b-ID :

-

L3 :

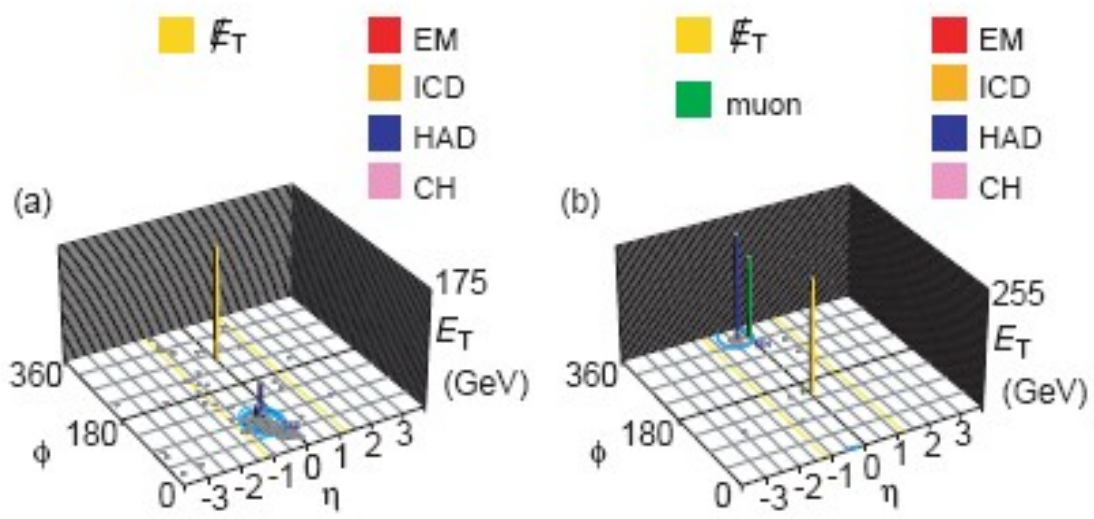
- Added 120 new nodes. Working!
-

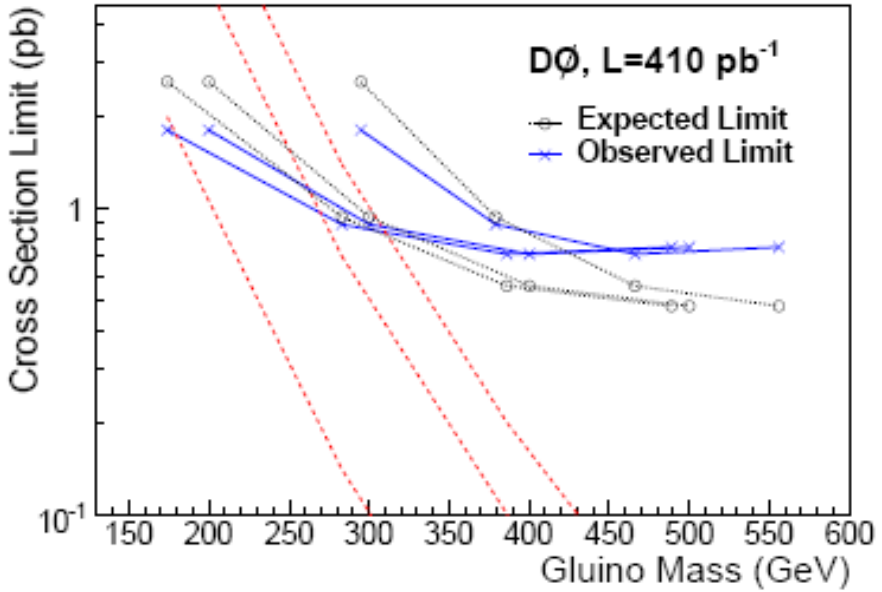
Stopped Gluinos :

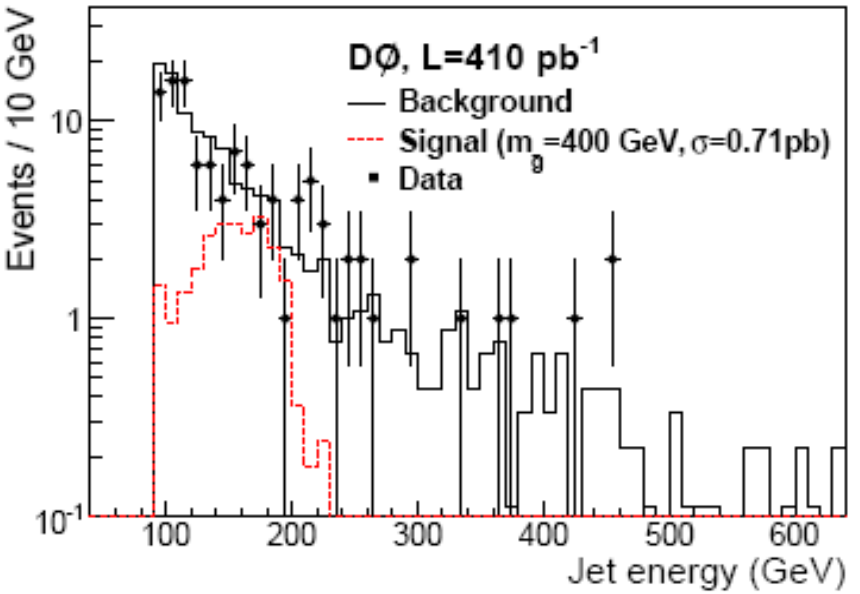
- Made lots of changes as requested by style committee
- PRL in collaboration review!

