ZH -> ee bb

Status

James Heinmiller
6FEB05
Multi-Lepton

Total number of events in ROOT tuple: 400000
... events processed: 400000 - **Pass 1**

>= 0 Jets:
Reco Effi = 97.8953 +- 0.0421926
EMF/Iso Effi = 99.2648 +- 0.025379
HMx7 Effi = 95.3161 +- 0.0627715
overall EM effi = 93.0102 +- 0.0749473

>= 1 Jets:
Reco Effi = 97.6774 +- 0.120814
EMF/Iso Effi = 99.203 +- 0.0721649
HMx7 Effi = 95.027 +- 0.176428
overall EM effi = 92.4661 +- 0.211707

>= 2 Jets:
Reco Effi = 97.2074 +- 0.401619
EMF/Iso Effi = 98.7775 +- 0.271682
HMx7 Effi = 94.0709 +- 0.583889
overall EM effi = 90.8497 +- 0.70281

>= 3 Jets:
Reco Effi = 96.7033 +- 1.3235
EMF/Iso Effi = 98.2955 +- 0.975696
HMx7 Effi = 94.3182 +- 1.74496
overall EM effi = 90.1099 +- 2.21285

>= 4 Jets:
Reco Effi = 100 +- 0
EMF/Iso Effi = 100 +- 0
HMx7 Effi = 90.9091 +- 8.66784
overall EM effi = 90.9091 +- 8.66784

>= 5 Jets:
Reco Effi = 100 +- 0
EMF/Iso Effi = 100 +- 0
HMx7 Effi = 100 +- 0
overall EM effi = 100 +- 0

Total number of events in ROOT tuple: 400000
... events processed: 400000 **Pass 2**

>= 0 Jets:
Reco Effi = 97.932 +- 0.0418099
EMF/Iso Effi = 99.3196 +- 0.0244048
HMx7 Effi = 95.3412 +- 0.0625682
overall EM effi = 93.1088 +- 0.0744183

>= 1 Jets:
Reco Effi = 97.5846 +- 0.149712
EMF/Iso Effi = 99.162 +- 0.0899891
HMx7 Effi = 94.9425 +- 0.216313
overall EM effi = 92.2975 +- 0.260008

>= 2 Jets:
Reco Effi = 97.0096 +- 0.589076
EMF/Iso Effi = 99.1369 +- 0.324822
HMx7 Effi = 94.328 +- 0.812229
overall EM effi = 91.1483 +- 0.98239

>= 3 Jets:
Reco Effi = 97.1831 +- 1.9636
EMF/Iso Effi = 100 +- 0
HMx7 Effi = 92.7536 +- 3.12105
overall EM effi = 90.1408 +- 3.53795

