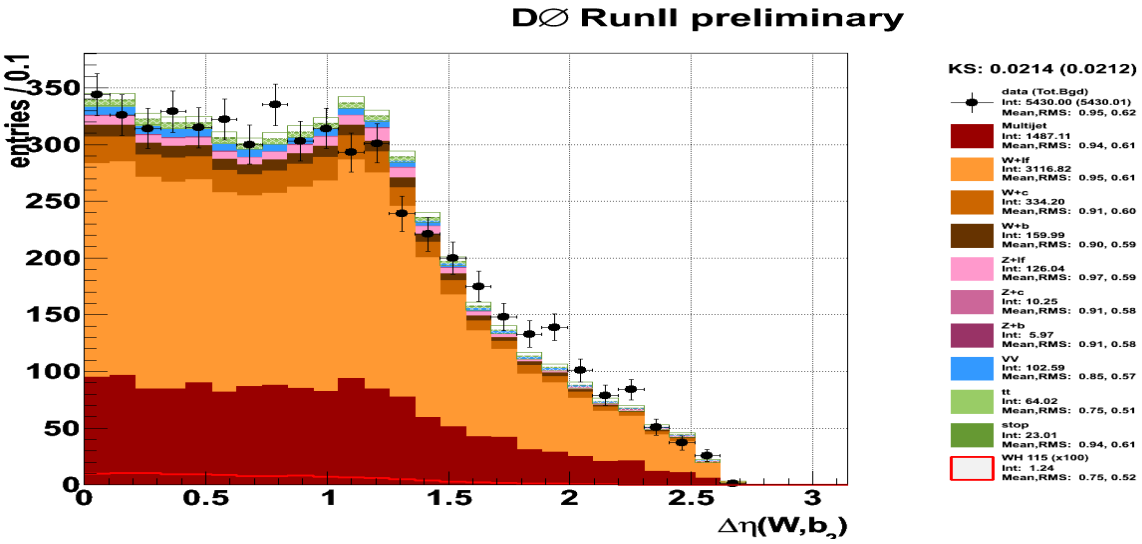



Figure 8.10:

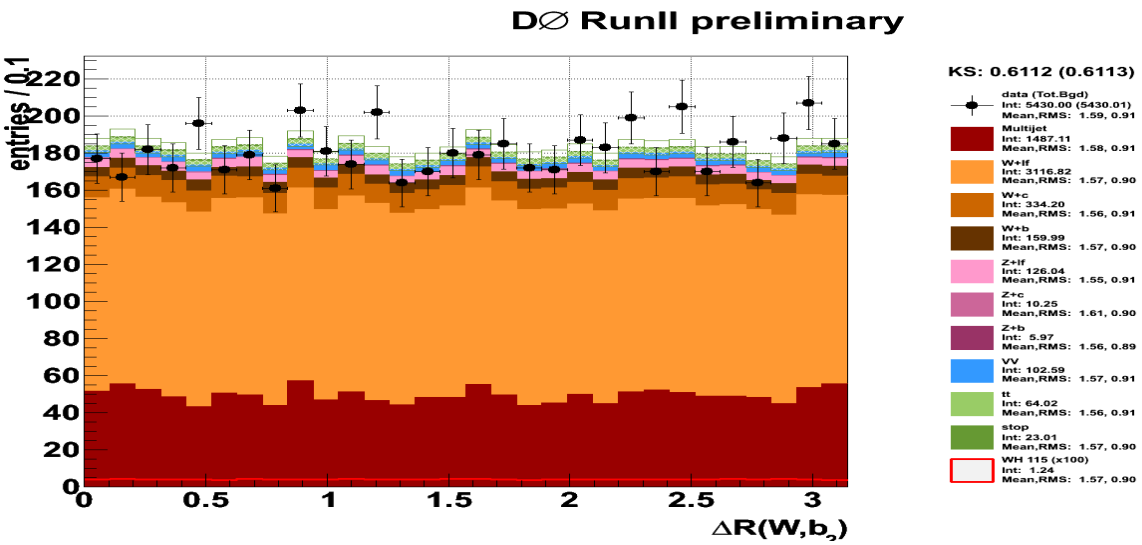



Figure 8.11:

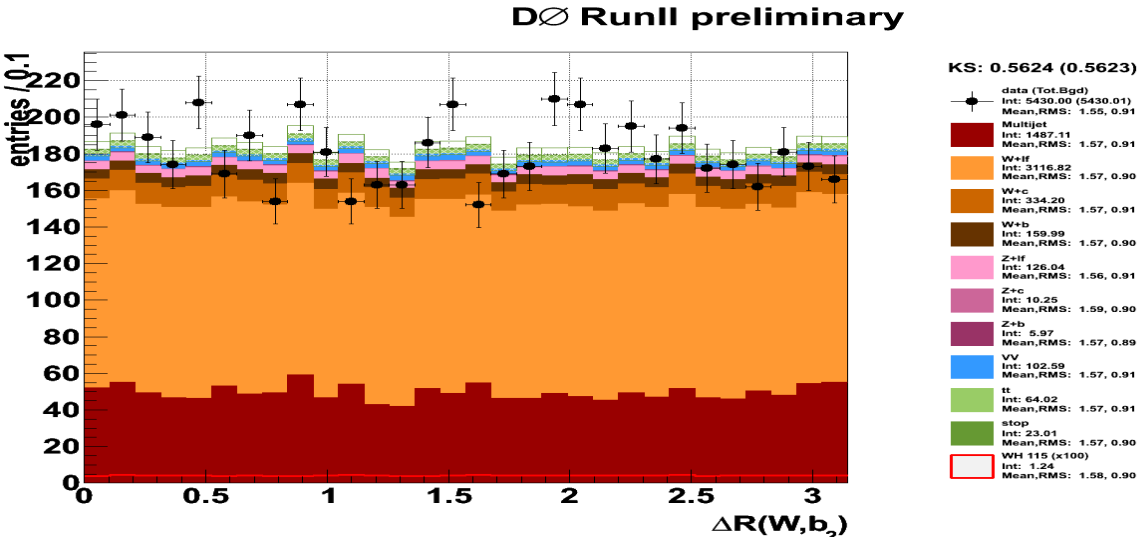



Figure 8.12:

# Chapter 9

# MEt

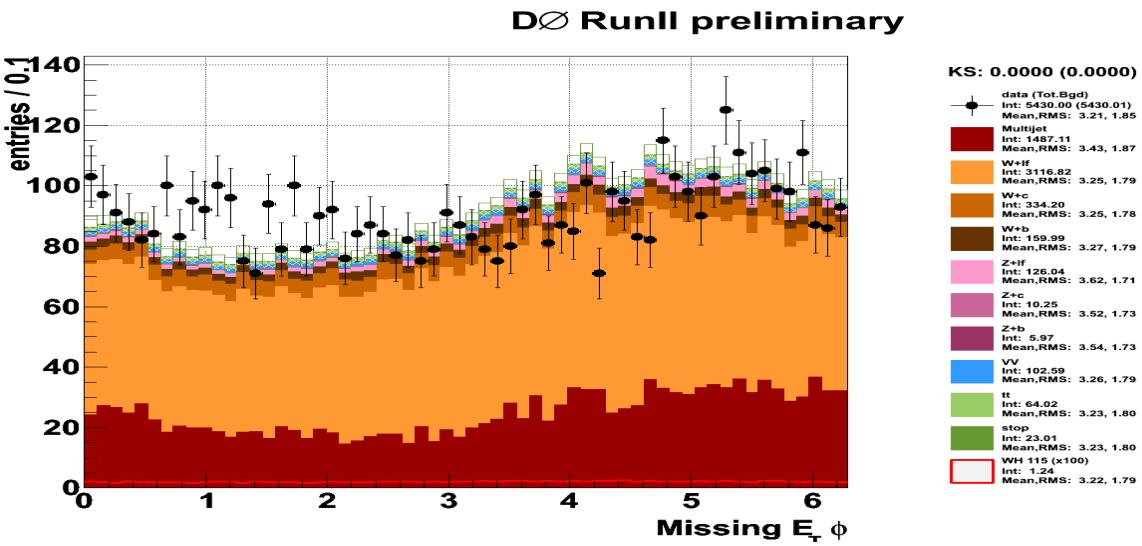



Figure 9.1:

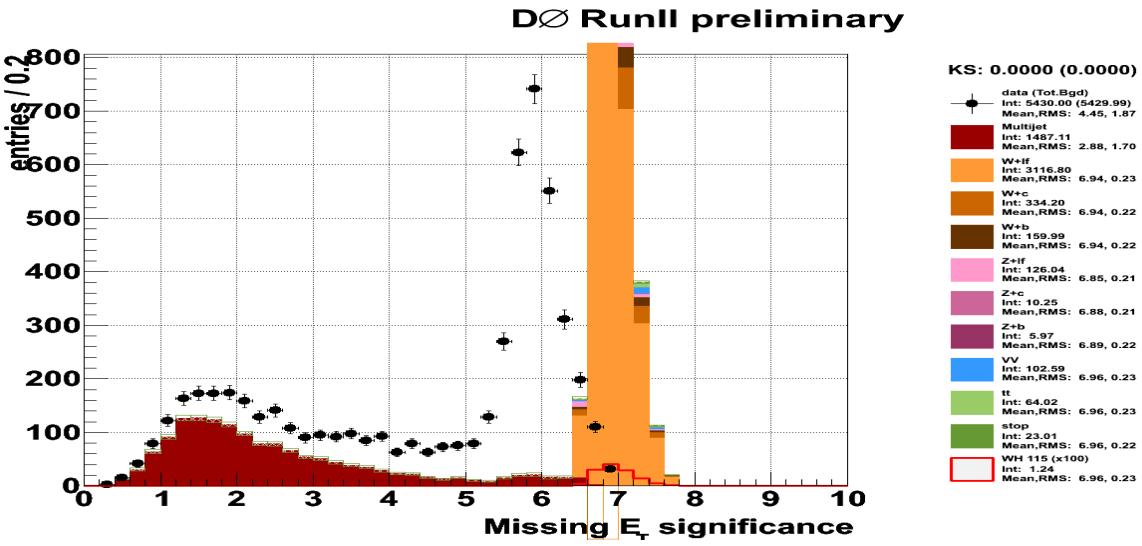



Figure 9.2:

# Chapter 10

# WH

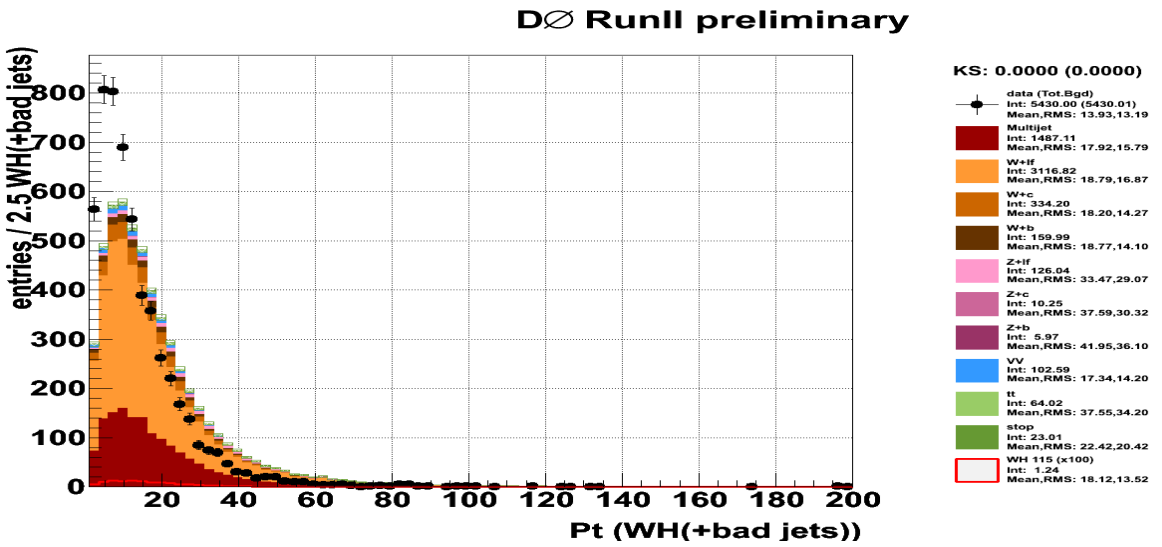



Figure 10.1:

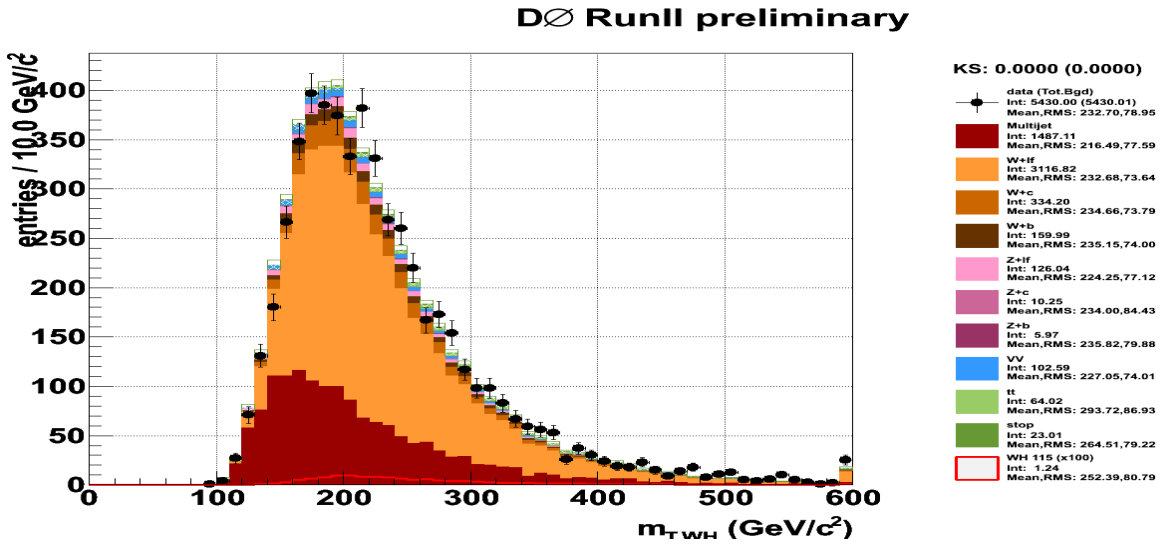
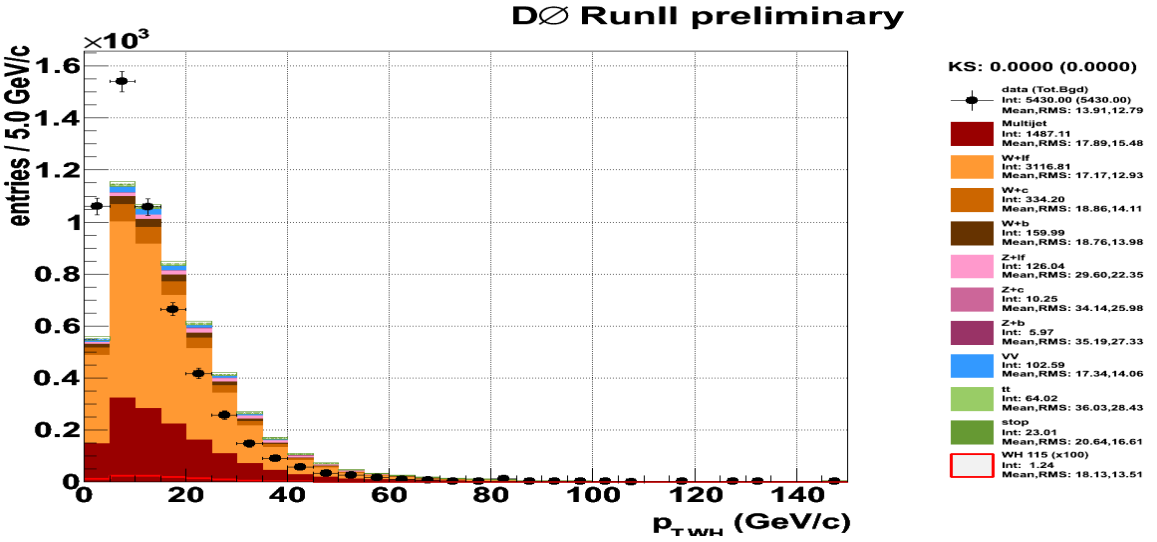



Figure 10.2:

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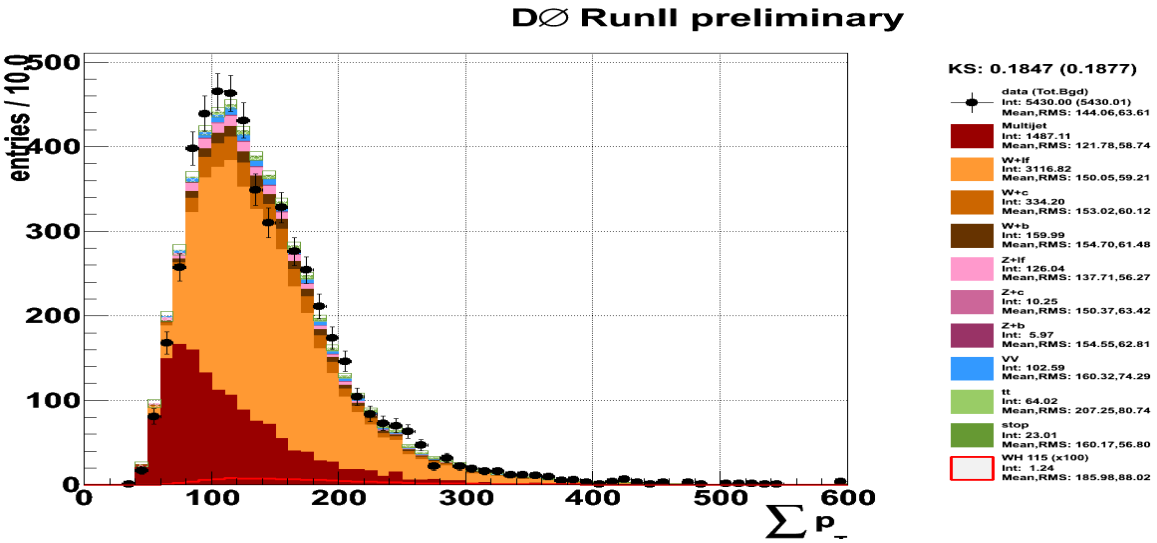