NLLP->bb :

-





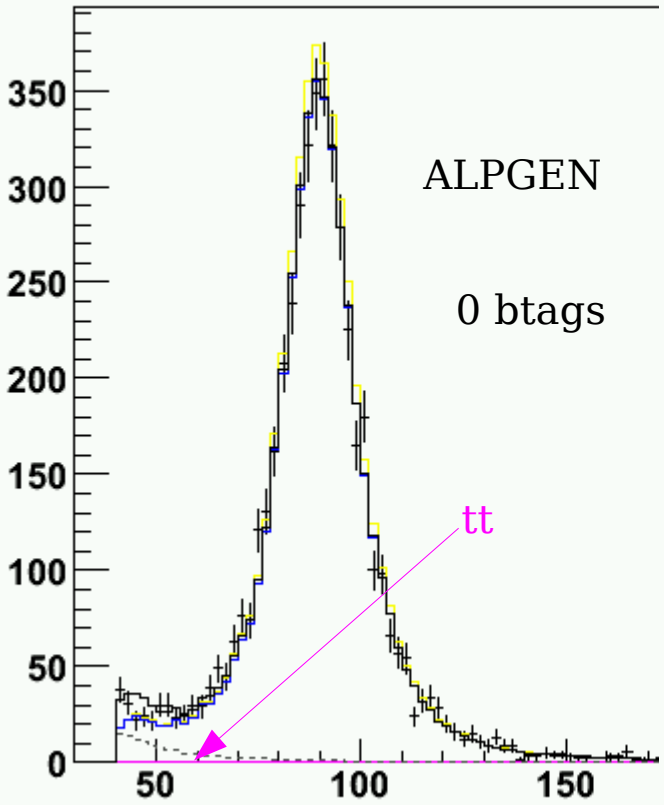


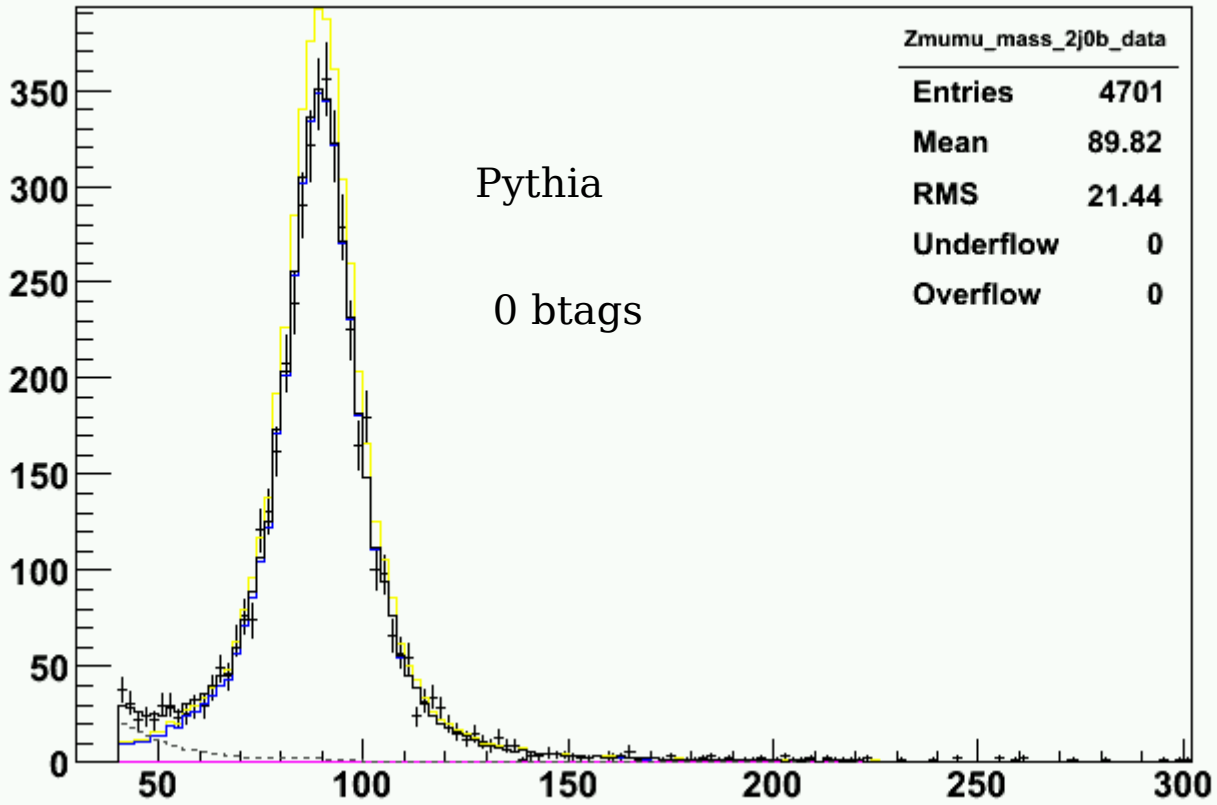
ZH(->llbb) :

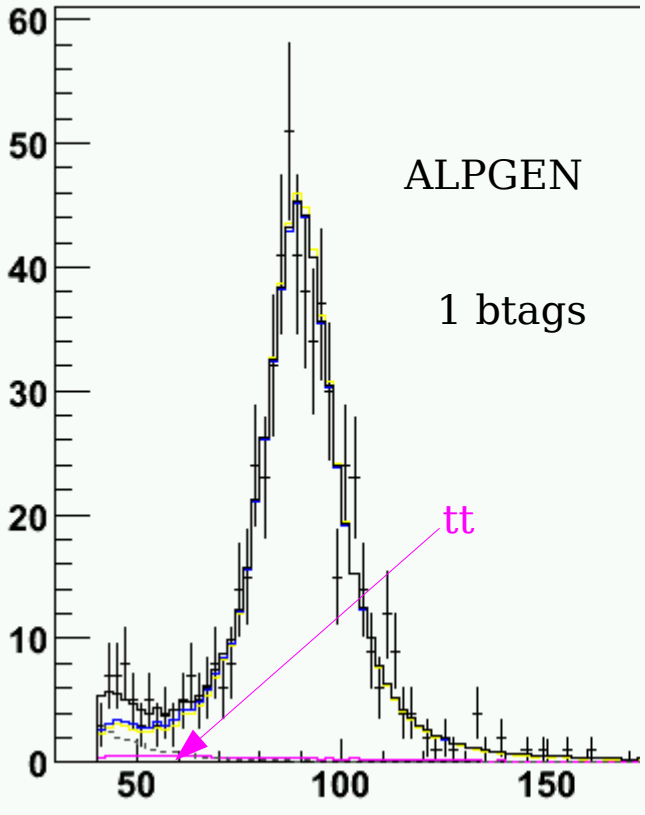
- Complete ALPGEN Z+jets mZ fit
  - include re-weighting for ALPGEN mZ bug in the 0,1 lp samples