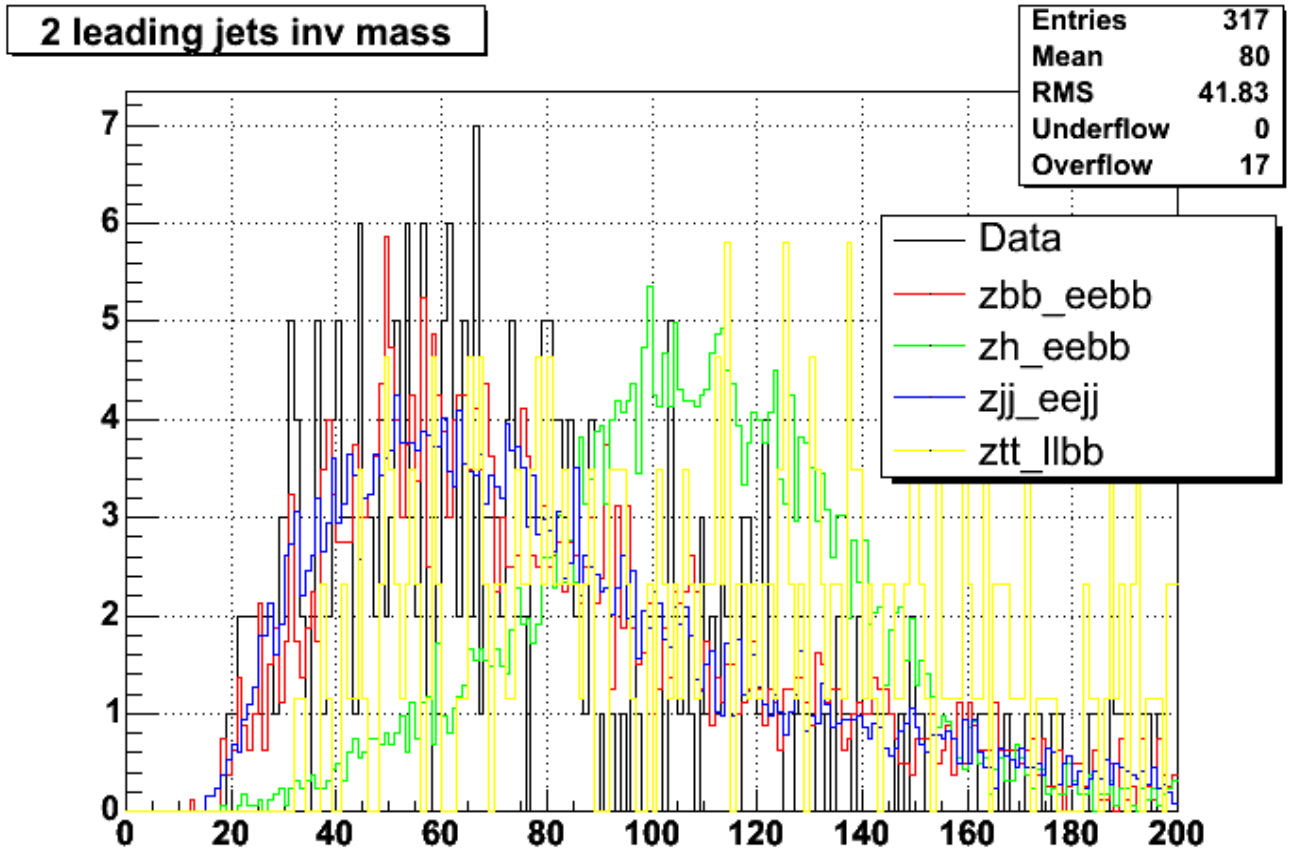
>= 4 Jets:
Reco Effi = 100 +- 0
EMF/Iso Effi = 100 +- 0
HMx7 Effi = 100 +- 0
overall EM effi = 100 +- 0

>= 5 Jets:
Reco Effi = 100 +- 0
EMF/Iso Effi = 100 +- 0
HMx7 Effi = 100 +- 0
overall EM effi = 100 +- 0