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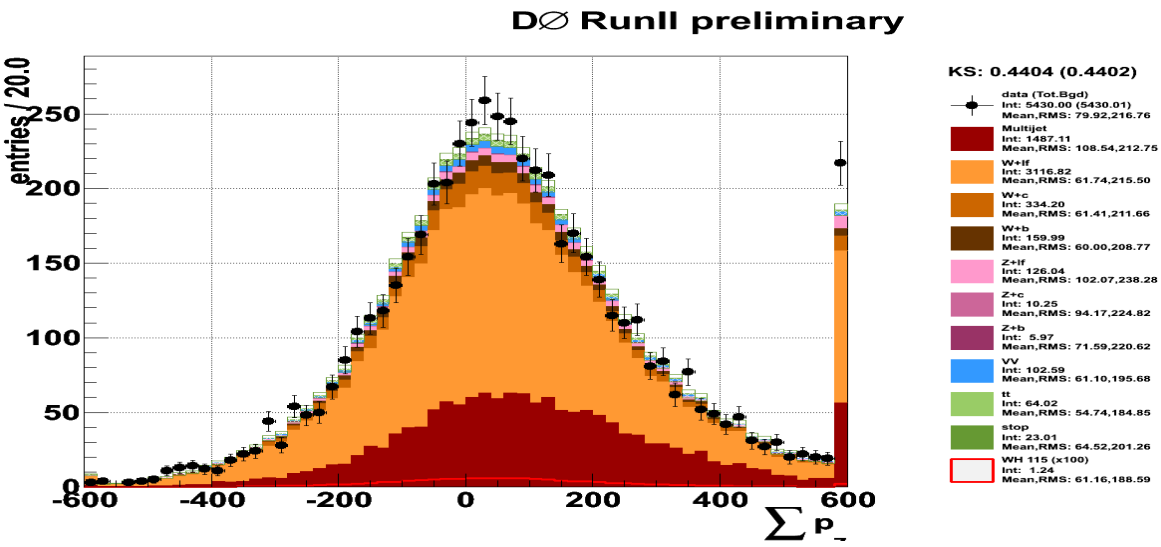


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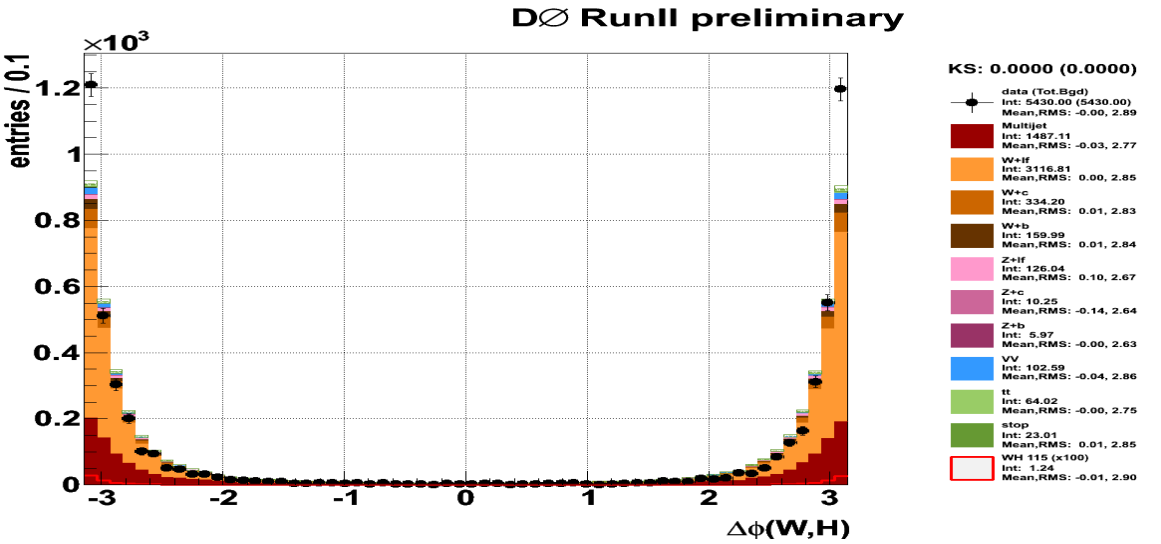


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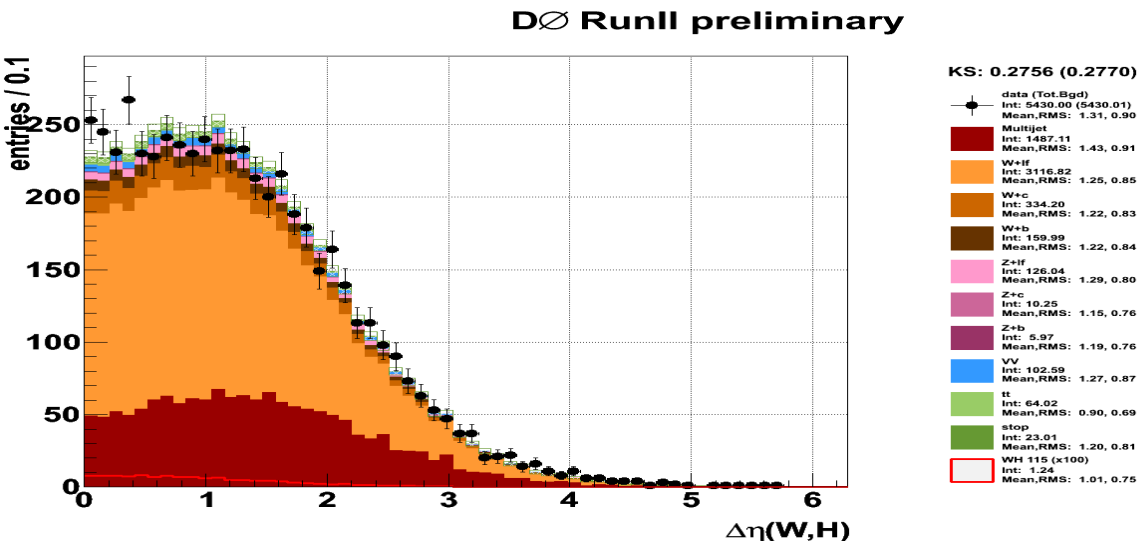


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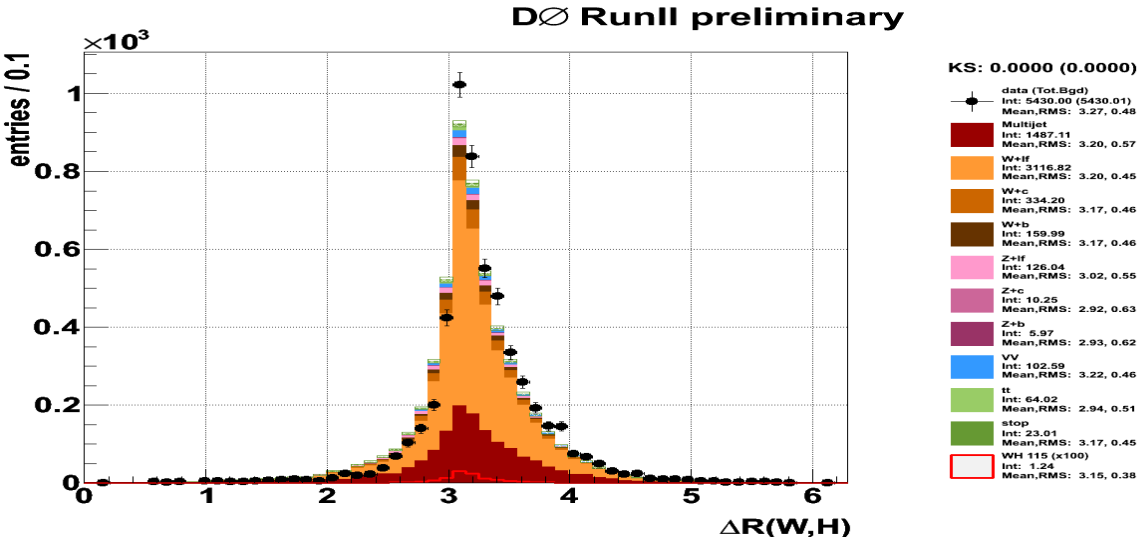



Figure 10.8:

# Chapter 11

# Topology

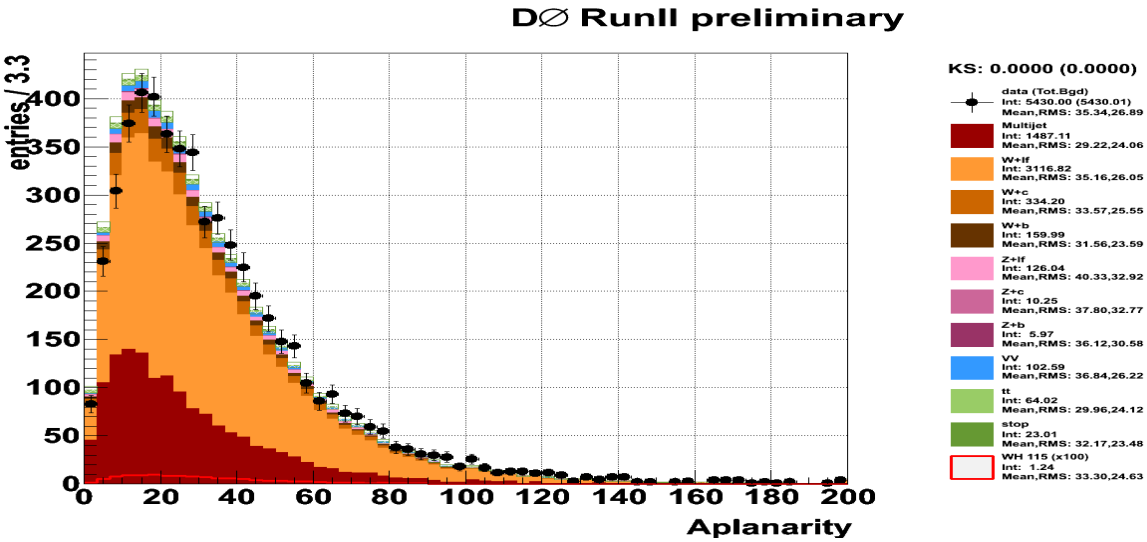



Figure 11.1:

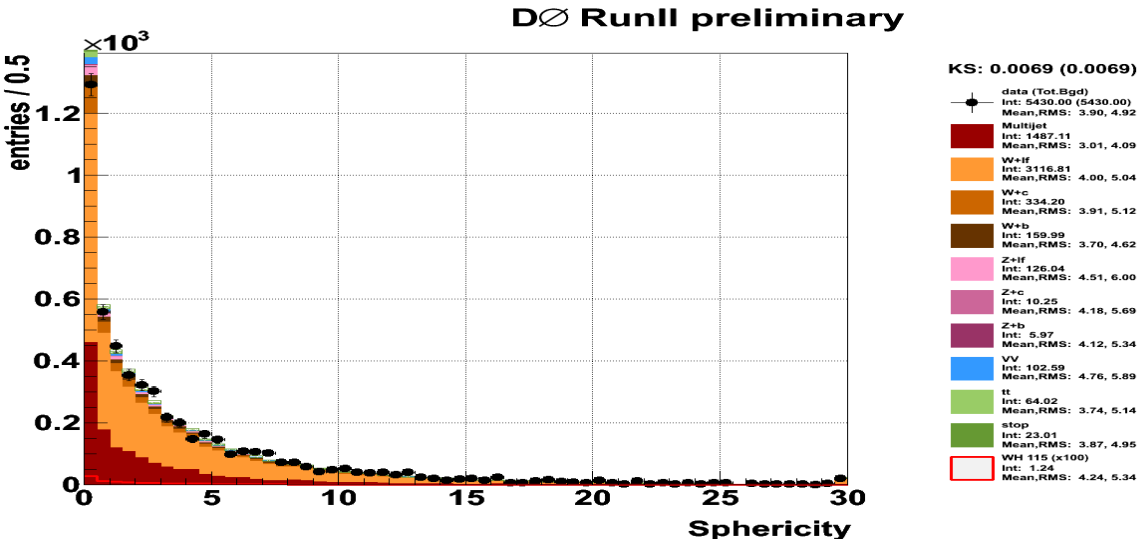



Figure 11.2:

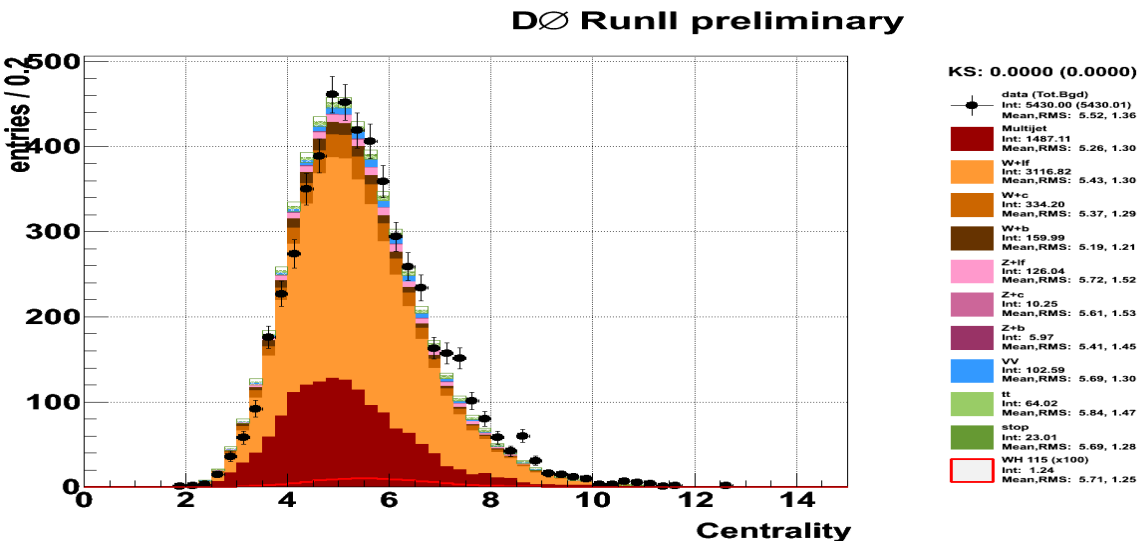
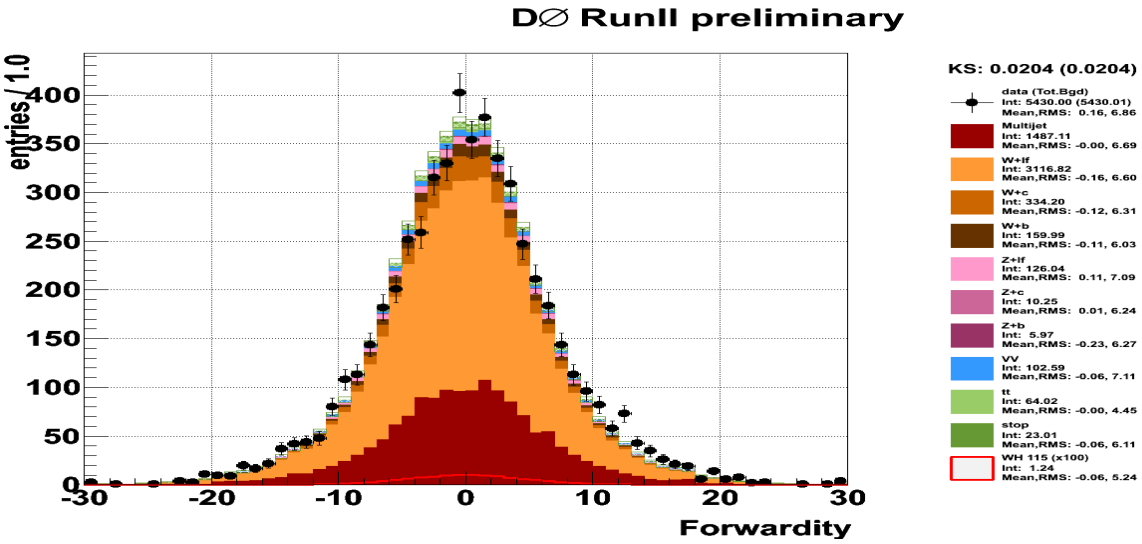



Figure 11.3:

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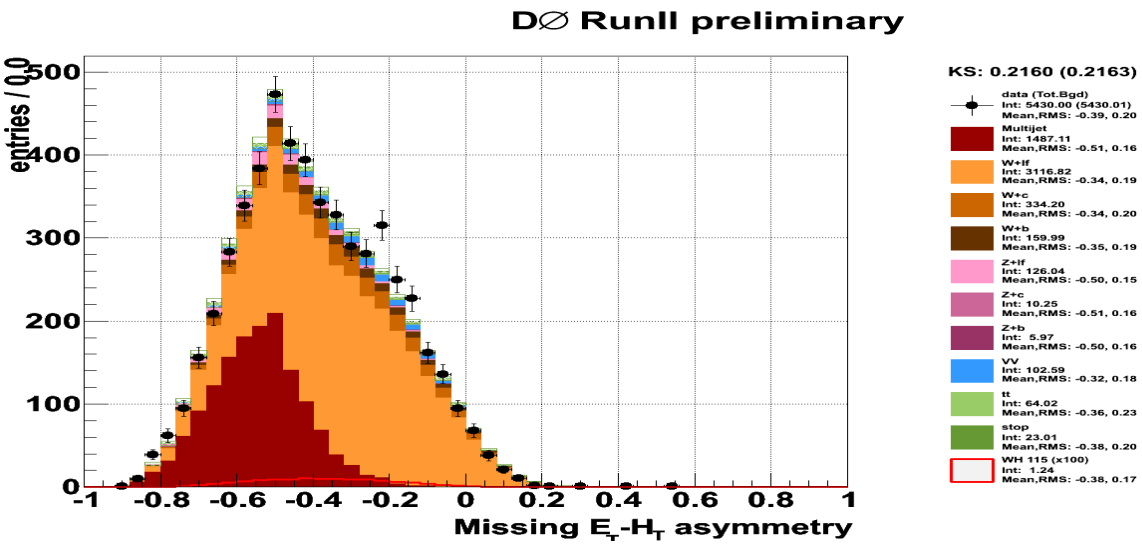
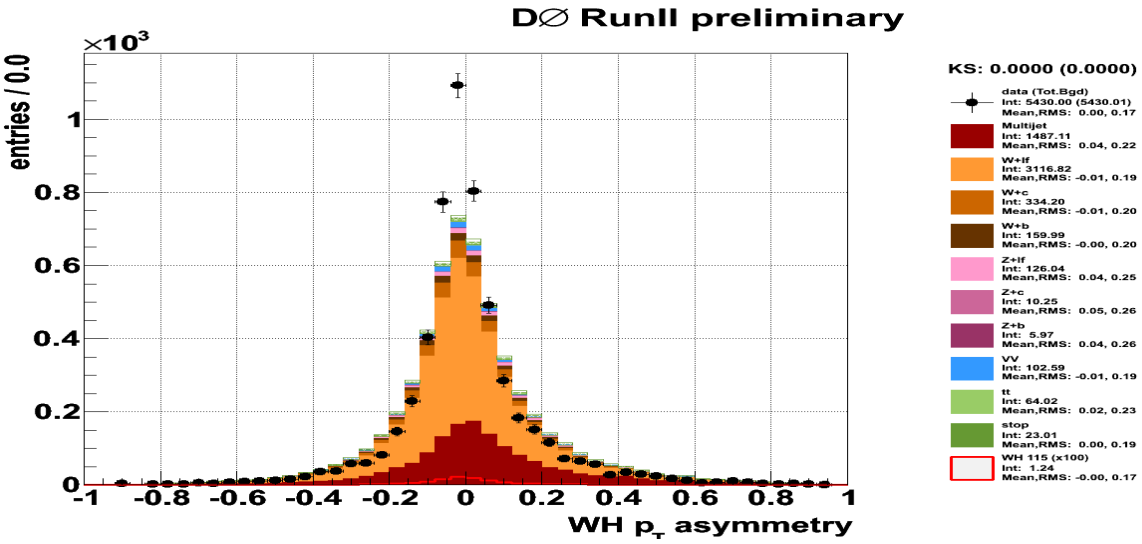



Figure 11.5:

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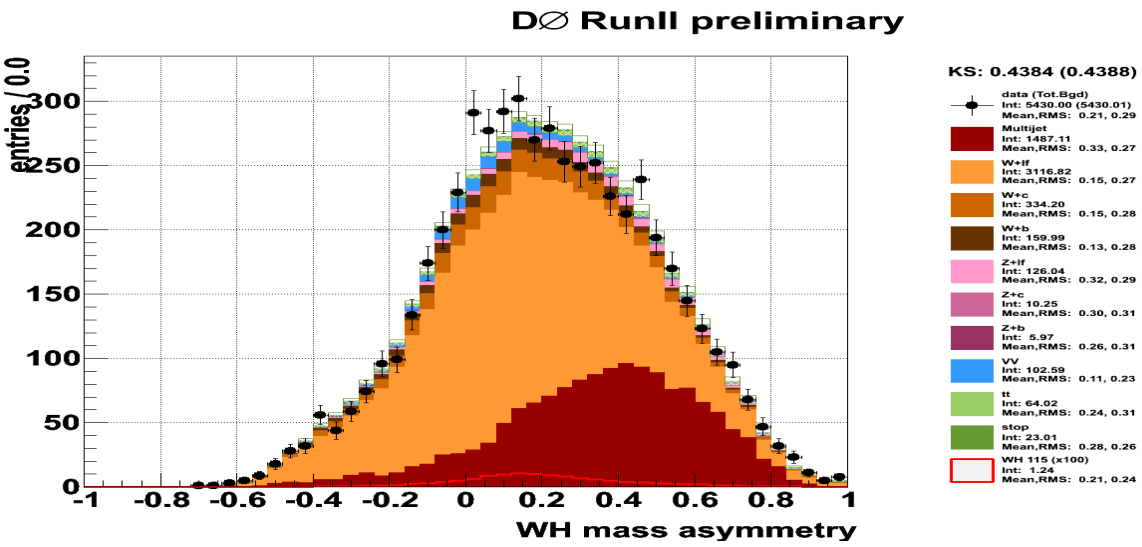



Figure 11.7:

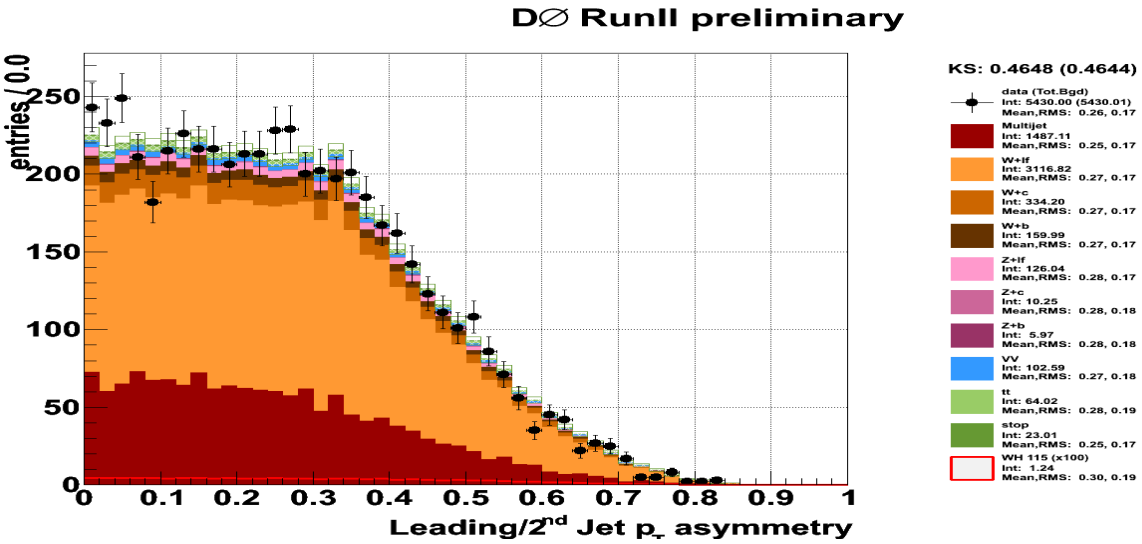
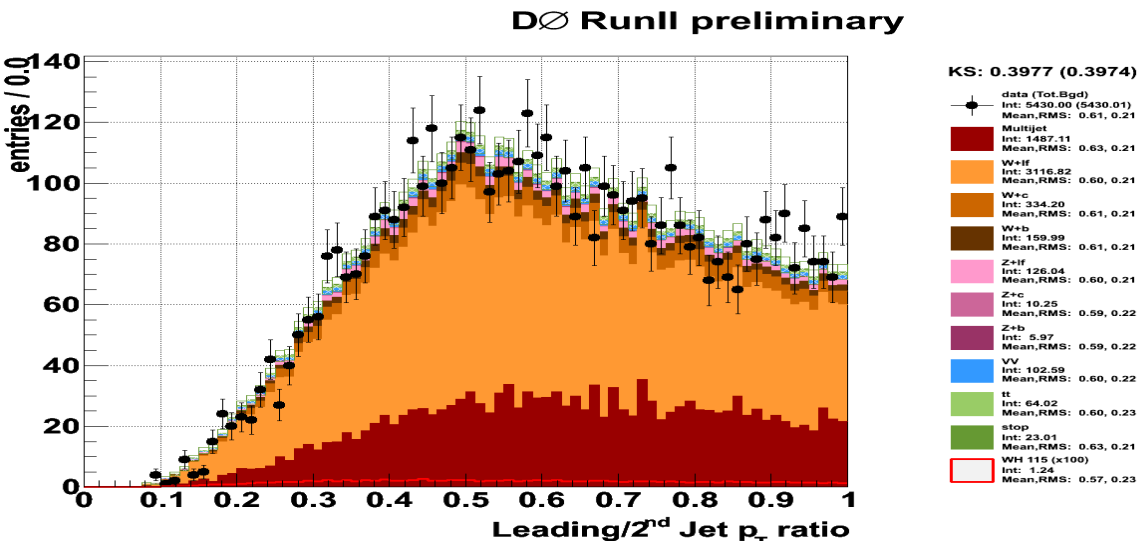



Figure 11.8: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entries / 0.0
Leading/2nd Jet pT ratio
KS: 0.3977 (0.3974)
data (Tot.Bgd)
Int: 5430.00 (5430.01)
Mean,RMS: 0.61, 0.21
Multijet
Int: 1487.11
Mean,RMS: 0.63, 0.21
W+lf
Int: 3116.82
Mean,RMS: 0.60, 0.21
W+c
Int: 334.20
Mean,RMS: 0.61, 0.21
W+b
Int: 159.99
Mean,RMS: 0.61, 0.21
Z+lf
Int: 126.04
Mean,RMS: 0.60, 0.21
Z+c
Int: 10.25
Mean,RMS: 0.59, 0.22
Z+b
Int: 5.97
Mean,RMS: 0.59, 0.22
VV
Int: 102.59
Mean,RMS: 0.60, 0.22
tt
Int: 64.02
Mean,RMS: 0.60, 0.23
stop
Int: 23.01
Mean,RMS: 0.63, 0.21
WH 115 (x100)
Int: 1.24
Mean,RMS: 0.57, 0.23