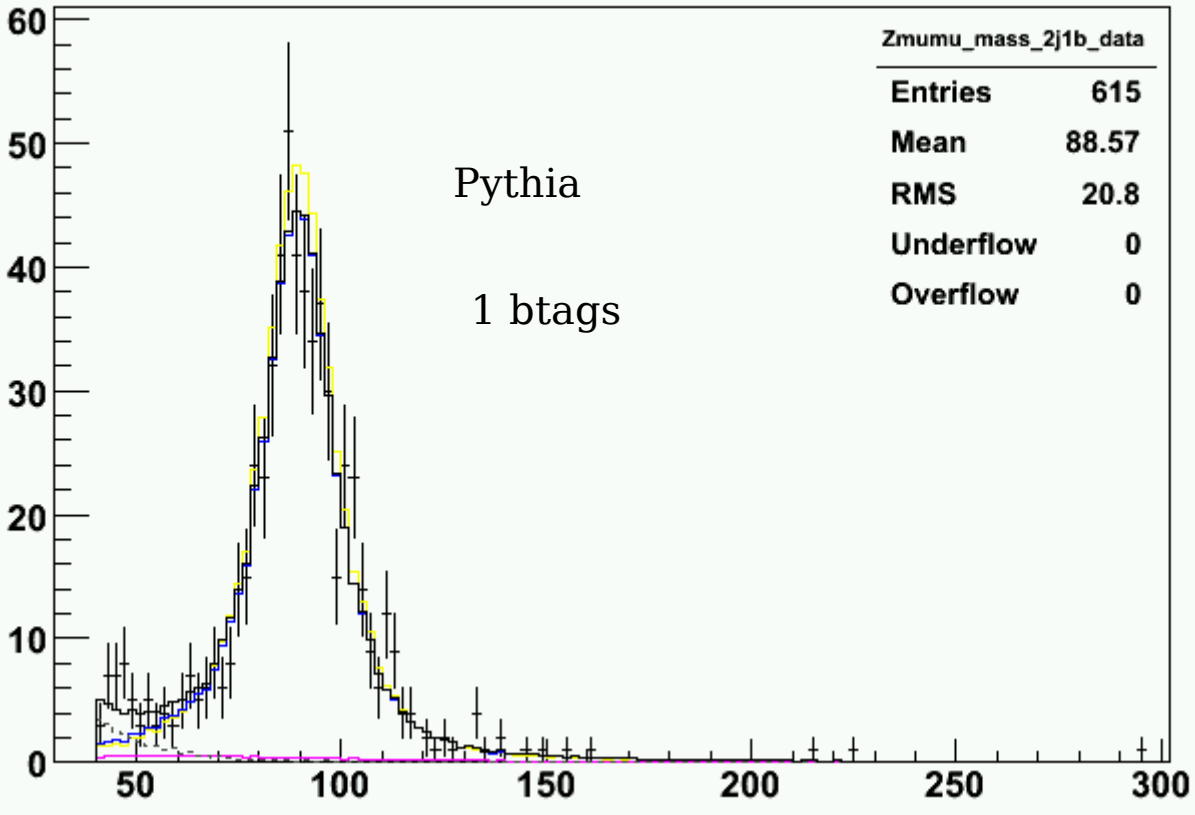
- Compare to Pythia Z+jets mZ fit

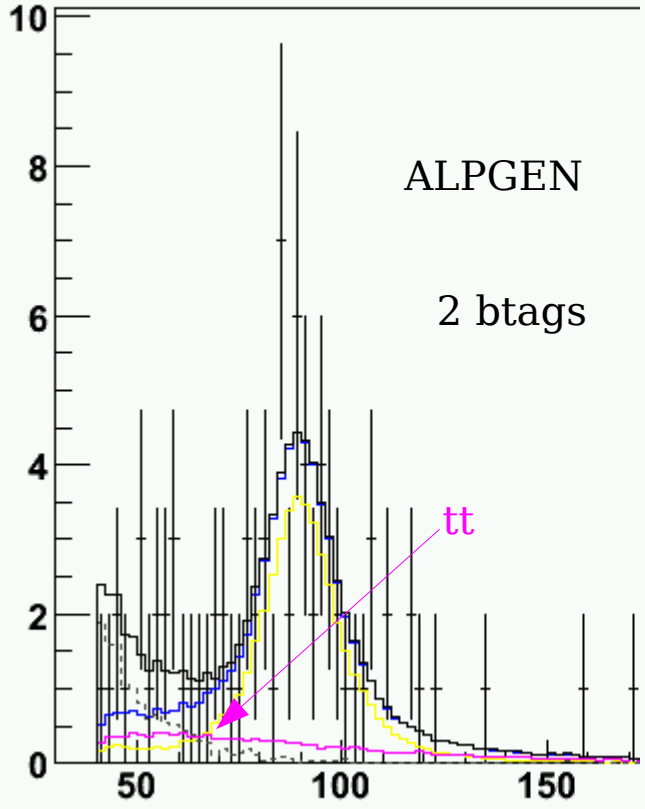
- Pythia better on left edge?
- Both are good enough – shape is well described, systematics on QCD are low

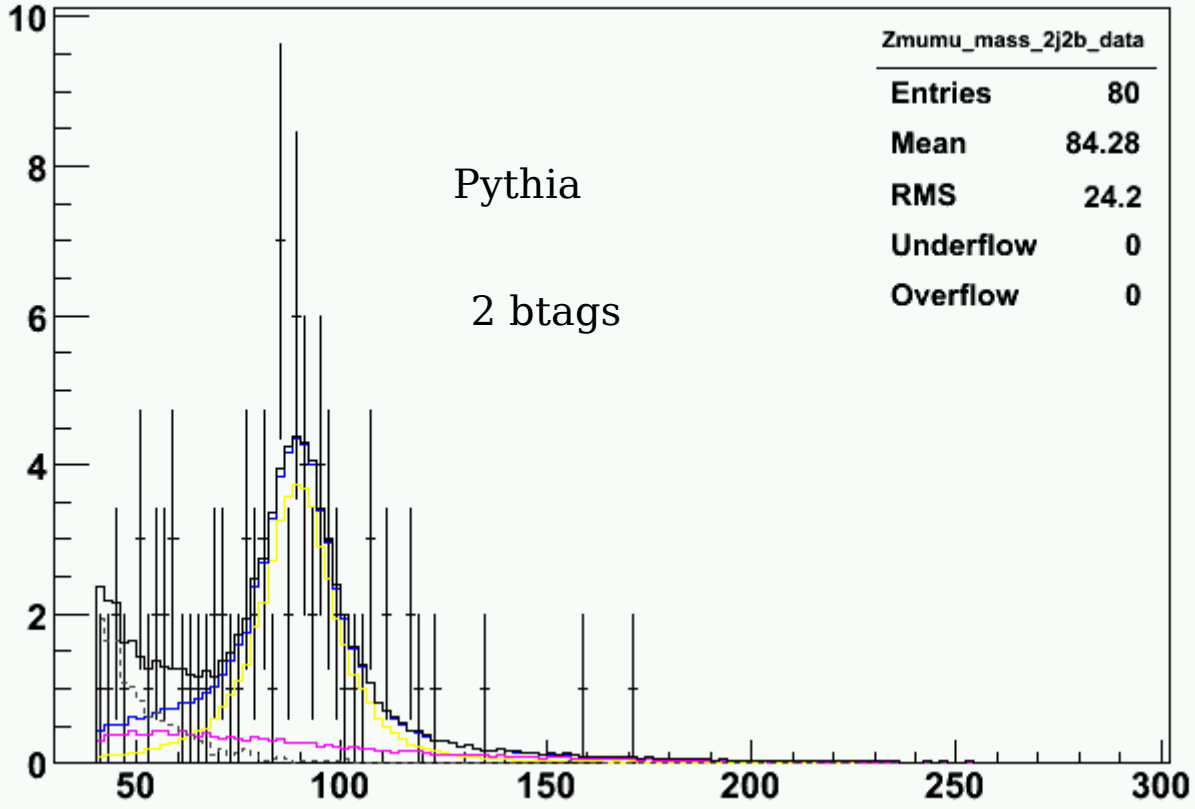





ALPGEN
1 btags
tt
60
50
40
30
20
10
0
50
100
150

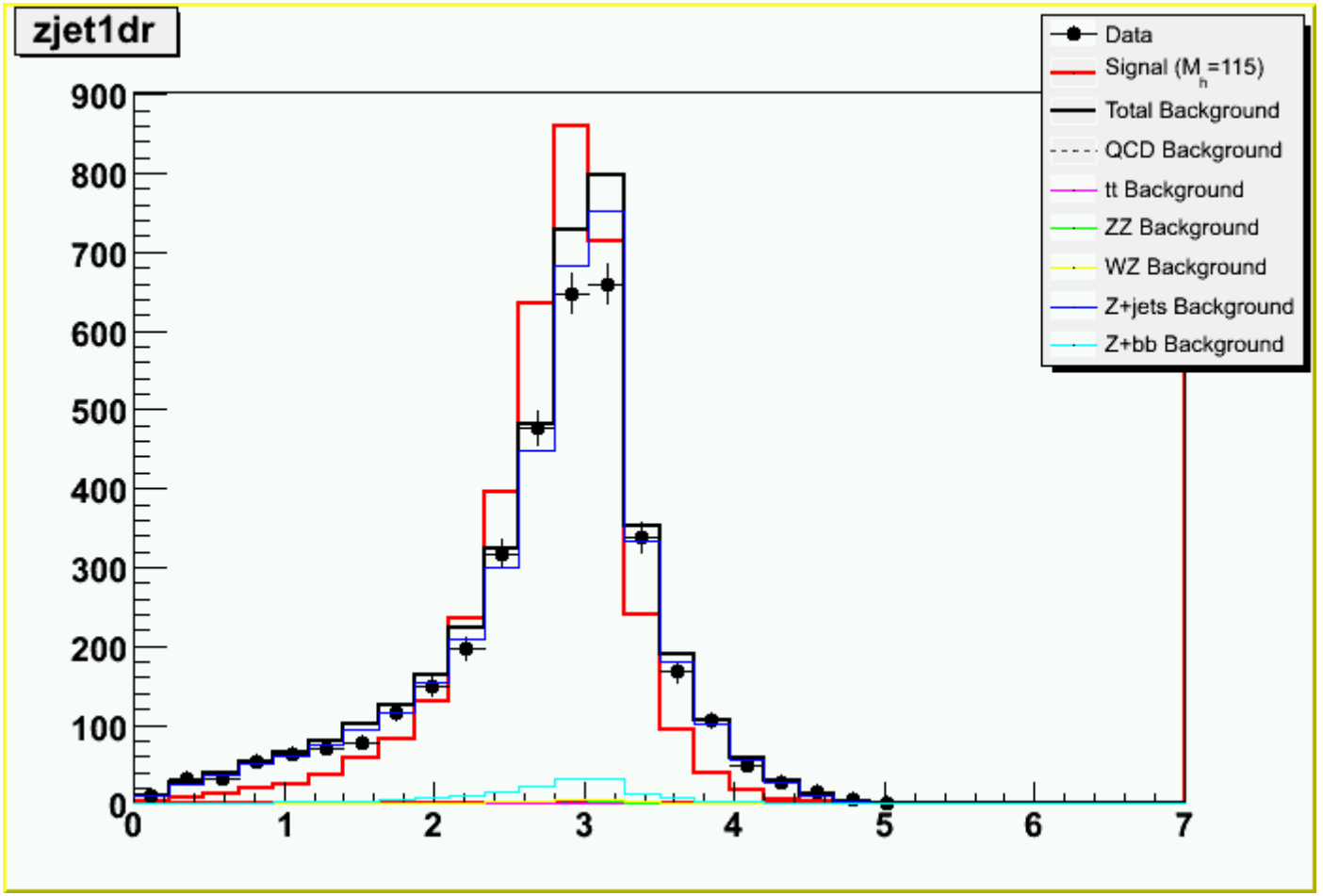

Pythia
1 btags
Zmumu_mass_2j1b_data
Entries 615
Mean 88.57
RMS 20.8
Underflow 0
Overflow 0
60
50
40
30
20
10
0
50
100
150
200
250
300


ALPGEN
2 btags
tt
10
8
6
4
2
0
50
100
150


Pythia
2 btags
Zmumu_mass_2j2b_data
Entries 80
Mean 84.28
RMS 24.2
Underflow 0
Overflow 0
10
8
6
4
2
0
50
100
150
200
250
300

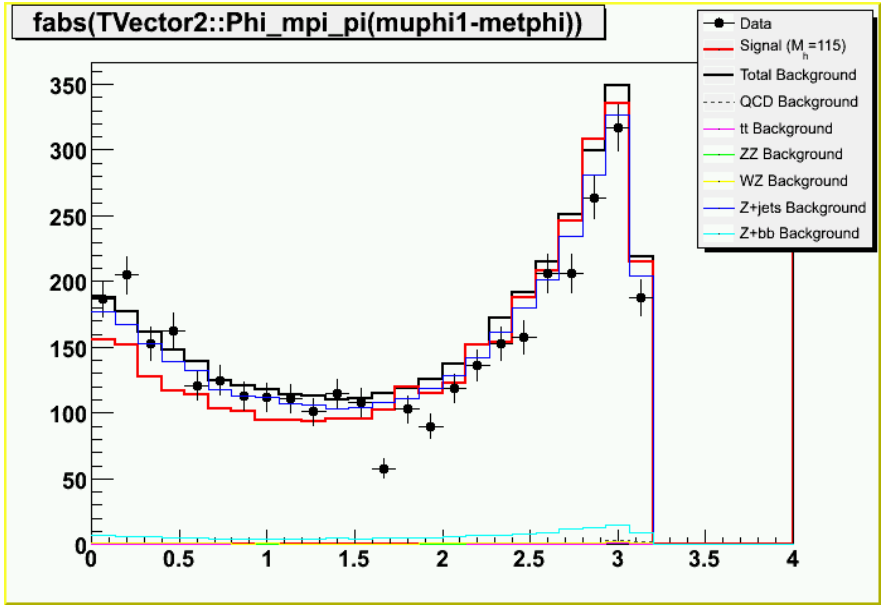
ZH(->llbb) :

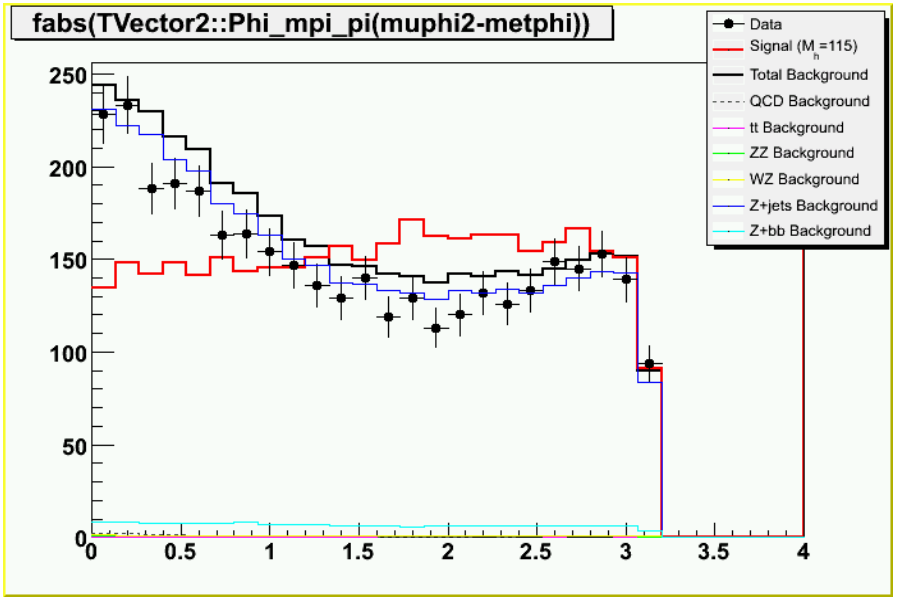
- Add dR(jet1, Z) variable to NN
  - stole the idea from CDF analysis

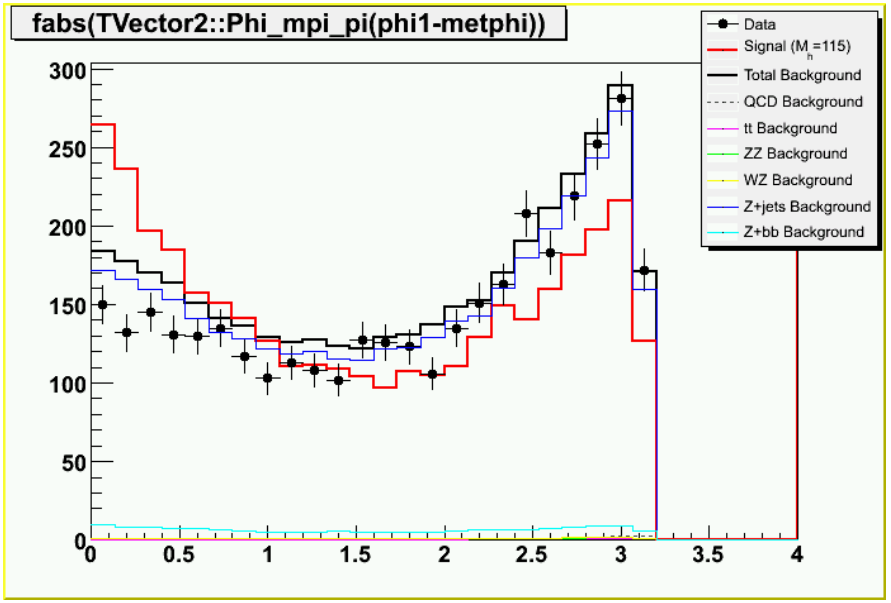


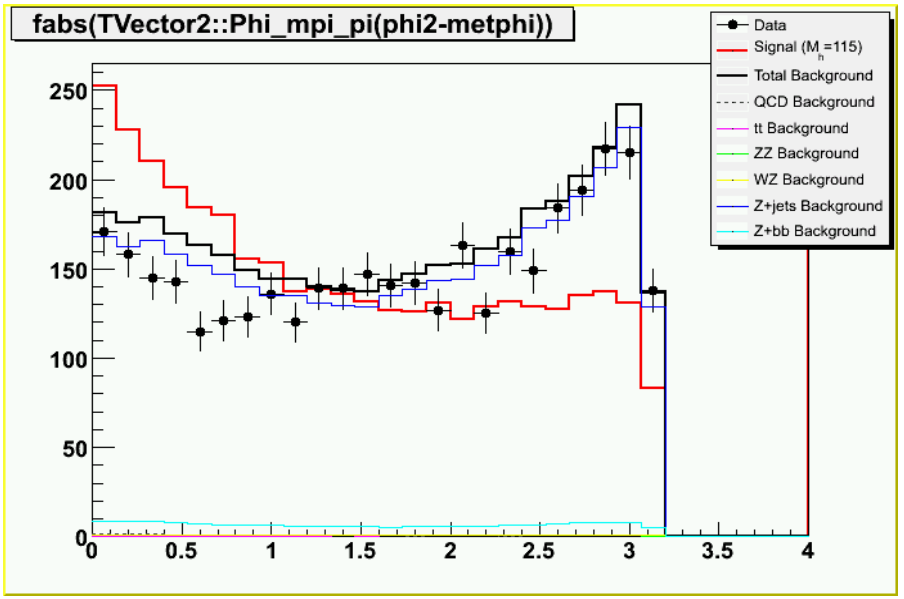
ZH(->llbb) :

- Study MET_phi relation to muon and jet directions



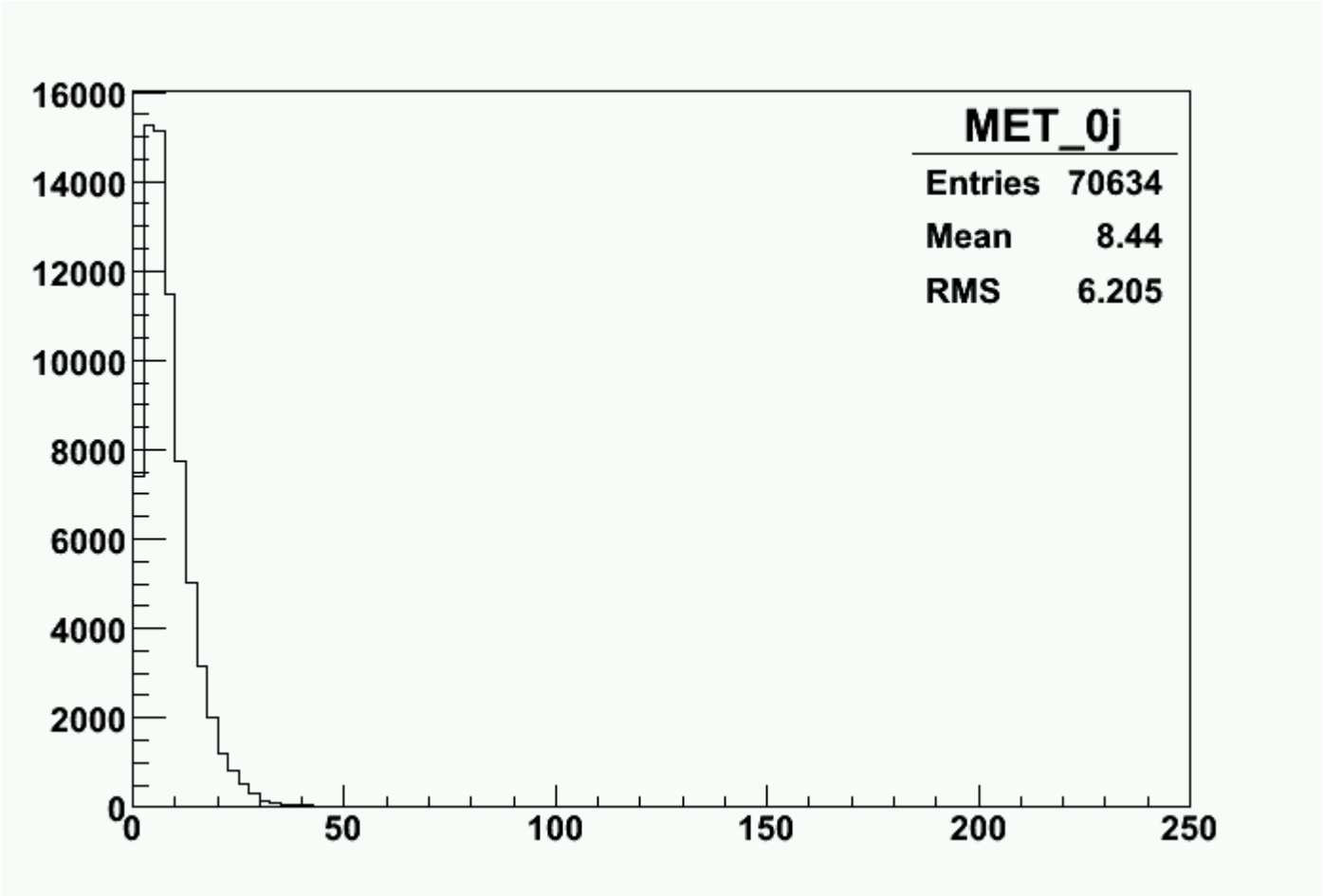


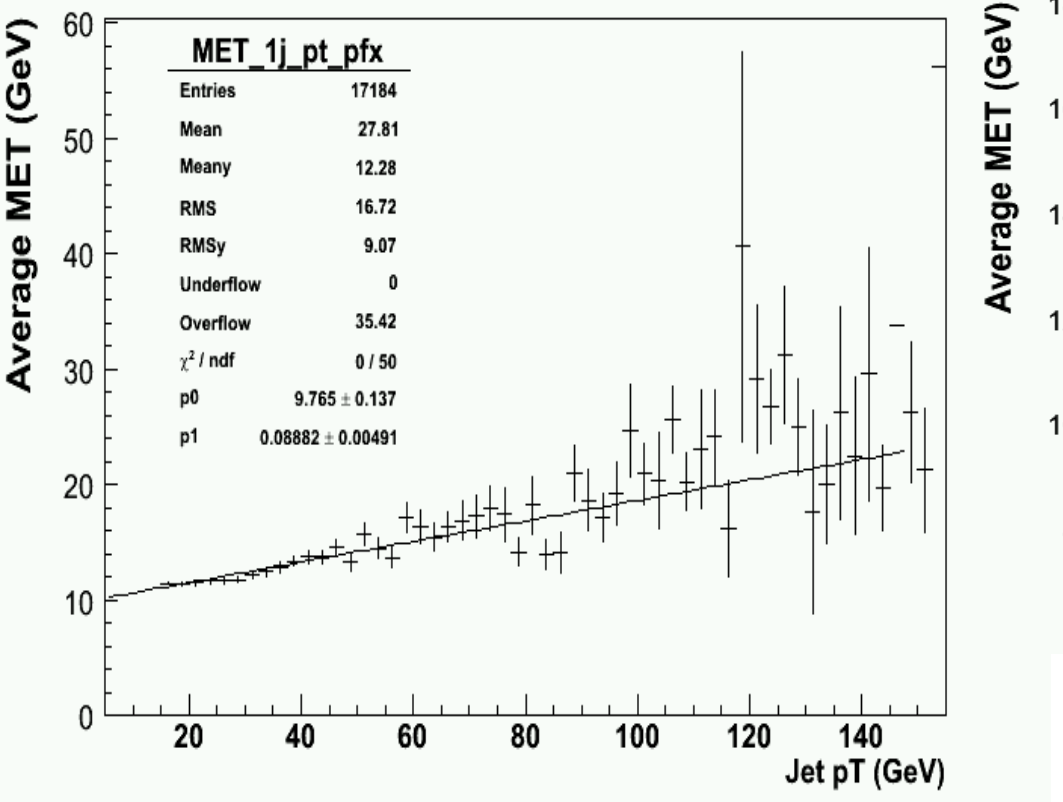


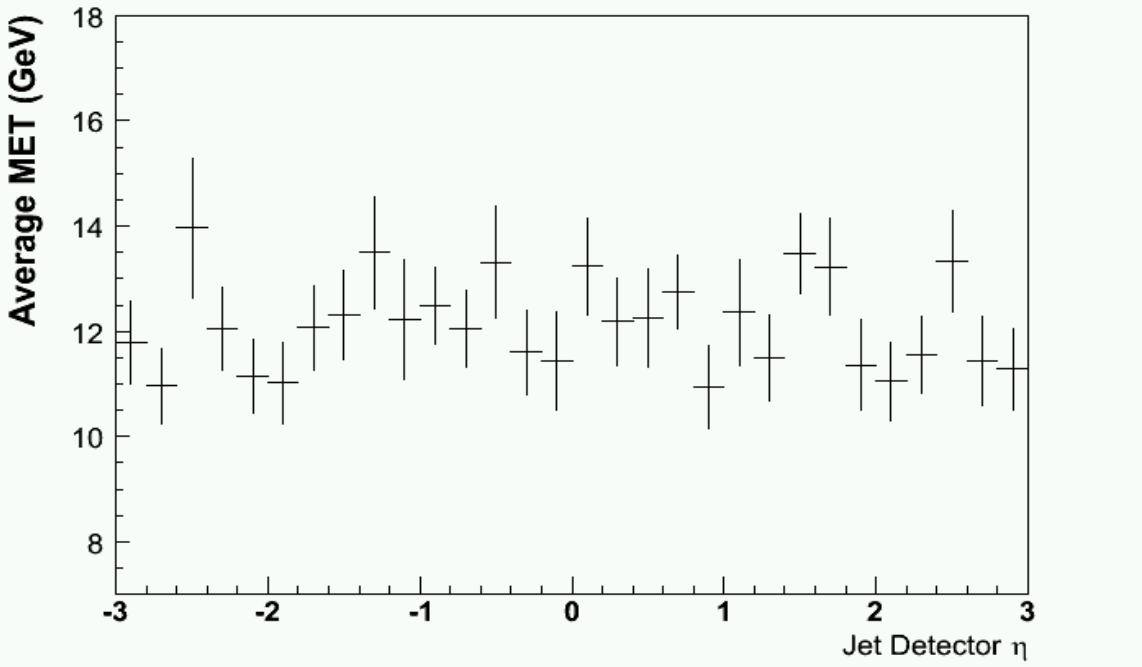


ZH(->llbb) :

- Study MET and muon and jet resolutions in Z + 0, 1 jet samples




MET_1j_pt_pfx
Entries 17184
Mean 27.81
Meany 12.28
RMS 16.72
RMSy 9.07
Underflow 0
Overflow 35.42
χ² / ndf 0 / 50
p0 9.765 ± 0.137
p1 0.08882 ± 0.00491
Average MET (GeV)
Jet pT (GeV)


Average MET (GeV)
Jet Detector η

ZH(->llbb) :

- Almost done updating analysis note.

Sample	Cross section x BR	SAM req-id's	N. Events
$ZH(\to\mu^+\mu^- b\bar{b})$, m_H=105 GeV	4.0 fb	28575	50000
$ZH(\to\mu^+\mu^- b\bar{b})$, m_H=115 GeV	2.8 fb	28576	50000
$ZH(\to\mu^+\mu^- b\bar{b})$, m_H=125 GeV	1.8 fb	28577	50000
$ZH(\to\mu^+\mu^- b\bar{b})$, m_H=135 GeV	1.1 fb	28578	52250
$ZH(\to\mu^+\mu^- b\bar{b})$, m_H=145 GeV	0.50 fb	32426	49750
$ZH(\to\mu^+\mu^- b\bar{b})$, m_H=155 GeV	0.20 fb	32427	50000
$Z(\to\mu^+\mu^-)$+0lp excl. (mZ=15-60 GeV)	335 * 1.3 fb	32900, 32901, 32902	650250
$Z(\to\mu^+\mu^-)$+1lp excl. (mZ=15-60 GeV)	38.5 * 1.3 fb	32903, 32904, 32905	512500
$Z(\to\mu^+\mu^-)$+2lp excl. (mZ=15-60 GeV)	10.1 * 1.3 fb	32906, 32907	205000
$Z(\to\mu^+\mu^-)$+3lp incl. (mZ=15-60 GeV)	4.2/1.5 * 1.3 fb	32908, 32909	100500
$Z(\to\mu^+\mu^-)$+0lp excl. (mZ=60-130 GeV)	139 * 1.3 fb	28762, 28884, 38410, 38409, 38408, 38364, 37409, 37408, 37407, 37004, 37003, 29279, 29278, 29273, 29272	1469750
$Z(\to\mu^+\mu^-)$+1lp excl. (mZ=60-130 GeV)	41.6 * 1.3 fb	28763, 28885, 38362, 37416, 37005	874116
$Z(\to\mu^+\mu^-)$+2lp excl. (mZ=60-130 GeV)	10.3 * 1.3 fb	28764, 38368, 37006	413500
$Z(\to\mu^+\mu^-)$+3lp incl. (mZ=60-130 GeV)	5.3/1.5 * 1.3 fb	28767, 38372, 37007	317000
$Z(\to\mu^+\mu^-)$+0lp excl. (mZ=130-250 GeV)	0.90 * 1.3 fb	32621	108000
$Z(\to\mu^+\mu^-)$+1lp excl. (mZ=130-250 GeV)	0.36 * 1.3 fb	32623	100250
$Z(\to\mu^+\mu^-)$+2lp excl. (mZ=130-250 GeV)	0.097 * 1.3 fb	32624	100750
$Z(\to\mu^+\mu^-)$+3lp incl. (mZ=130-250 GeV)	0.053/1.5 * 1.3 fb	32648	99750
$Z(\to\mu^+\mu^-)$+0lp excl. (mZ>=250 GeV)	0.072 * 1.3 fb	33738	106250
$Z(\to\mu^+\mu^-)$+1lp excl. (mZ>=250 GeV)	0.036 * 1.3 fb	33739	105750
$Z(\to\mu^+\mu^-)$+2lp excl. (mZ>=250 GeV)	0.011 * 1.3 fb	33740	102250
$Z(\to\mu^+\mu^-)$+3lp incl. (mZ>=250 GeV)	0.0066/1.5 * 1.3 fb	33741	105750
$Z(\to\mu^+\mu^-)$+2b+0lp excl.	0.97 * 1.5 fb	32356, 32806, 32807	342000
$Z(\to\mu^+\mu^-)$+2b+1lp excl.	0.36 * 1.5 fb	32357	52750
$Z(\to\mu^+\mu^-)$+2b+2lp incl.	0.21/1.5 * 1.5 fb	32257	25000
$t\bar{t}$ inclusive (M_{top}=170-175 GeV)	7.0 fb	35833, 35834, 35835, 35437, 35438, 35439, 34873, 34874, 33810, 33811	1615030
WZ inclusive	3.6 fb	30488, 30489, 33685, 33684, 42212, 38491	724250
ZZ inclusive	1.423 fb	30486, 30487, 33687, 33686, 42213, 38492	711000
Pythia $Z(\to\mu^+\mu^-)$ (mZ=15-60 GeV)	479139.25 fb	40687 40686 40685 40684 40683, 40682 40681 40680 40679 40678, 36595 36594 36593 36592 36591	3107250
Pythia $Z(\to\mu^+\mu^-)$ (mZ=60-130 GeV)	255203.33 fb	38912 38911 38910 38909 38908, 38907 38906 38905 38904 38903, 38902 38901 38900 38899 38898	2821282
Pythia $Z(\to\mu^+\mu^-)$ (mZ=130-250 GeV)	1875.78 fb	41252 41251	413521
Pythia $Z(\to\mu^+\mu^-)$ (mZ=250-500 GeV)	476. fb	41256	102750
Pythia $Z(\to\mu^+\mu^-)$ (mZ>=500 GeV)	24.7 fb	41259	51500