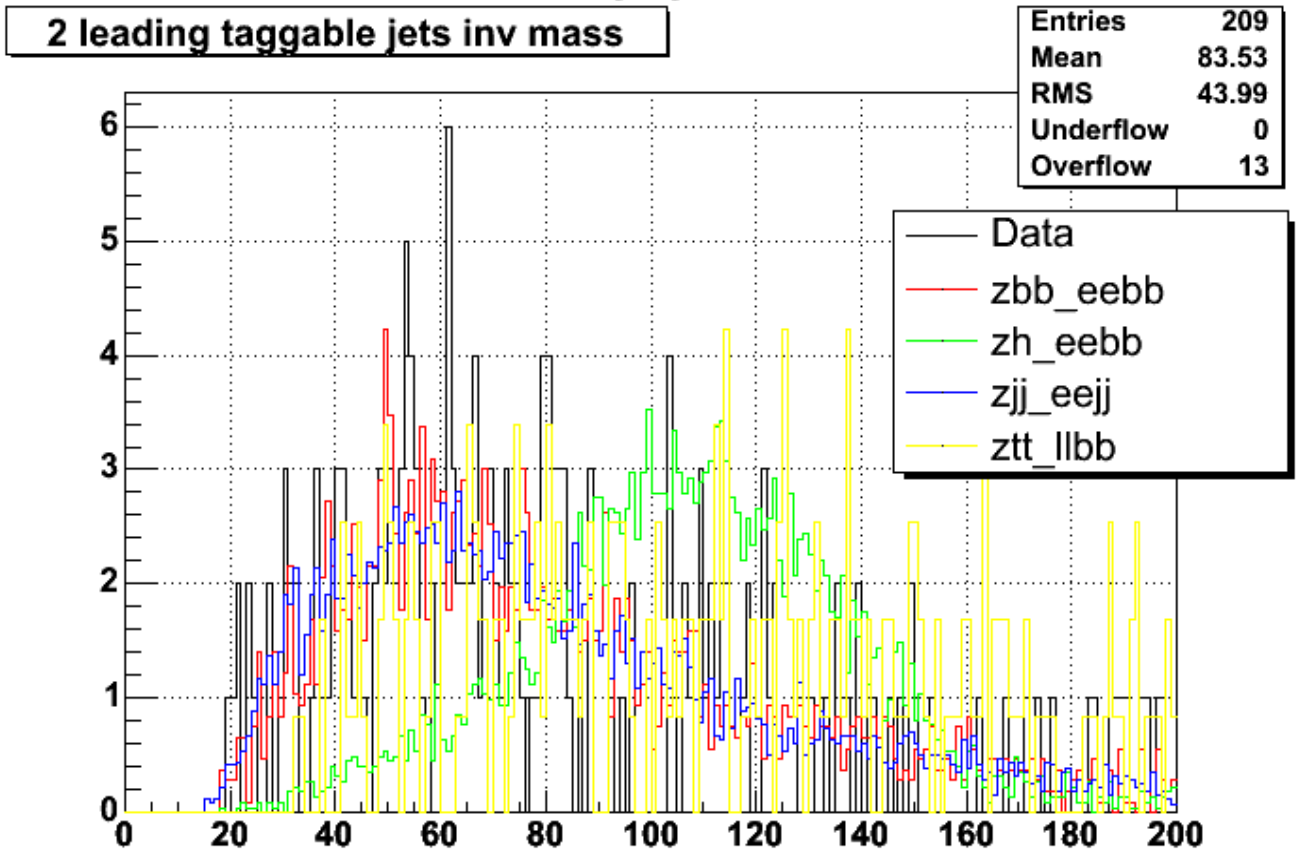
```
Total number of events in ROOT tuple: 1774534
... events processed: 1774534


>= 0 Jets:
Reco Effi = 95.9597 +- 0.152904
EMF/Iso Effi = 98.8563 +- 0.0842919
HMx7 Effi = 91.7489 +- 0.218113
overall EM effi = 87.6922 +- 0.255117

>= 1 Jets:
Reco Effi = 92.8754 +- 0.582372
EMF/Iso Effi = 98.1236 +- 0.318763
HMx7 Effi = 90.894 +- 0.675852
overall EM effi = 83.8544 +- 0.833031

>= 2 Jets:
Reco Effi = 89.243 +- 1.95567
EMF/Iso Effi = 98.2143 +- 0.884849
HMx7 Effi = 90.625 +- 1.94754
overall EM effi = 80.4781 +- 2.50186

>= 3 Jets:
Reco Effi = 97.0588 +- 2.8976
EMF/Iso Effi = 96.9697 +- 2.98404
HMx7 Effi = 90.9091 +- 5.00438
overall EM effi = 85.2941 +- 6.07387

>= 4 Jets:
Reco Effi = 100 +- 0
EMF/Iso Effi = 100 +- 0
HMx7 Effi = 100 +- 0
overall EM effi = 100 +- 0

>= 5 Jets:
Reco Effi = nan +- nan
EMF/Iso Effi = nan +- nan
HMx7 Effi = nan +- nan
overall EM effi = nan +- nan
```

```
Total number of events in ROOT tuple: 2411841
... events processed: 2411841      Pass 2

>= 0 Jets:
Reco Effi       = (95.8474 +- 0.172881)%
EMF/Iso Effi    = (99.0364 +- 0.0864695)%
Hmx7 Effi       = (92.1185 +- 0.238498)%
overall EM effi = (88.0679 +- 0.280908)%

>= 1 Jets:
Reco Effi       = (93.2324 +- 0.749567)%
EMF/Iso Effi    = (98.7584 +- 0.342225)%
HMx7 Effi       = (90.4489 +- 0.908354)%
overall EM effi = (83.9715 +- 1.09477)%


>= 2 Jets:
Reco Effi       = (90.9836 +- 2.59309)%
EMF/Iso Effi    = (97.2973 +- 1.53918)%
HMx7 Effi       = (93.6937 +- 2.30718)%
overall EM effi = (84.4262 +- 3.28288)%

>= 3 Jets:
Reco Effi       = (100 +- 0)%
EMF/Iso Effi    = (100 +- 0)%
HMx7 Effi       = (100 +- 0)%
overall EM effi = (100 +- 0)%

>= 4 Jets:
Reco Effi       = (nan +- nan)%
EMF/Iso Effi    = (nan +- nan)%
HMx7 Effi       = (nan +- nan)%
overall EM effi = (nan +- nan)%

>= 5 Jets:
Reco Effi       = (nan +- nan)%
EMF/Iso Effi    = (nan +- nan)%
HMx7 Effi       = (nan +- nan)%
overall EM effi = (nan +- nan)%
```

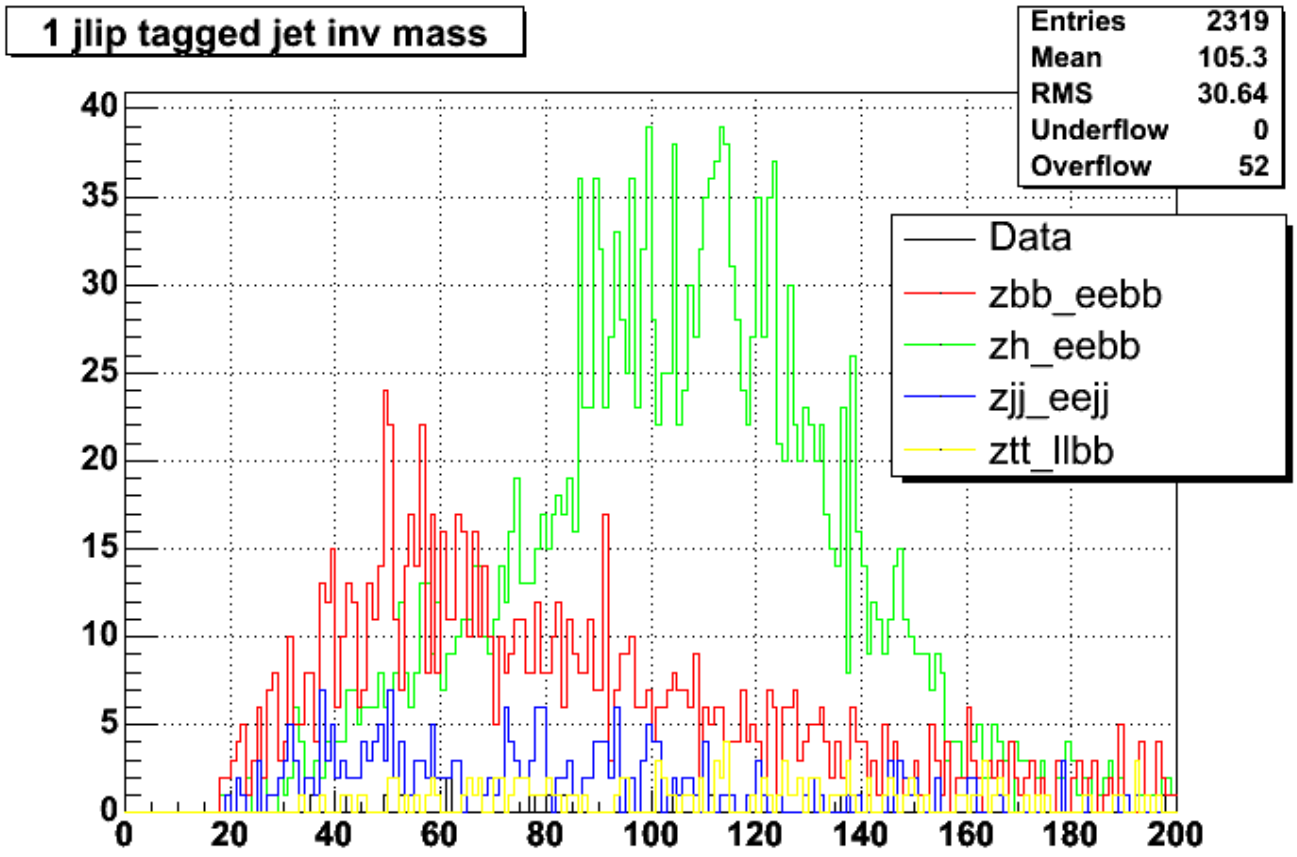
2 jets – normalized to data



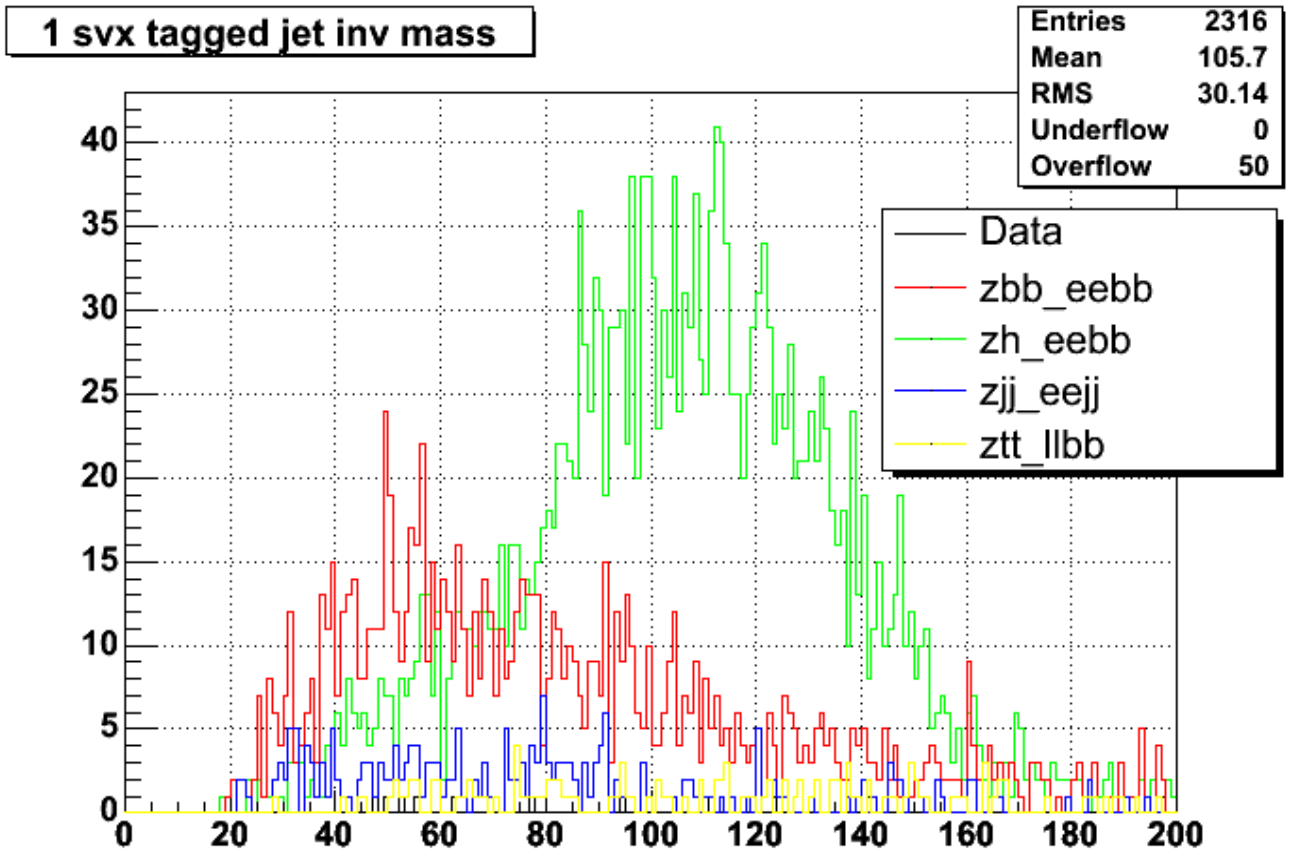
2 taggble


2 leading taggable jets inv mass
Entries 209
Mean 83.53
RMS 43.99
Underflow 0
Overflow 13
Data
zbb_eebb
zh_eebb
zjj_eejj
ztt_llbb
0
1
2
3
4
5
6
0
20
40
60
80
100
120
140
160
180
200

1 jlip – not normalized



1 svx


1 svx tagged jet inv mass
Entries 2316
Mean 105.7
RMS 30.14
Underflow 0
Overflow 50
Data
zbb_eebb
zh_eebb
zjj_eejj
ztt_llbb
0
5
10
15
20
25
30
35
40
0
20
40
60
80
100
120
140
160
180
200