Figure 11.9:

# Chapter 12

# B-tagging

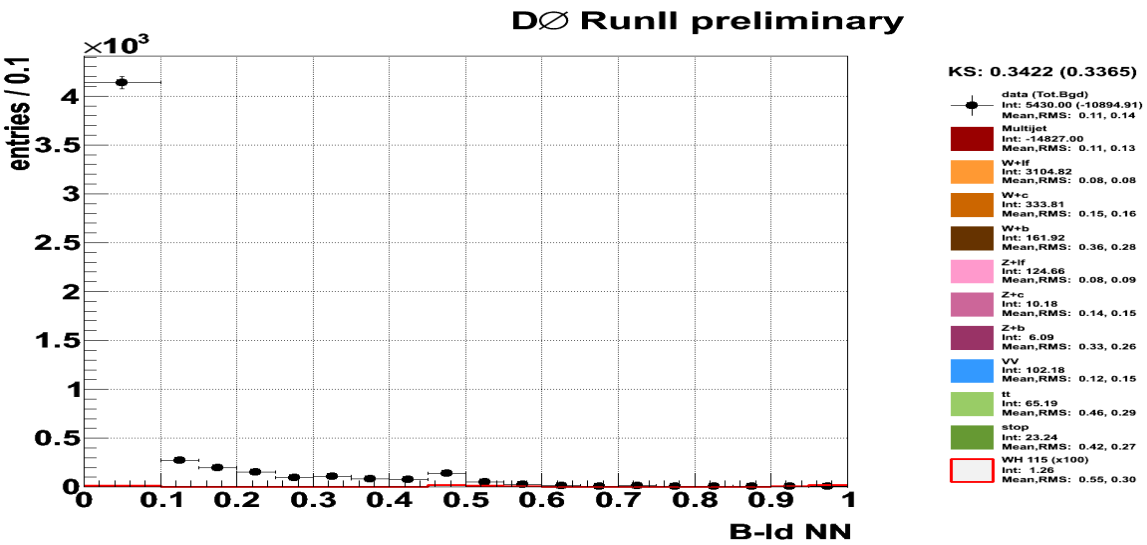



Figure 12.1:

# Chapter 13

# Systematics

# Chapter 14

# VV

# Chapter 15

# Bad distributions

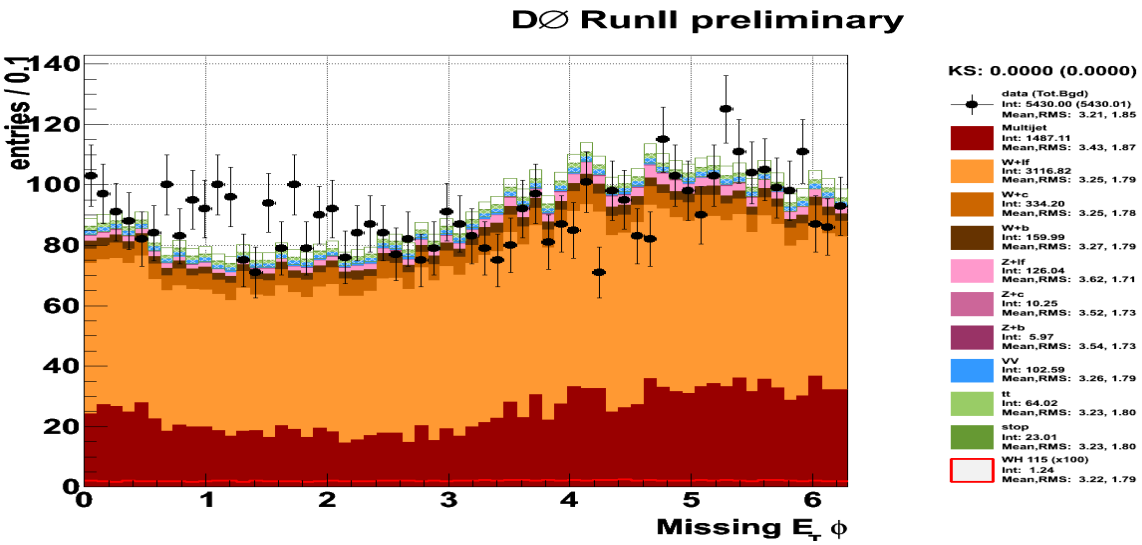



Figure 15.1:

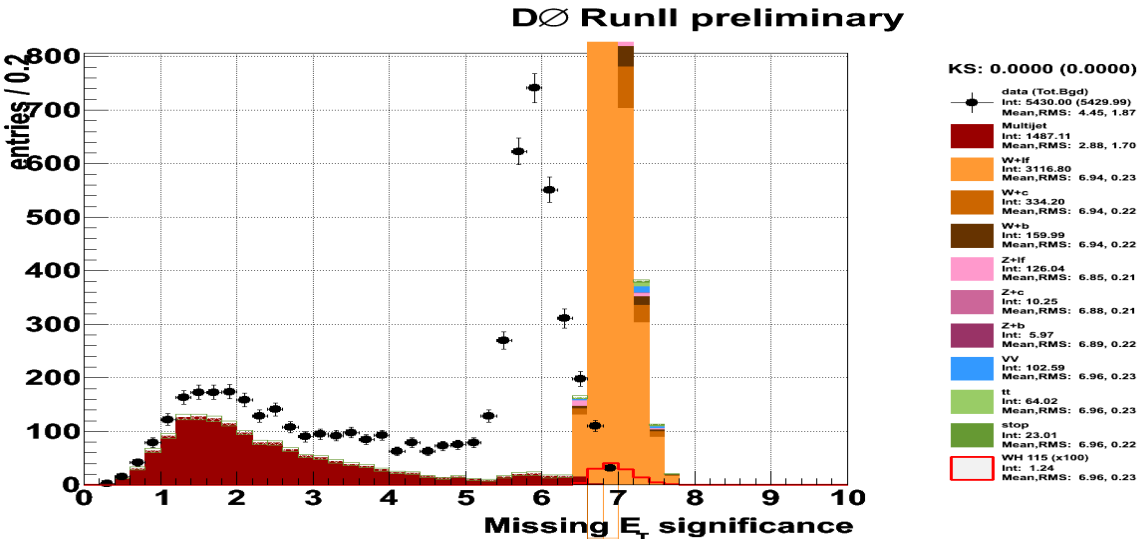



Figure 15.2:

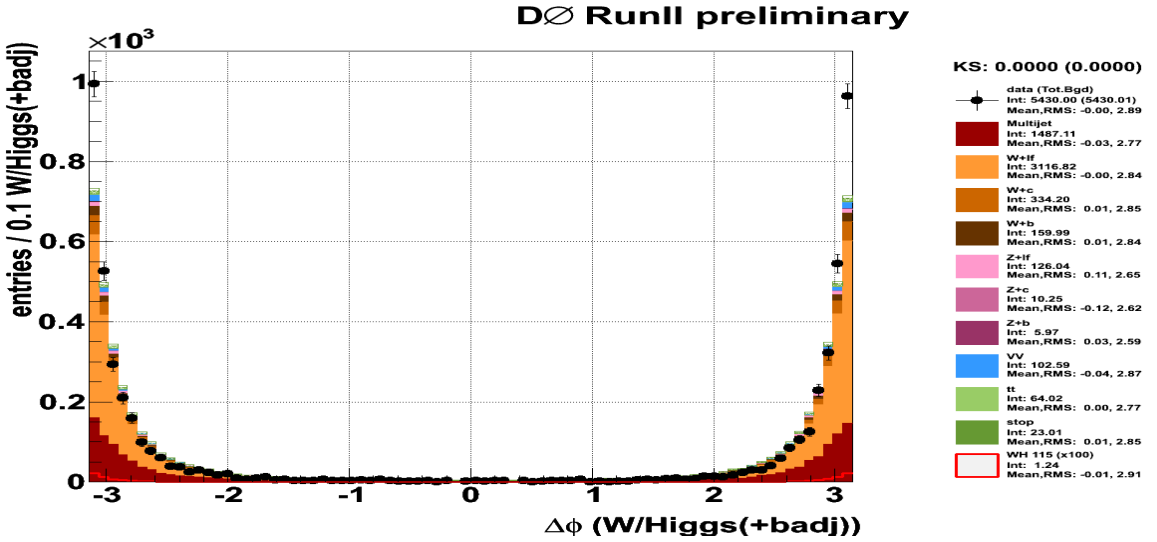



Figure 15.3:

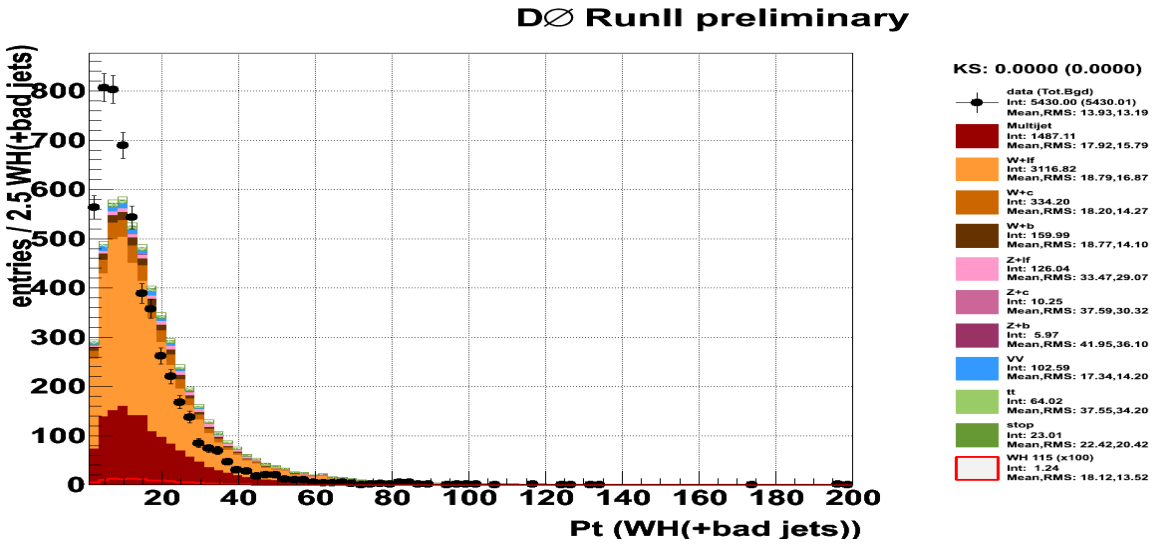



Figure 15.4:

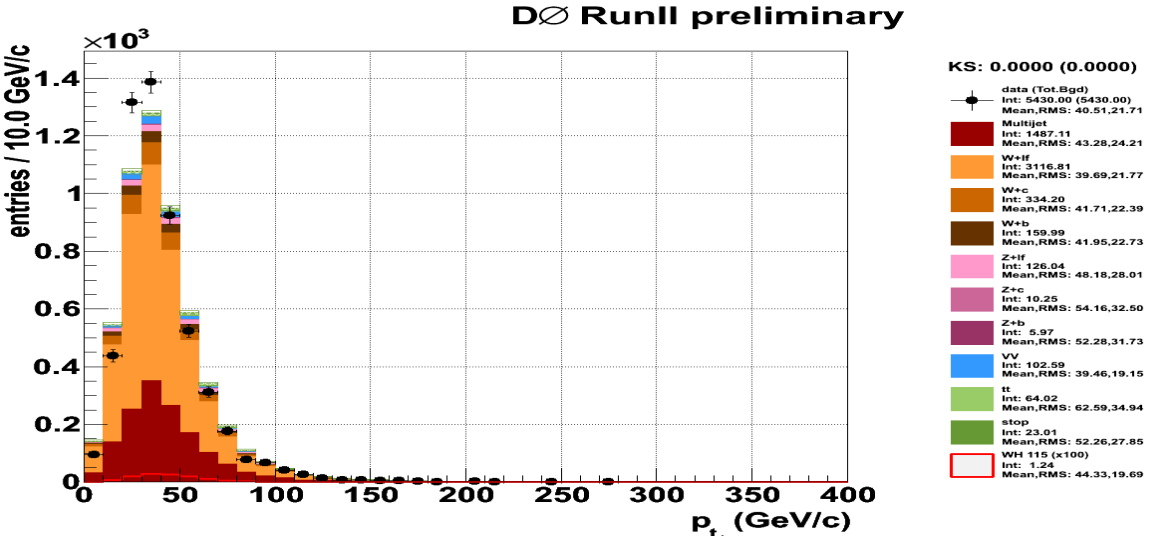



Figure 15.5:

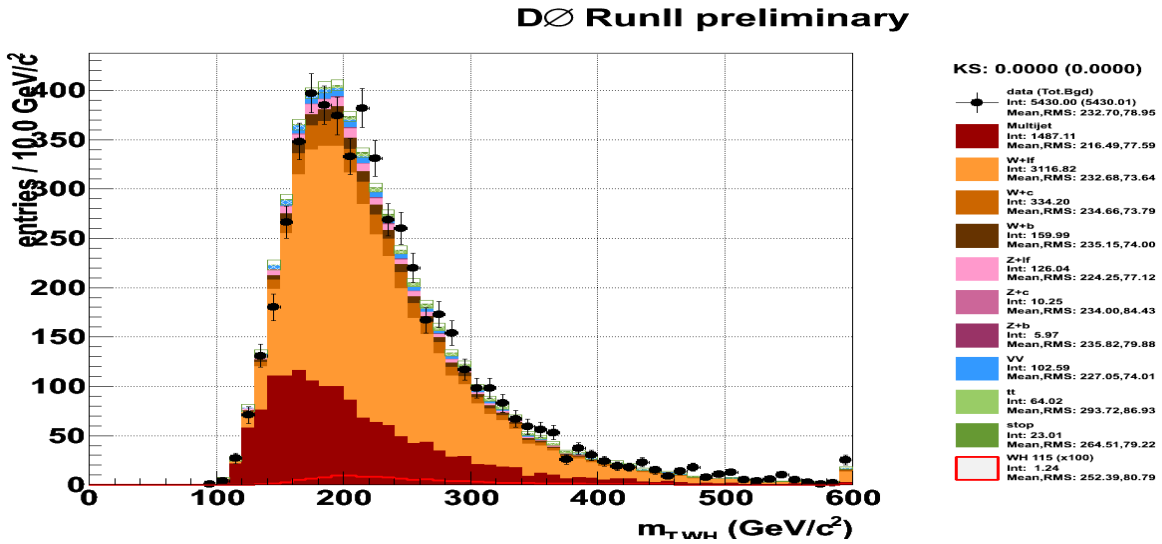
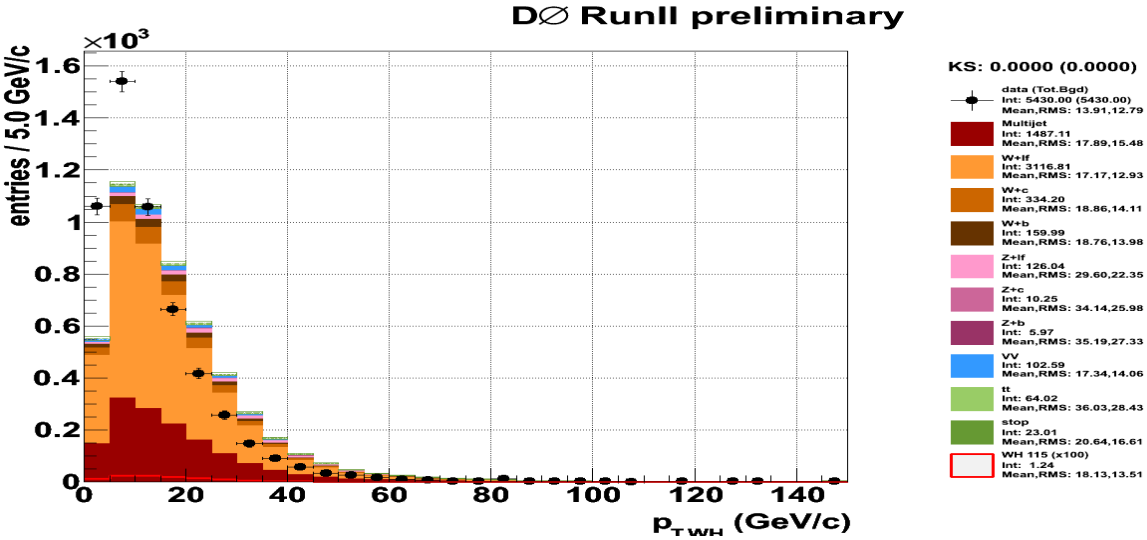



Figure 15.6:

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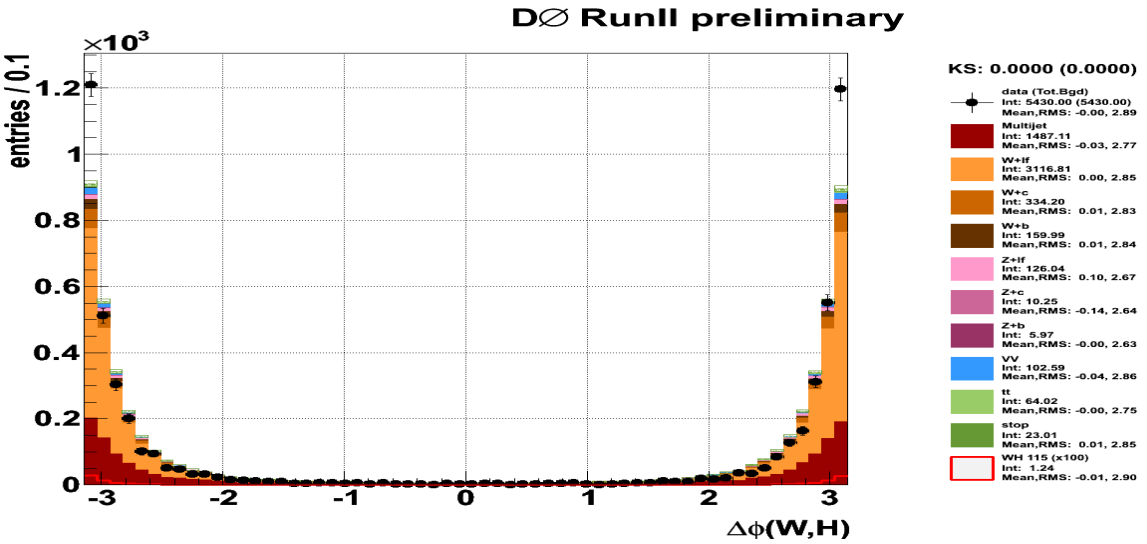


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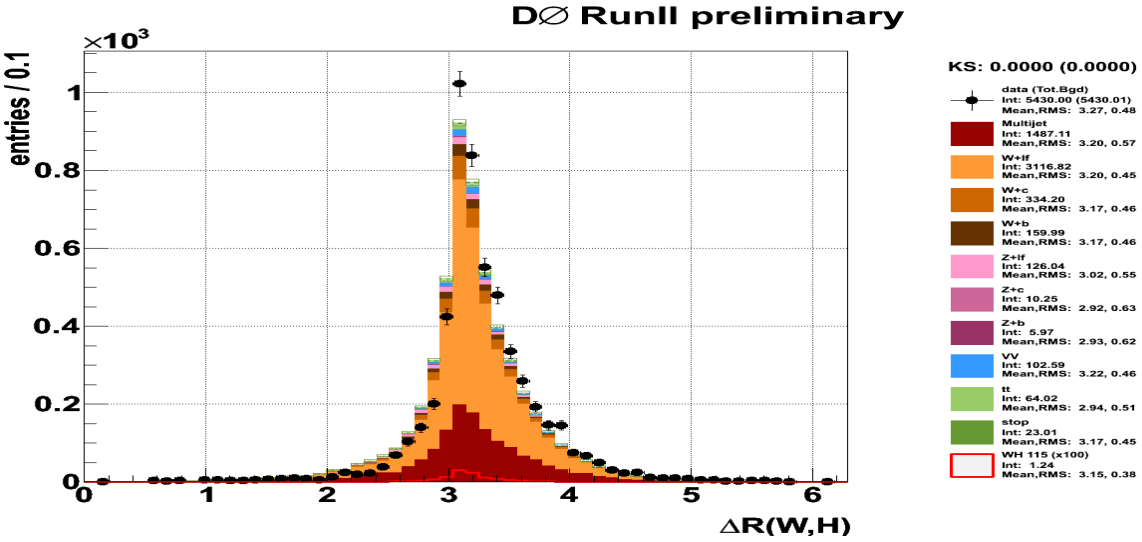


Figure 15.9:

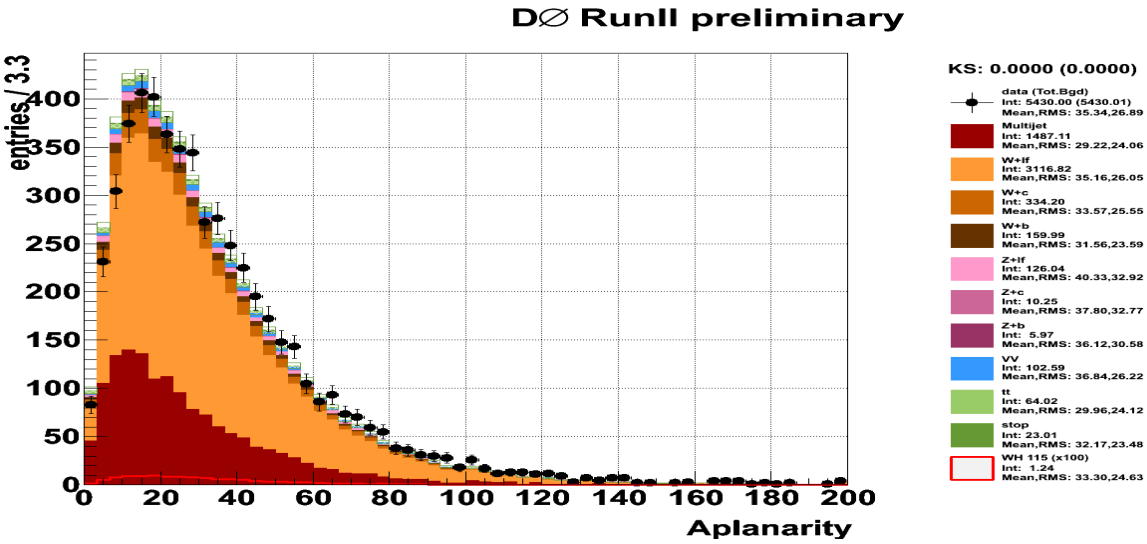


Figure 15.10:

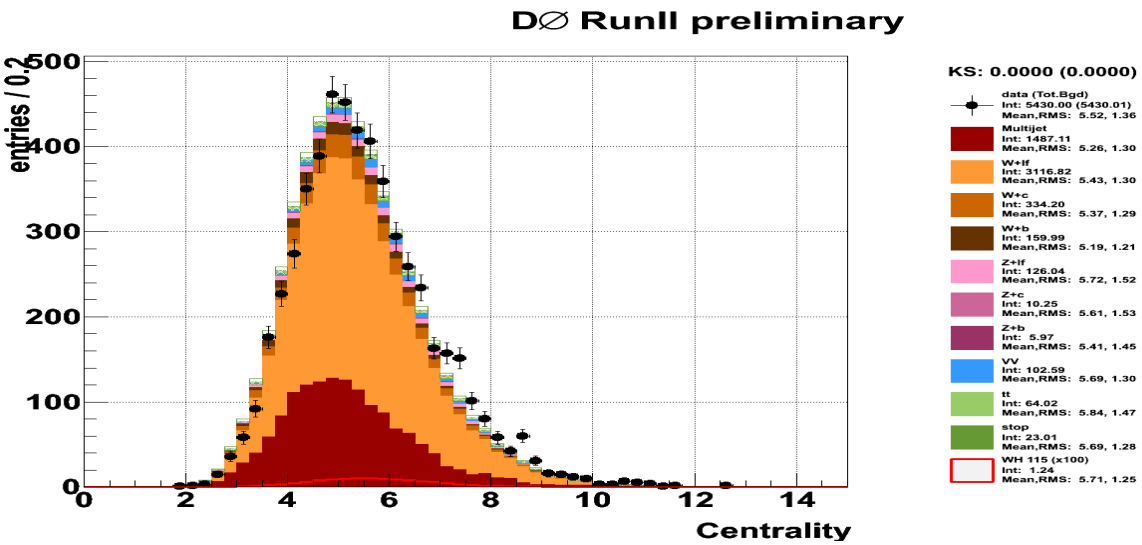


Figure 15.11:

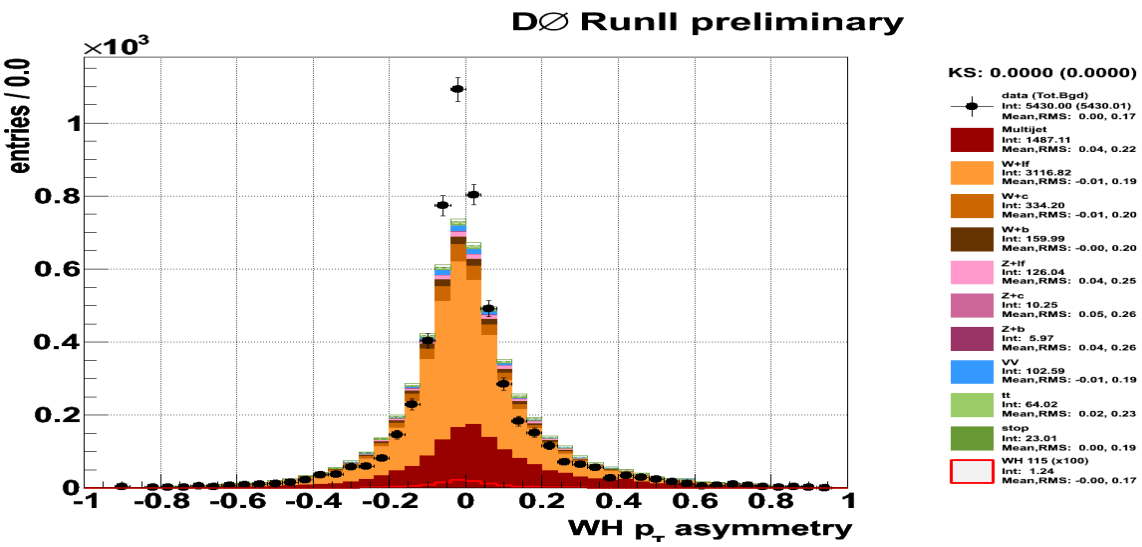


Figure 15.12: