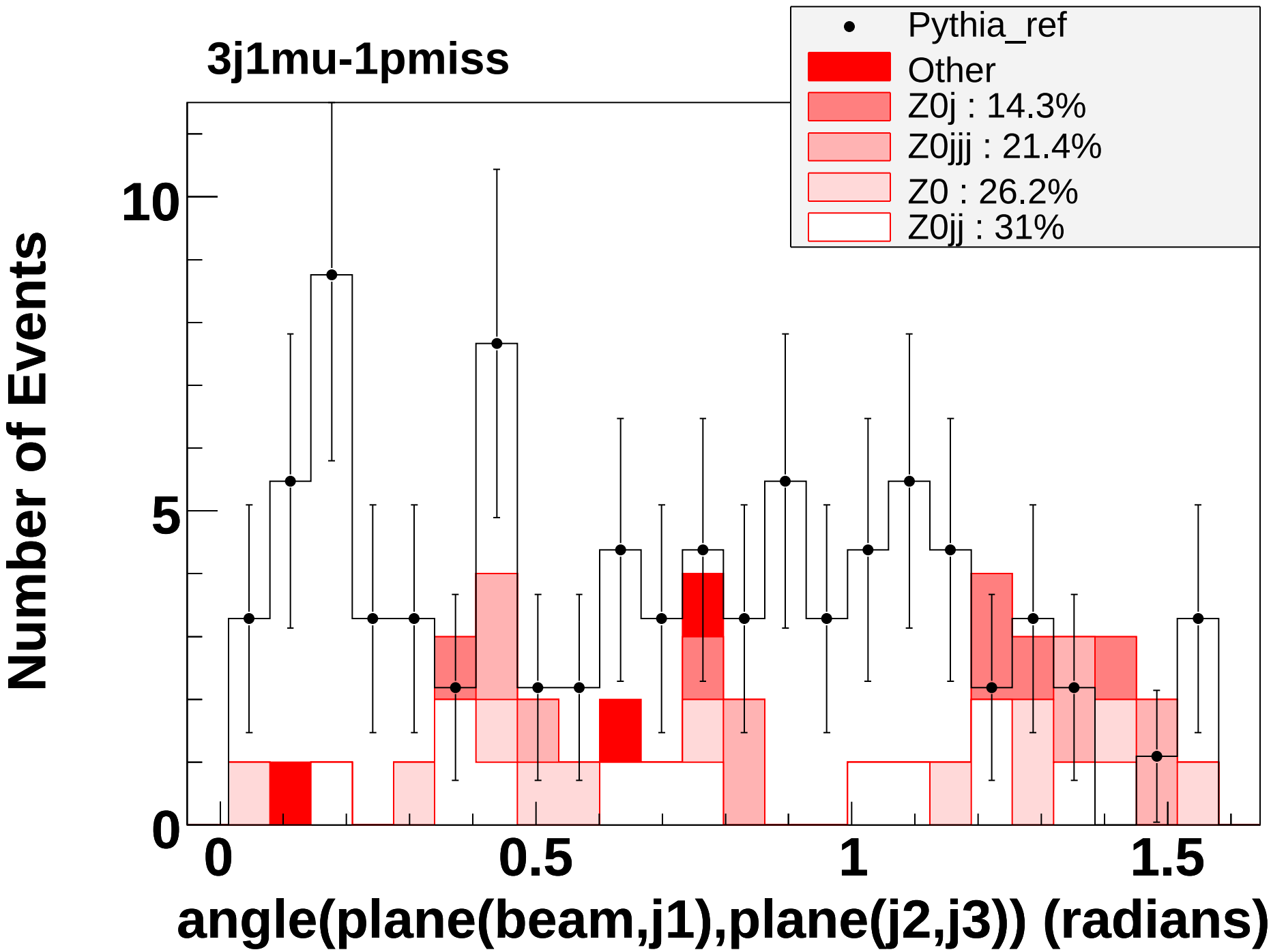
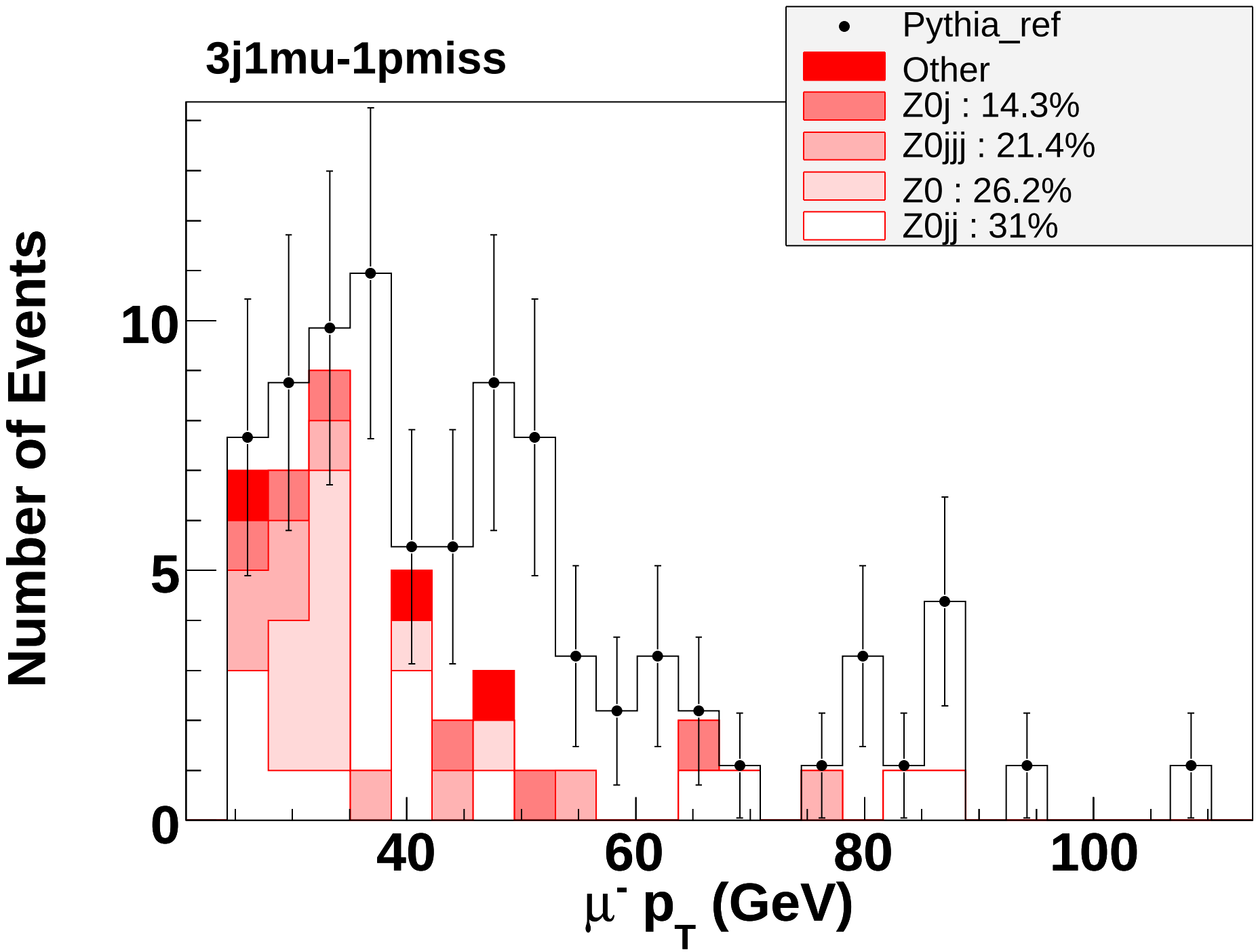
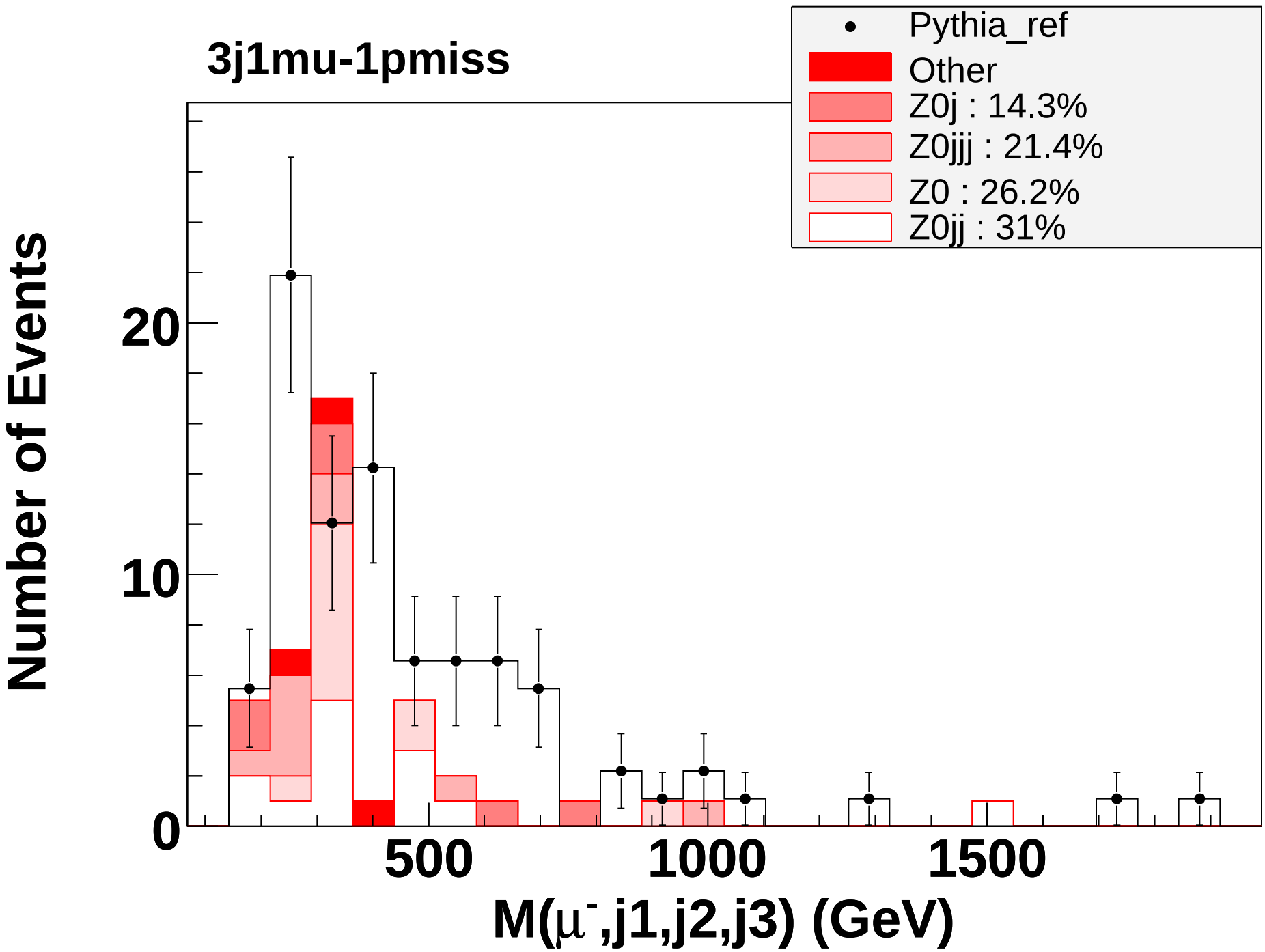
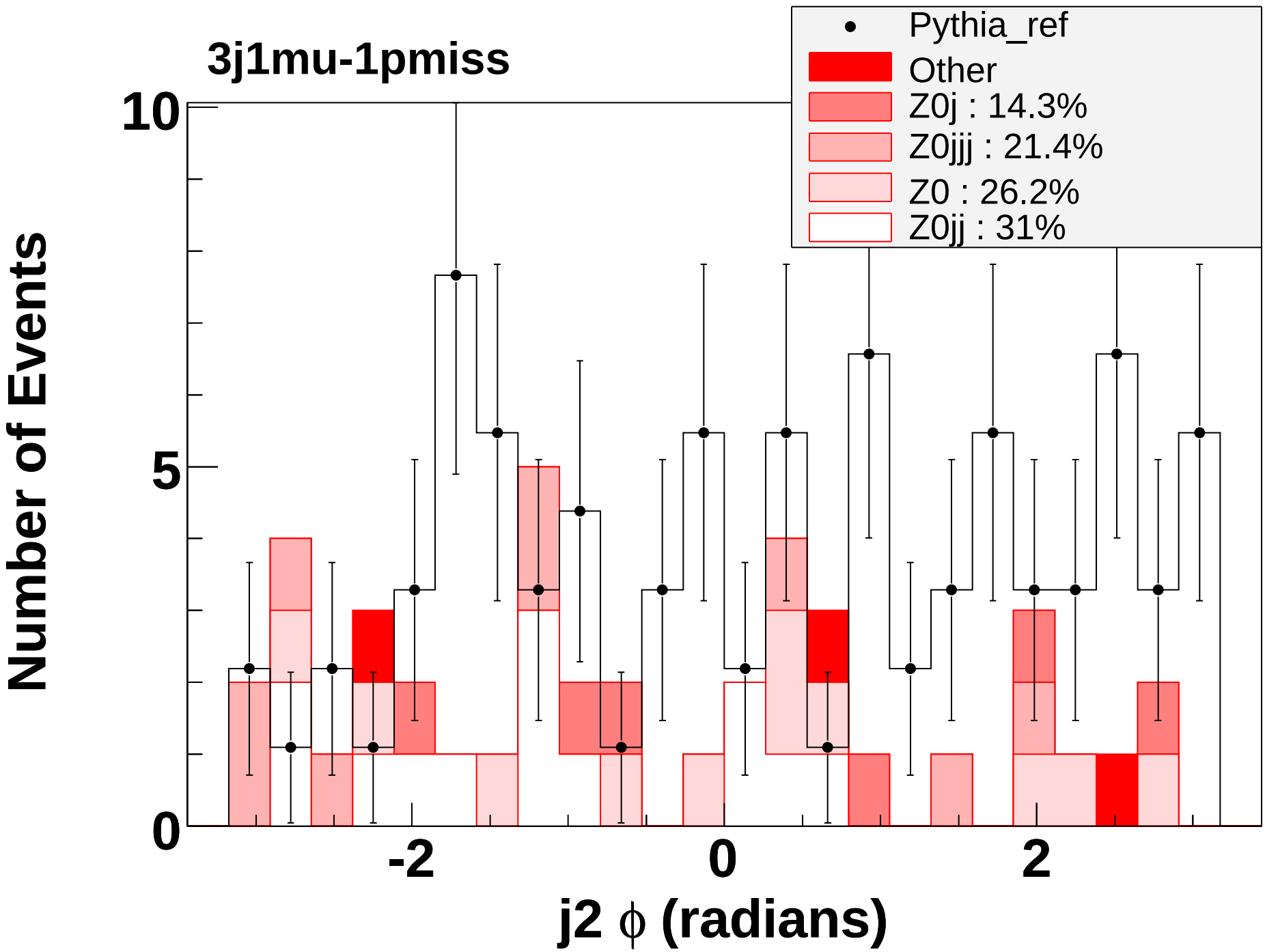
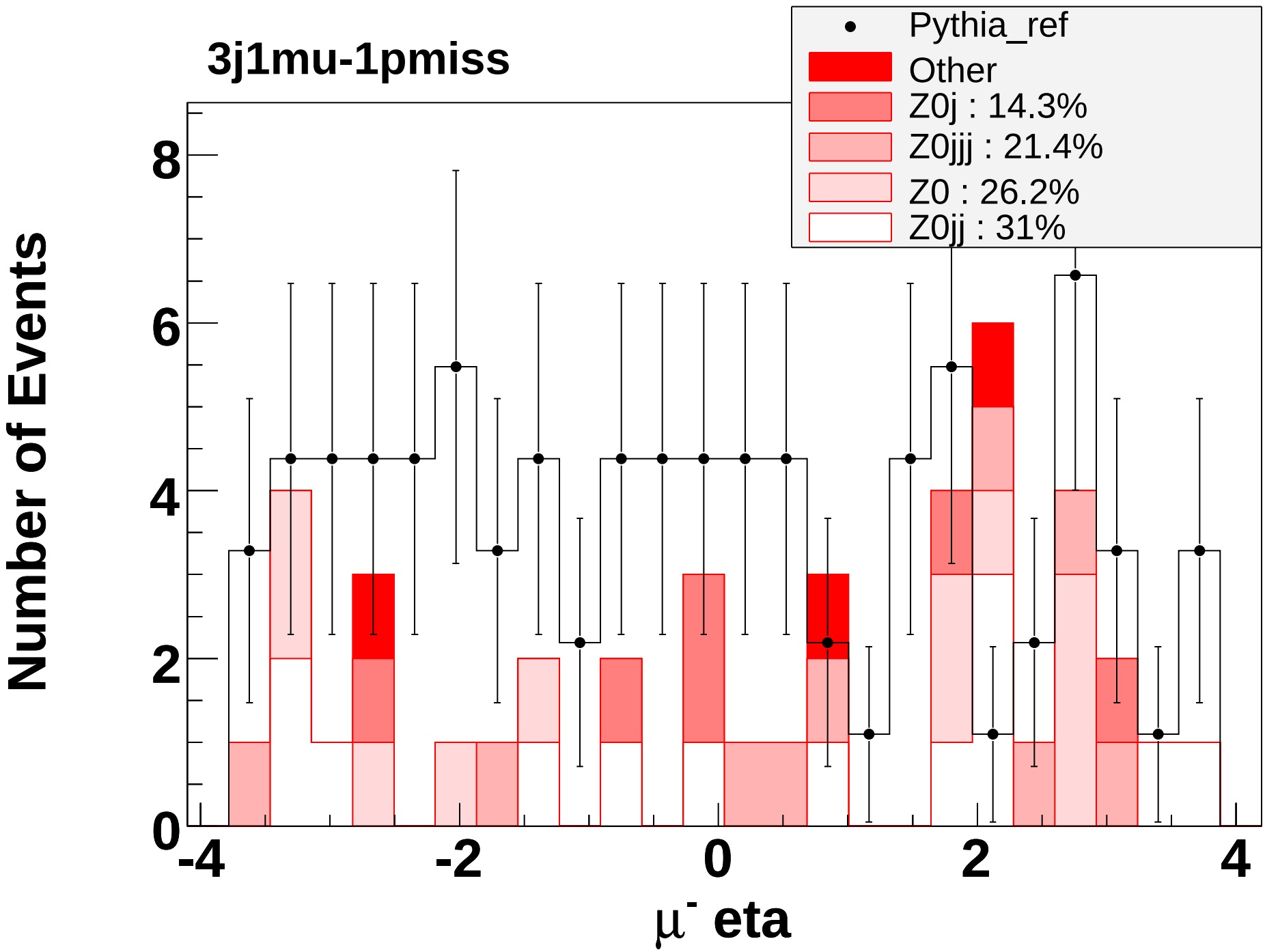
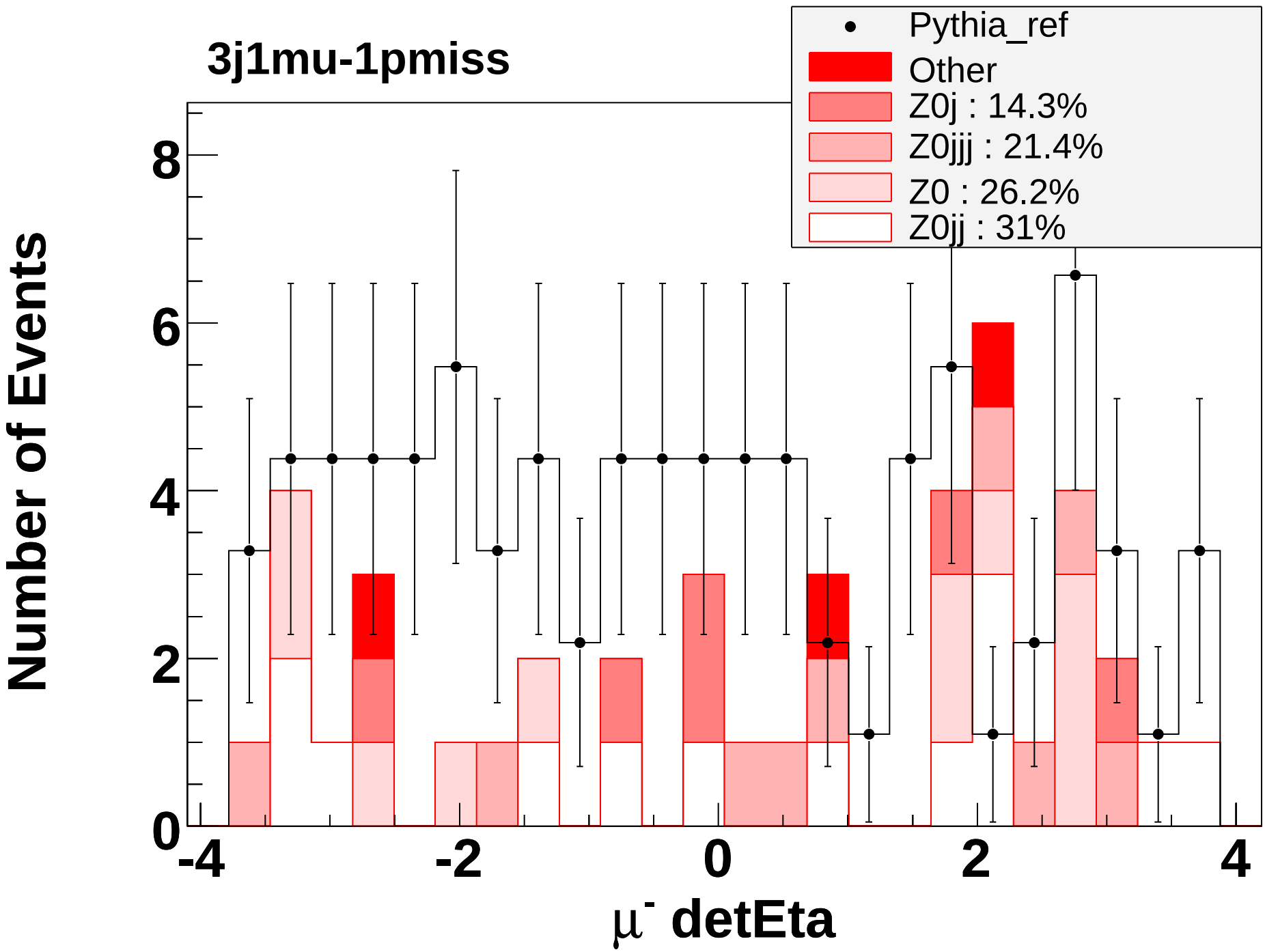

3j1mu-1pmiss
Pythia_ref
Other
Z0j : 14.3%
Z0jjj : 21.4%
Z0 : 26.2%
Z0jj : 31%
Number of Events
0
5
10
0
0.5
1
1.5
angle(plane(beam,j1),plane(j2,j3)) (radians)

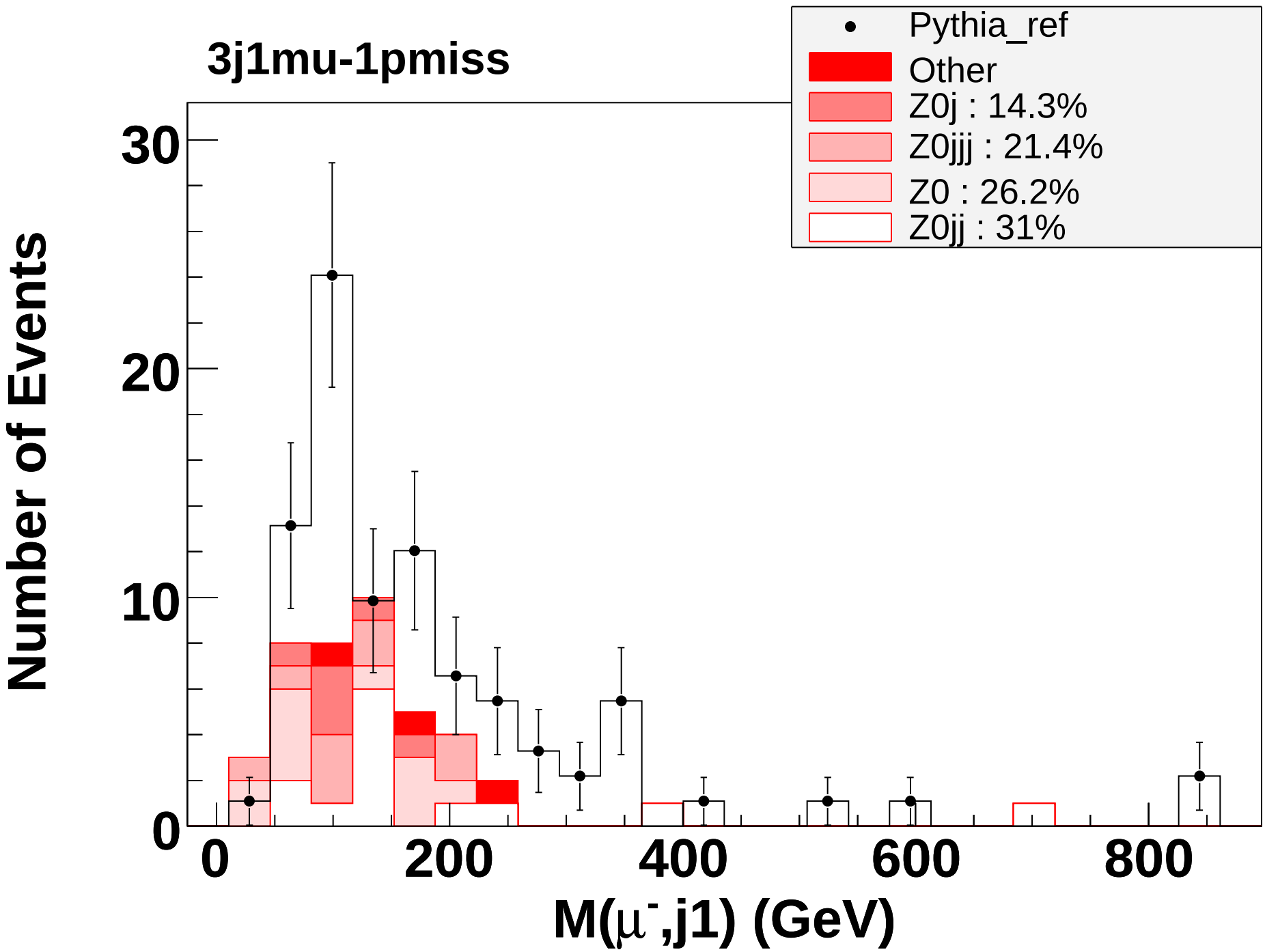

3j1mu-1pmiss
Pythia_ref
Other
Z0j : 14.3%
Z0jjj : 21.4%
Z0 : 26.2%
Z0jj : 31%
Number of Events
0
5
10
40
60
80
100
μ⁻ p_T (GeV)

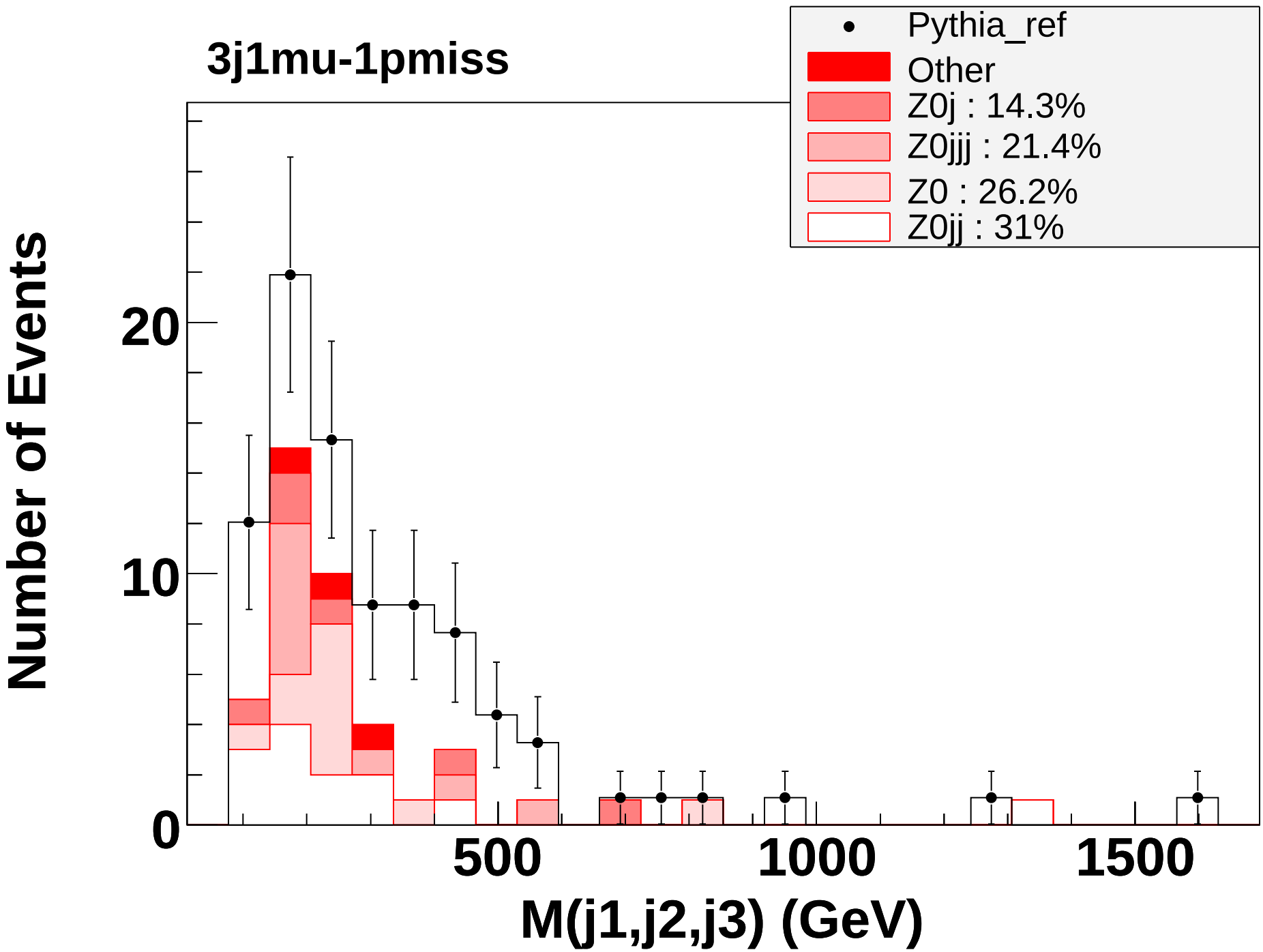

3j1mu-1pmiss
Pythia_ref
Other
Z0j : 14.3%
Z0jjj : 21.4%
Z0 : 26.2%
Z0jj : 31%
Number of Events
0
10
20
500
1000
1500
M(μ⁻,j1,j2,j3) (GeV)

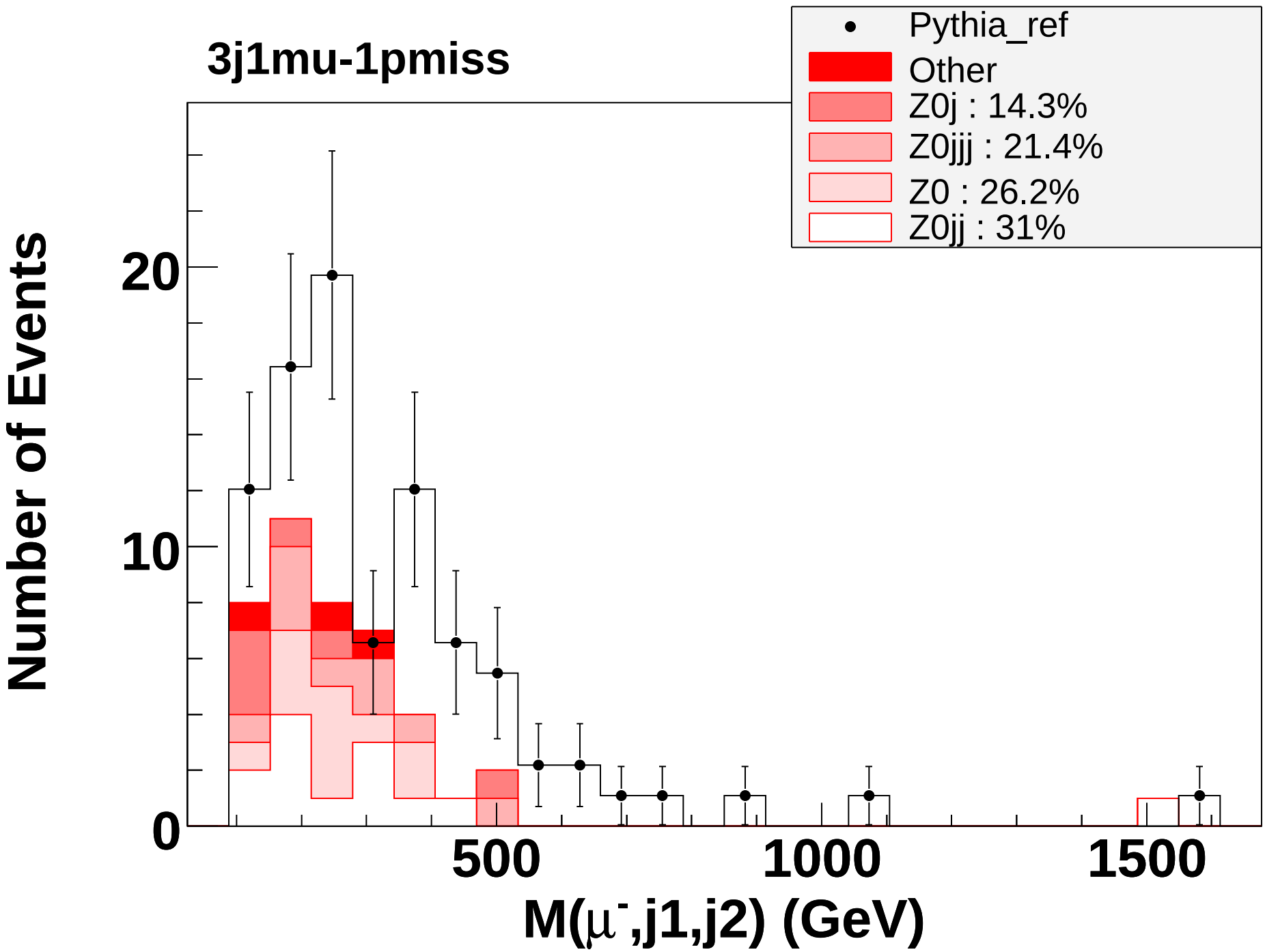

3j1mu-1pmiss
Pythia_ref
Other
Z0j : 14.3%
Z0jjj : 21.4%
Z0 : 26.2%
Z0jj : 31%
Number of Events
10
5
0
-2
0
2
j2 ϕ (radians)

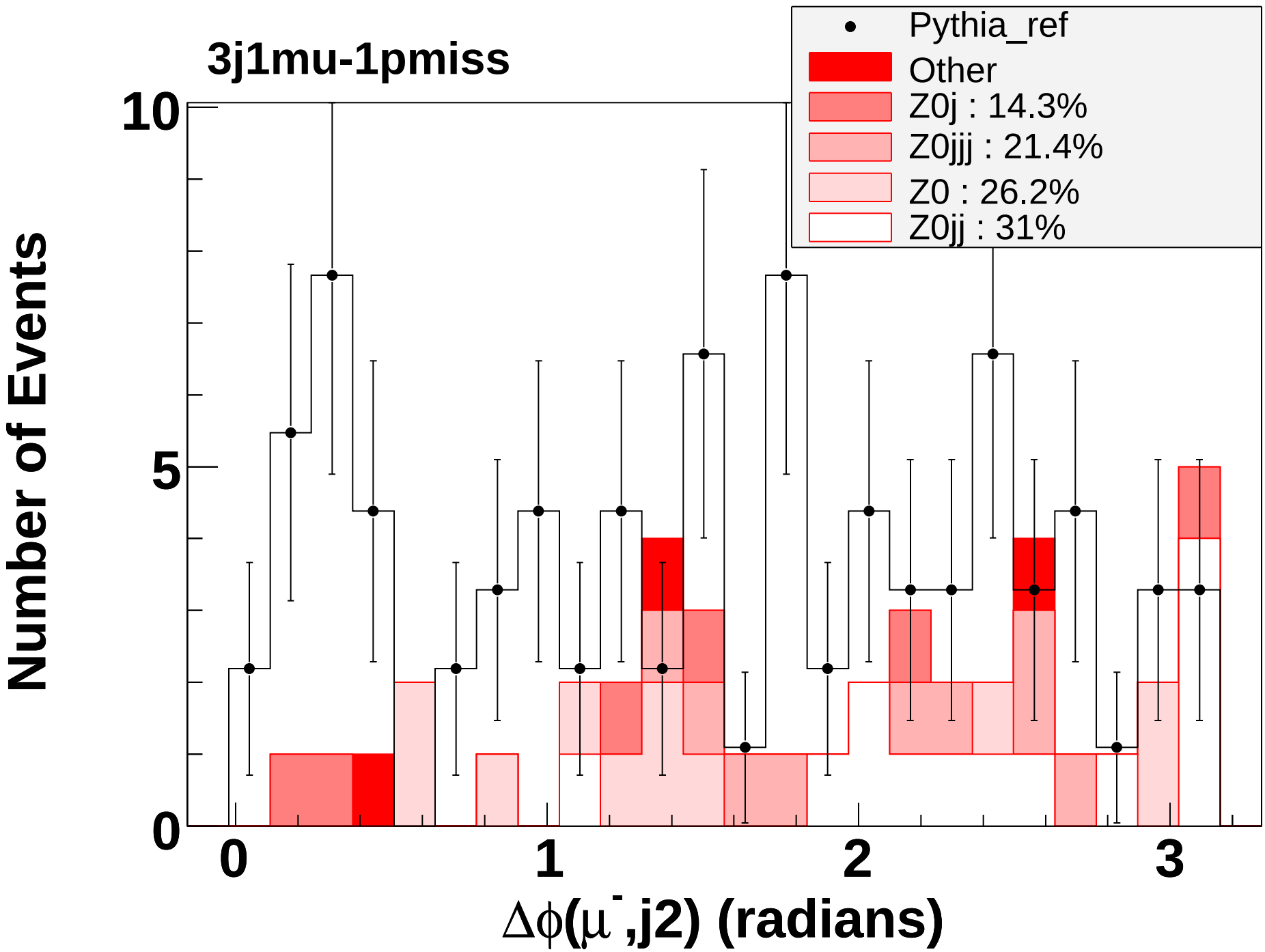

3j1mu-1pmiss
Pythia_ref
Other
Z0j : 14.3%
Z0jjj : 21.4%
Z0 : 26.2%
Z0jj : 31%
Number of Events
0
2
4
6
8
-4
-2
0
2
4
μ⁻ eta

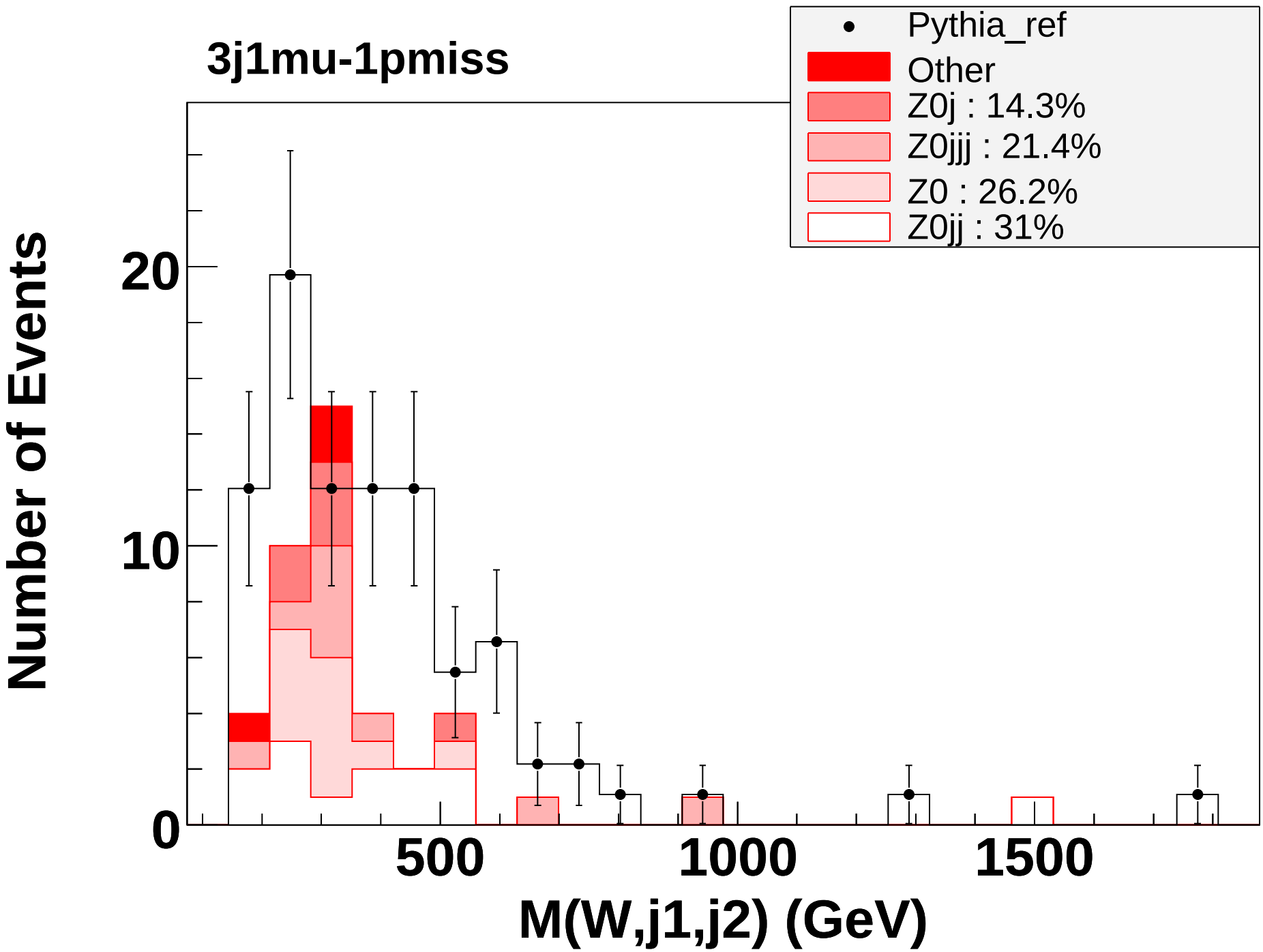

3j1mu-1pmiss
Pythia_ref
Other
Z0j : 14.3%
Z0jjj : 21.4%
Z0 : 26.2%
Z0jj : 31%
Number of Events
0
2
4
6
8
-4
-2
0
2
4
μ⁻ detEta

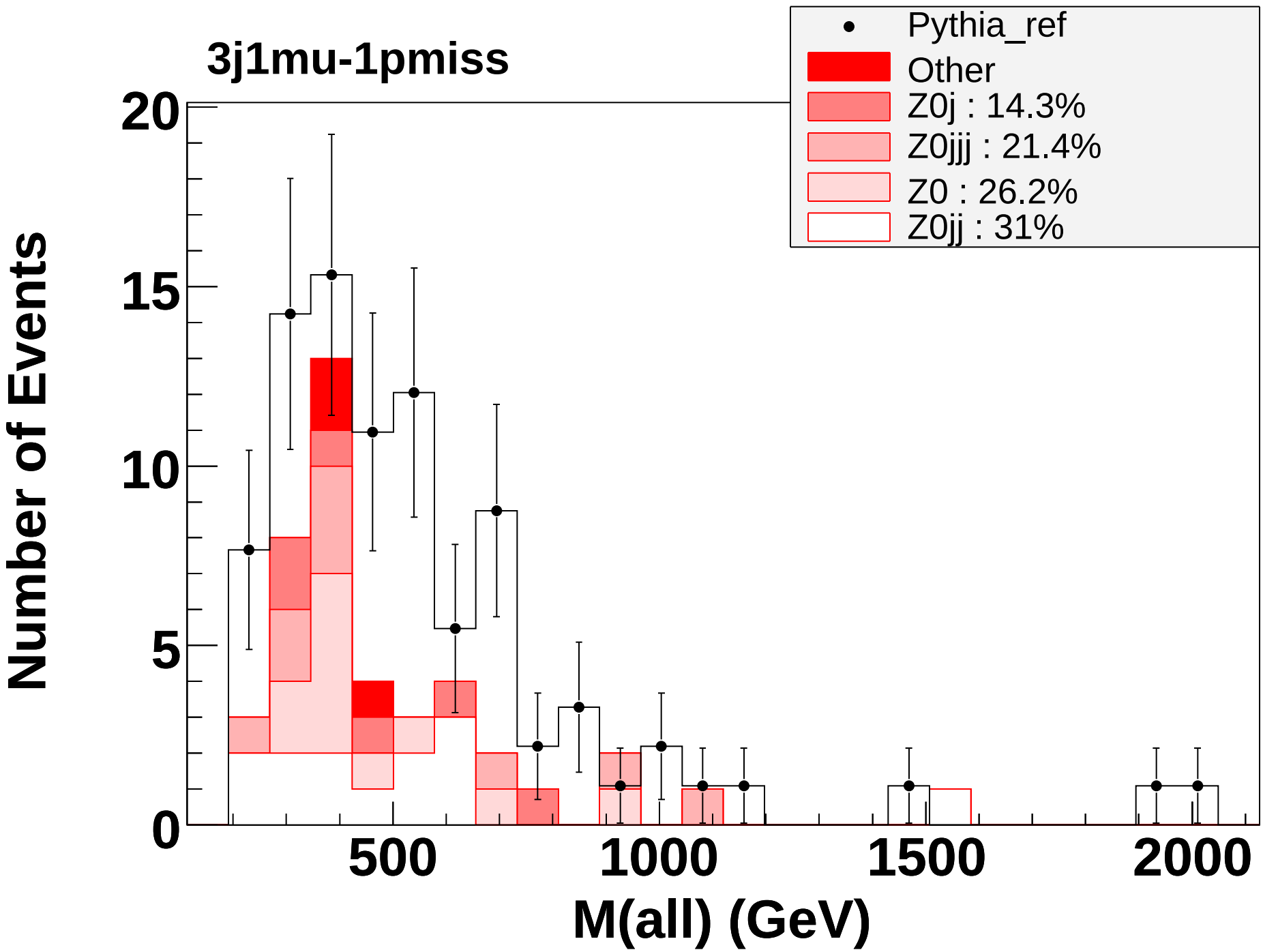

3j1mu-1pmiss
Pythia_ref
Other
Z0j : 14.3%
Z0jjj : 21.4%
Z0 : 26.2%
Z0jj : 31%
Number of Events
0
10
20
30
0
200
400
600
800
M(μ⁻,j1) (GeV)

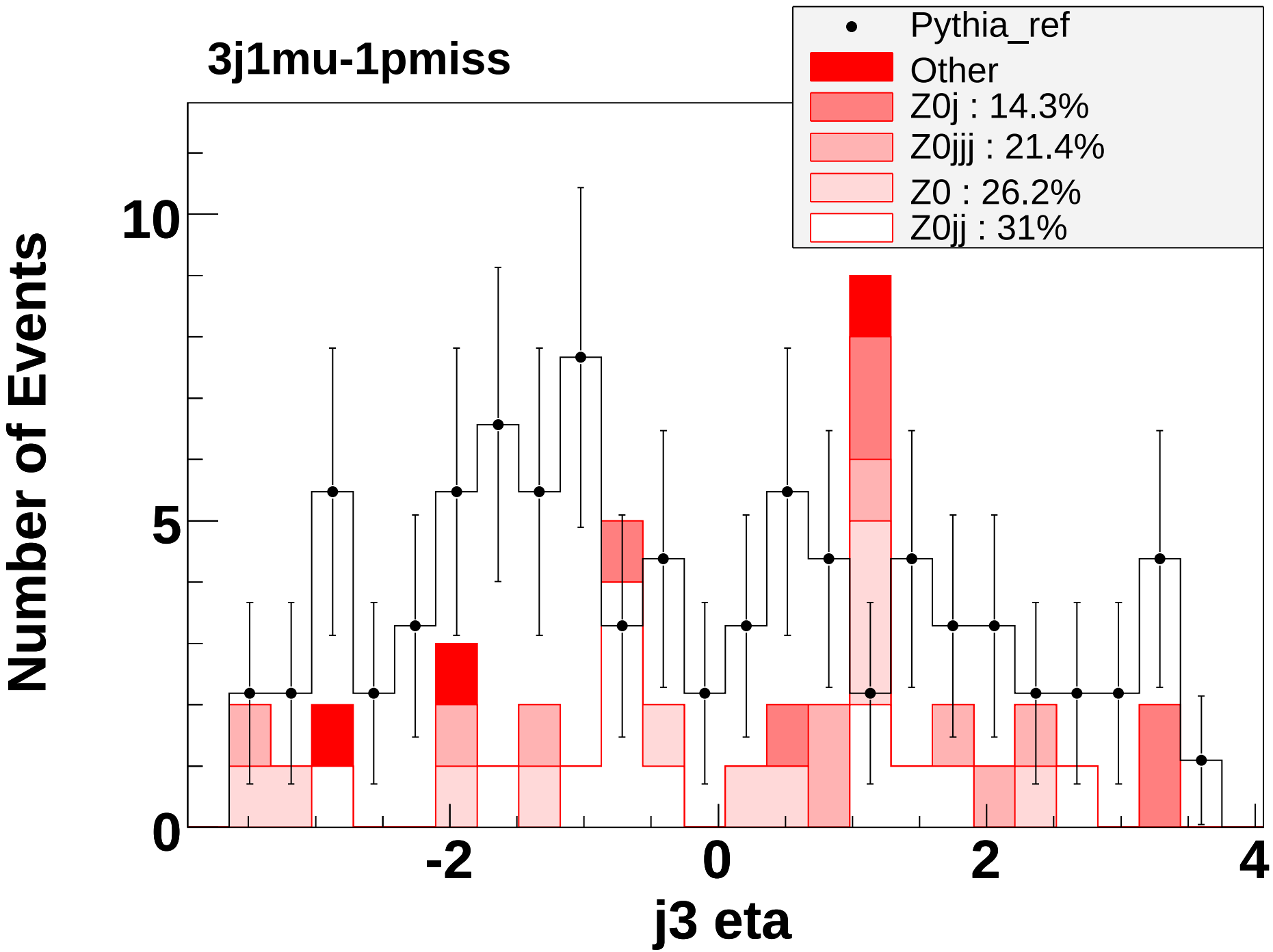

3j1mu-1pmiss
Pythia_ref
Other
Z0j : 14.3%
Z0jjj : 21.4%
Z0 : 26.2%
Z0jj : 31%
Number of Events
0
10
20
500
1000
1500
M(j1,j2,j3) (GeV)

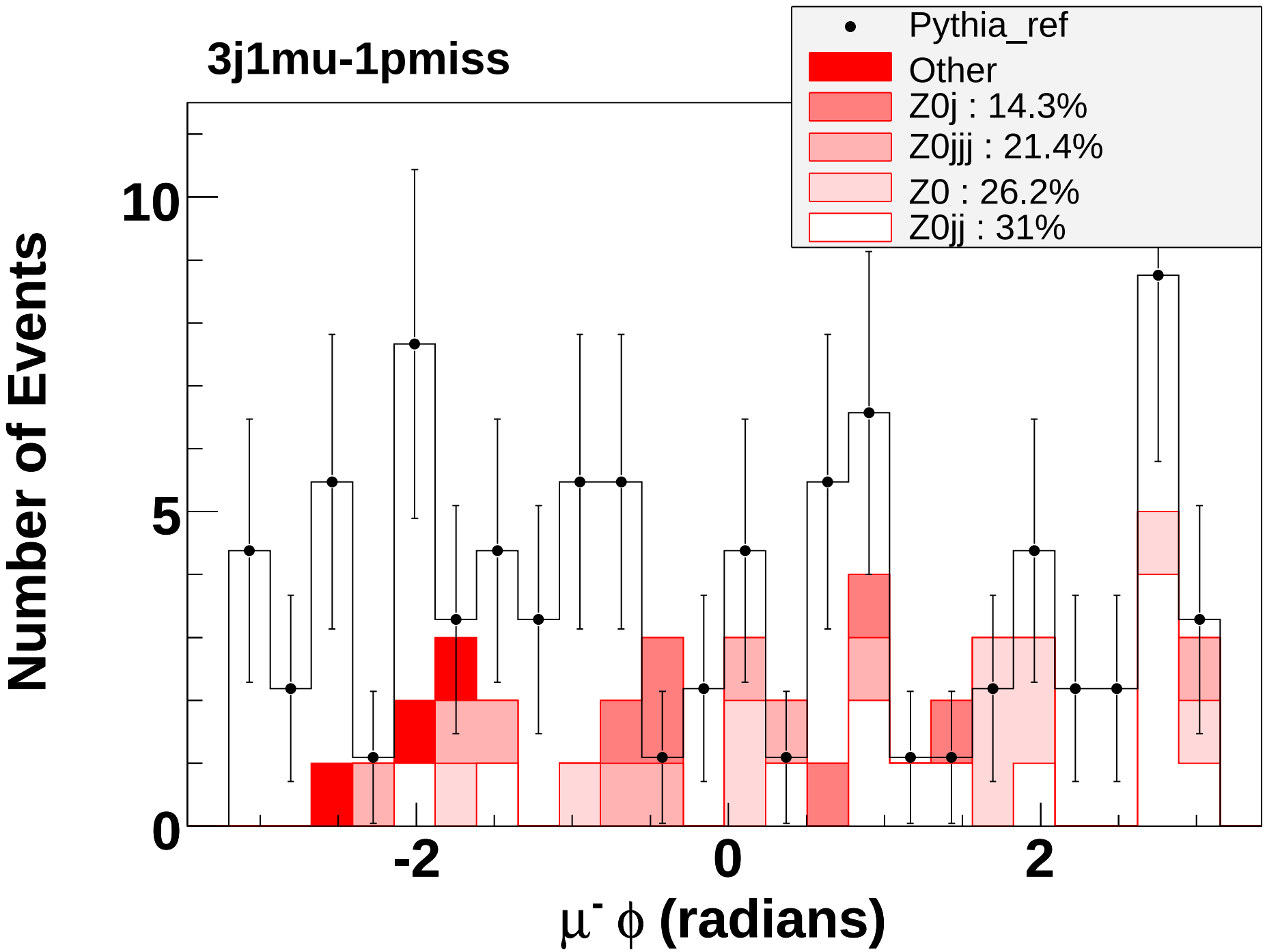

3j1mu-1pmiss
Pythia_ref
Other
Z0j : 14.3%
Z0jjj : 21.4%
Z0 : 26.2%
Z0jj : 31%
Number of Events
0
10
20
500
1000
1500
M(μ⁻,j1,j2) (GeV)

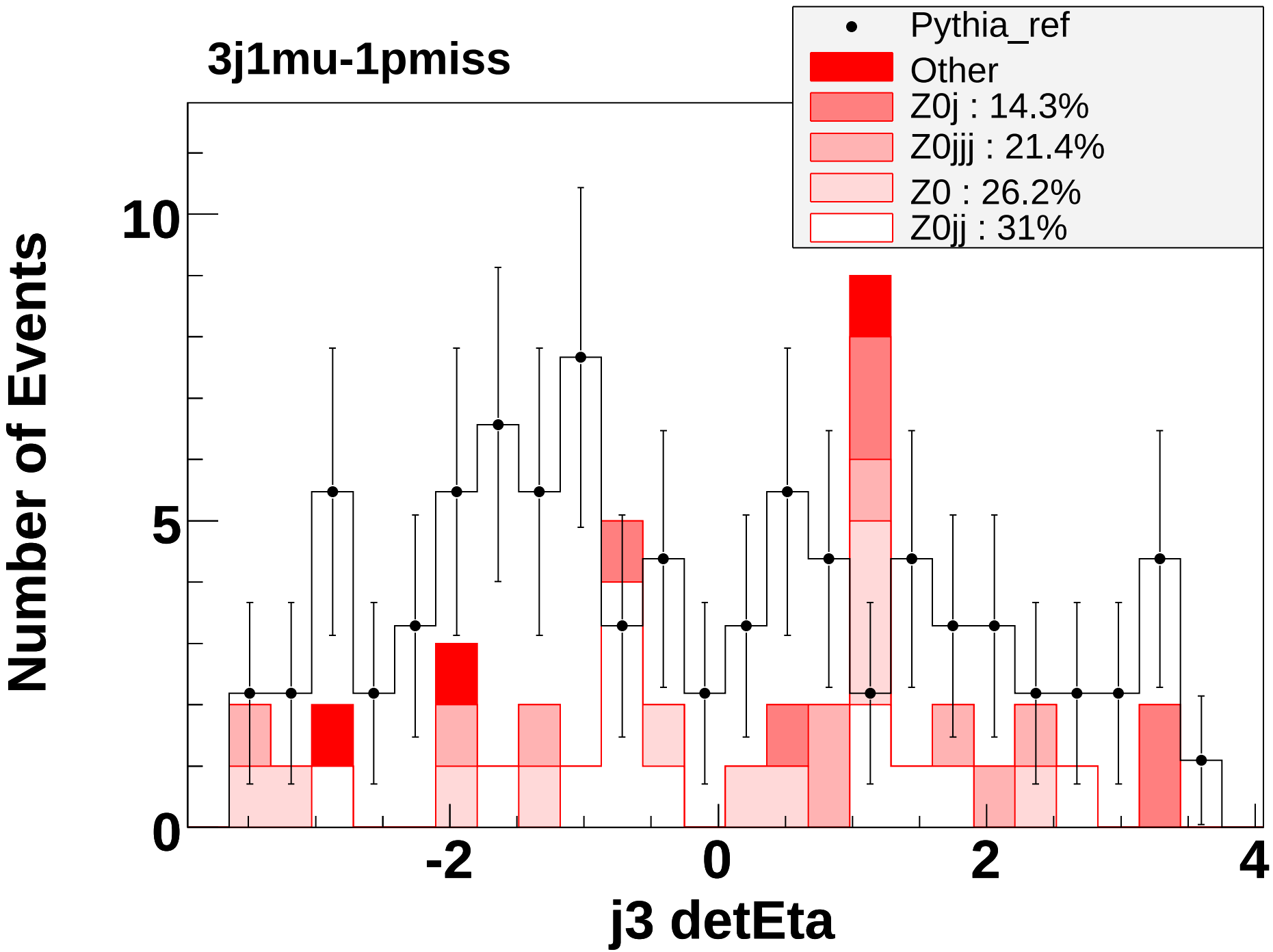

3j1mu-1pmiss
Pythia_ref
Other
Z0j : 14.3%
Z0jjj : 21.4%
Z0 : 26.2%
Z0jj : 31%
Number of Events
10
5
0
0
1
2
3
Δφ(μ⁻,j2) (radians)

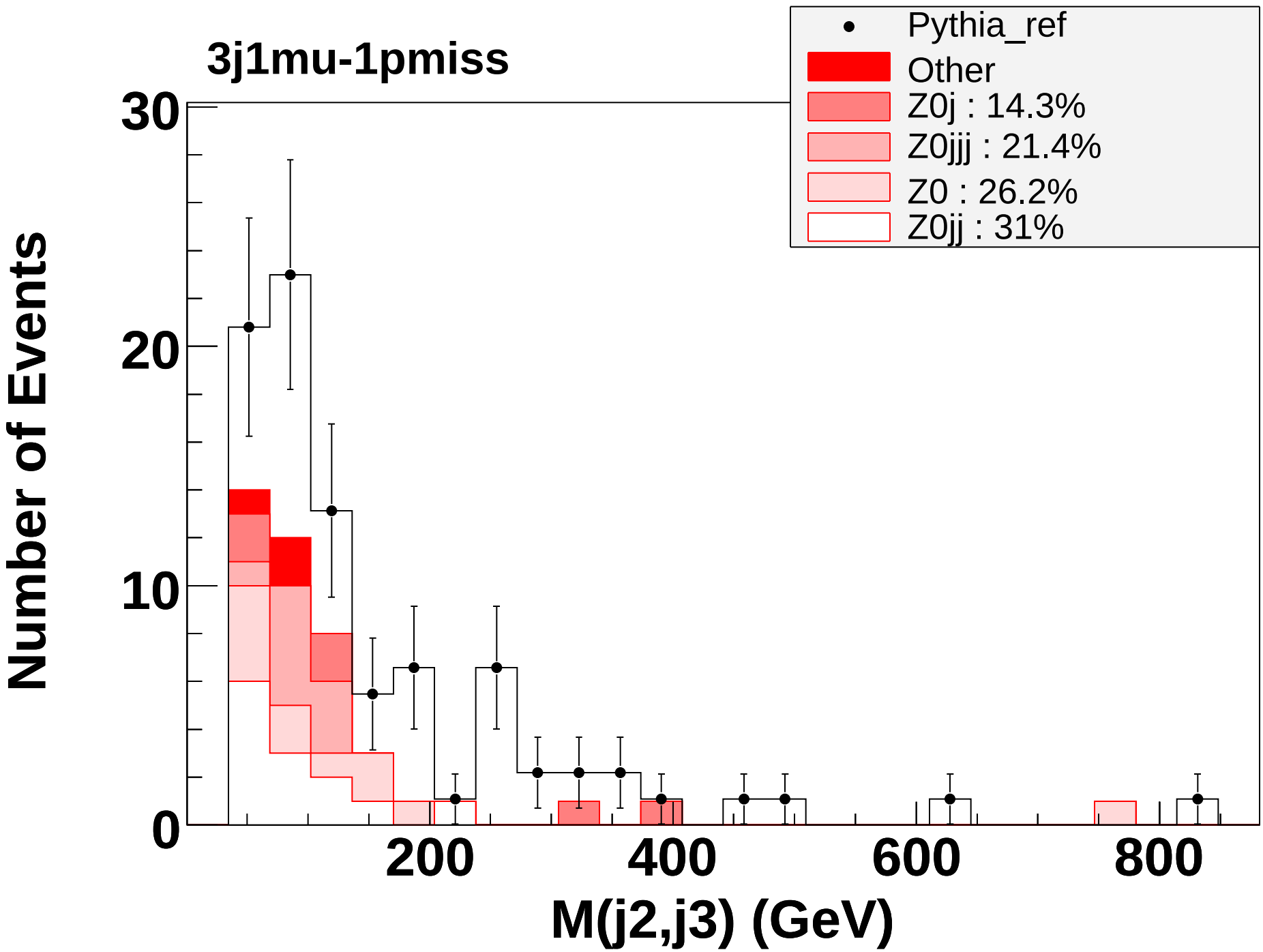

3j1mu-1pmiss
Pythia_ref
Other
Z0j : 14.3%
Z0jjj : 21.4%
Z0 : 26.2%
Z0jj : 31%
Number of Events
0
10
20
500
1000
1500
M(W,j1,j2) (GeV)

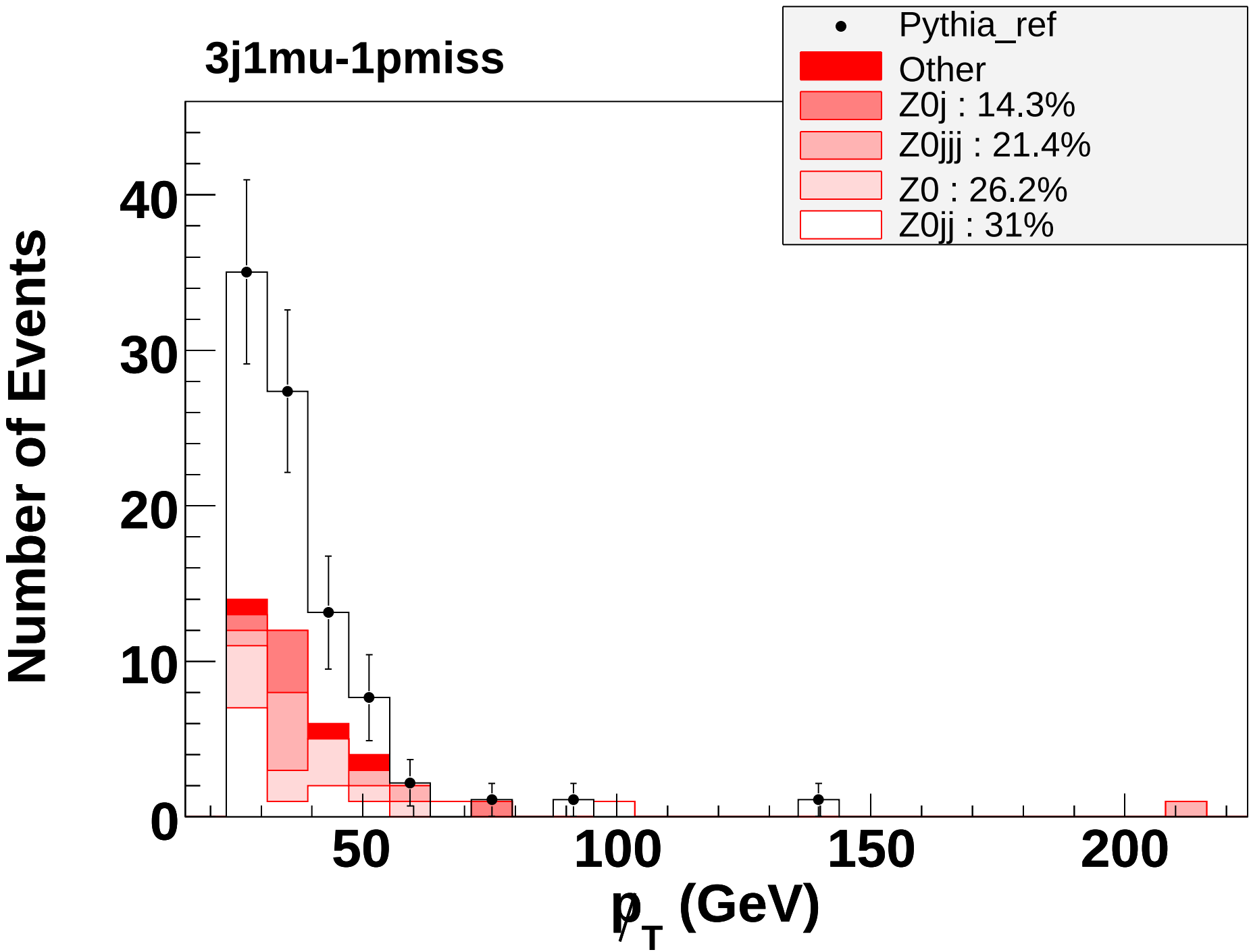

3j1mu-1pmiss
Pythia_ref
Other
Z0j : 14.3%
Z0jjj : 21.4%
Z0 : 26.2%
Z0jj : 31%
Number of Events
0
5
10
15
20
500
1000
1500
2000
M(all) (GeV)

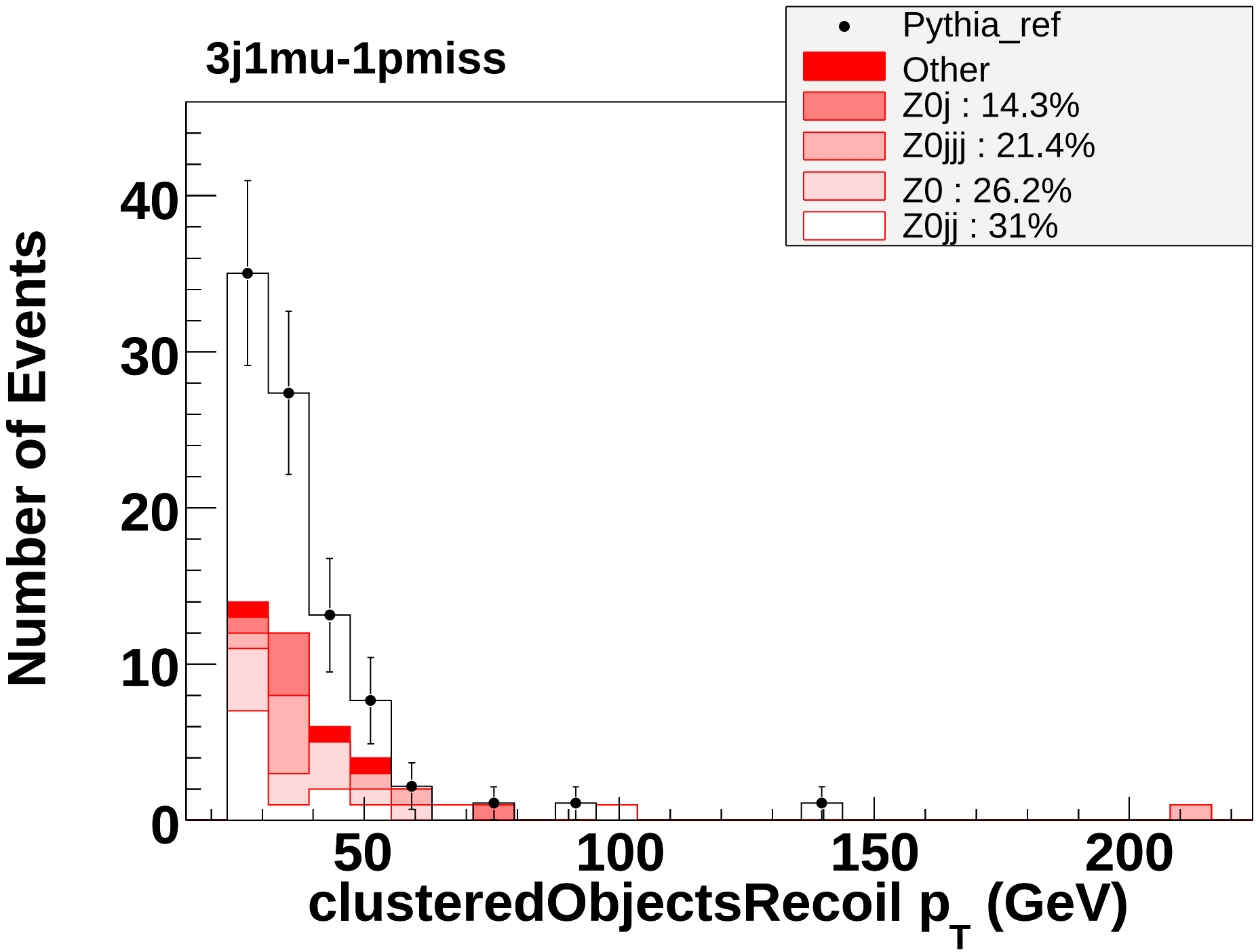

3j1mu-1pmiss
Pythia_ref
Other
Z0j : 14.3%
Z0jjj : 21.4%
Z0 : 26.2%
Z0jj : 31%
Number of Events
0
5
10
-2
0
2
4
j3 eta

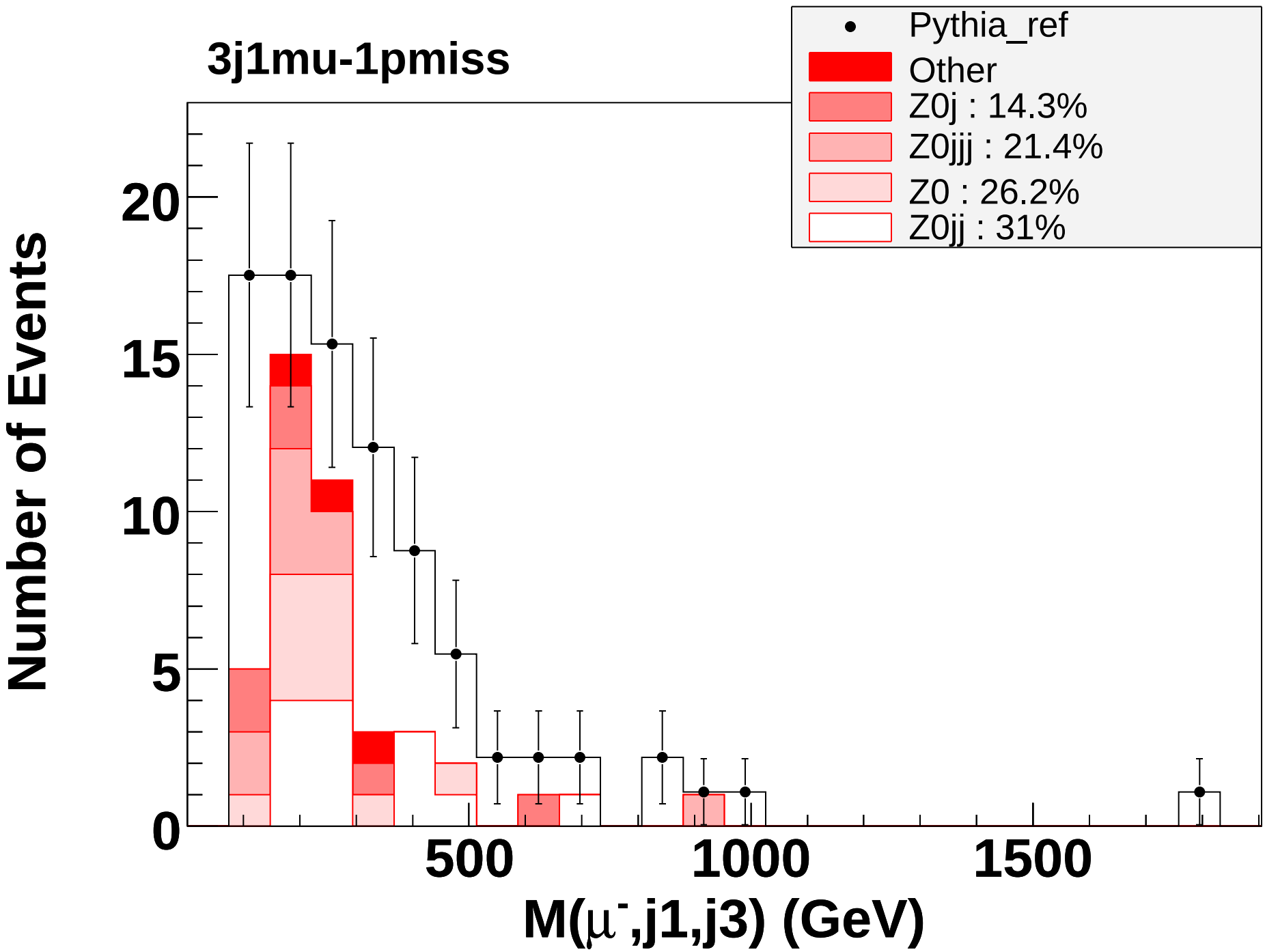

3j1mu-1pmiss
Pythia_ref
Other
Z0j : 14.3%
Z0jjj : 21.4%
Z0 : 26.2%
Z0jj : 31%
Number of Events
10
5
0
-2
0
2
μ⁻ ϕ (radians)

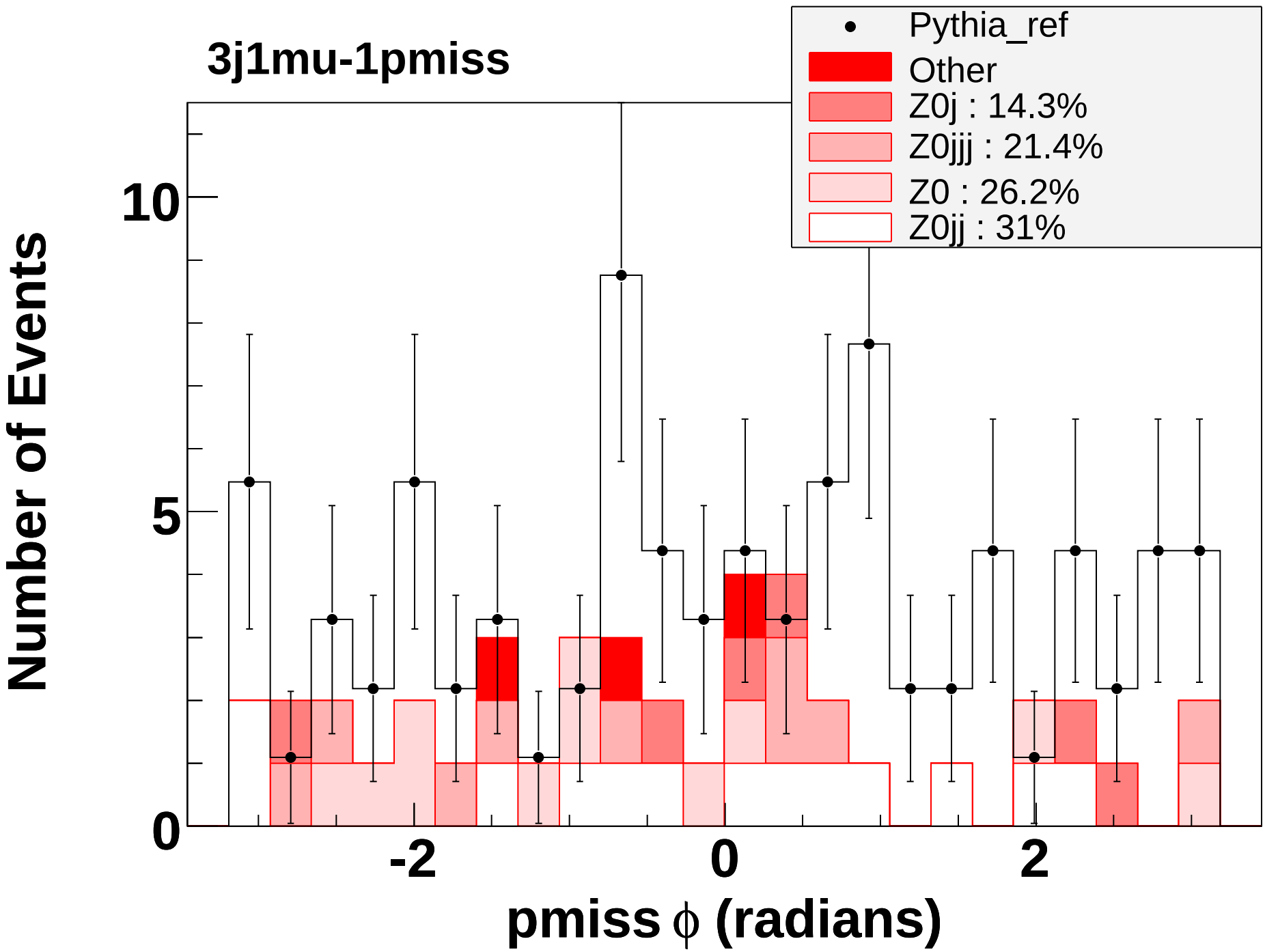

3j1mu-1pmiss
Pythia_ref
Other
Z0j : 14.3%
Z0jjj : 21.4%
Z0 : 26.2%
Z0jj : 31%
Number of Events
0
5
10
-2
0
2
4
j3 detEta

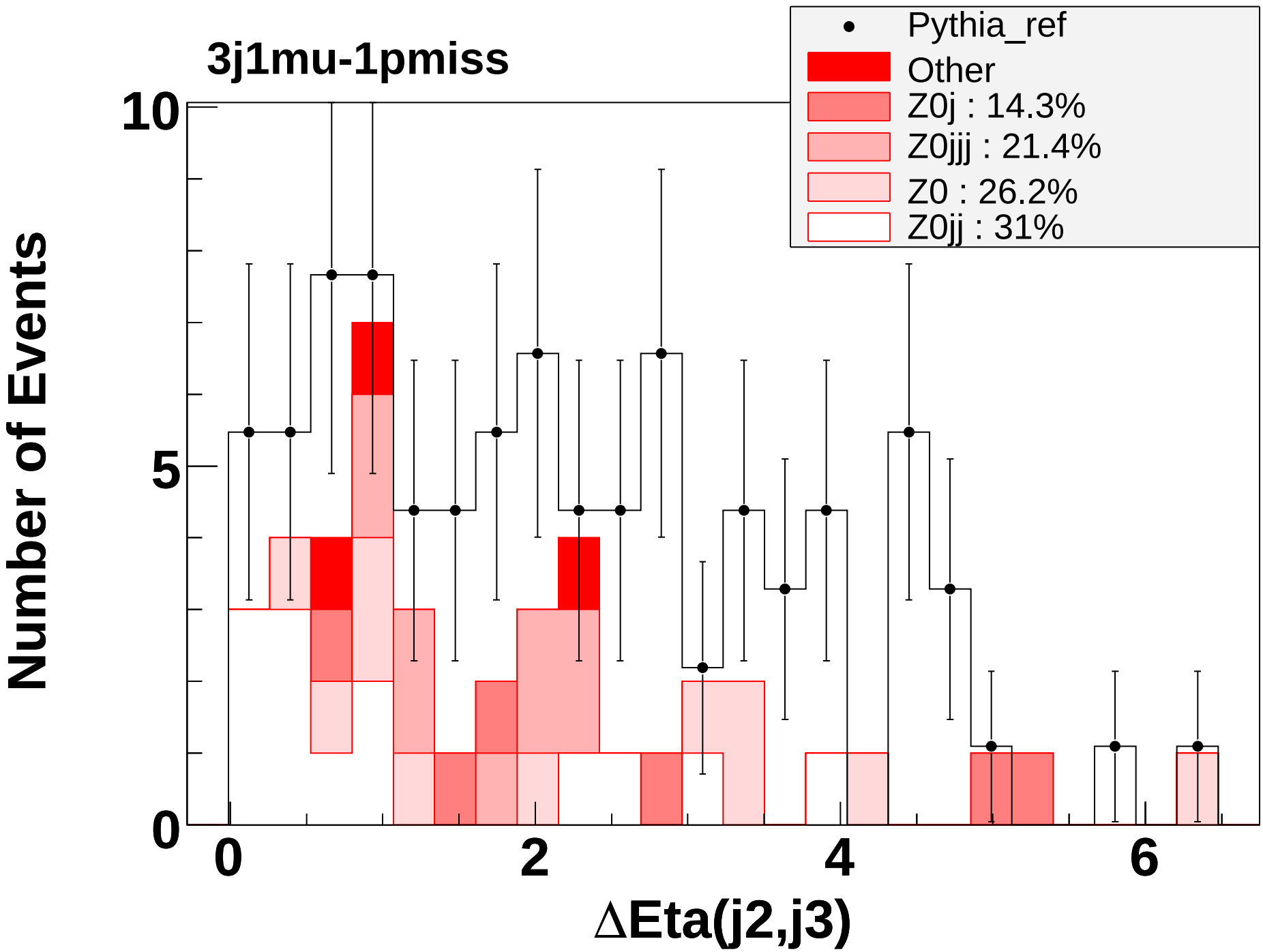

3j1mu-1pmiss
Pythia_ref
Other
Z0j : 14.3%
Z0jjj : 21.4%
Z0 : 26.2%
Z0jj : 31%
Number of Events
0
10
20
30
200
400
600
800
M(j2,j3) (GeV)

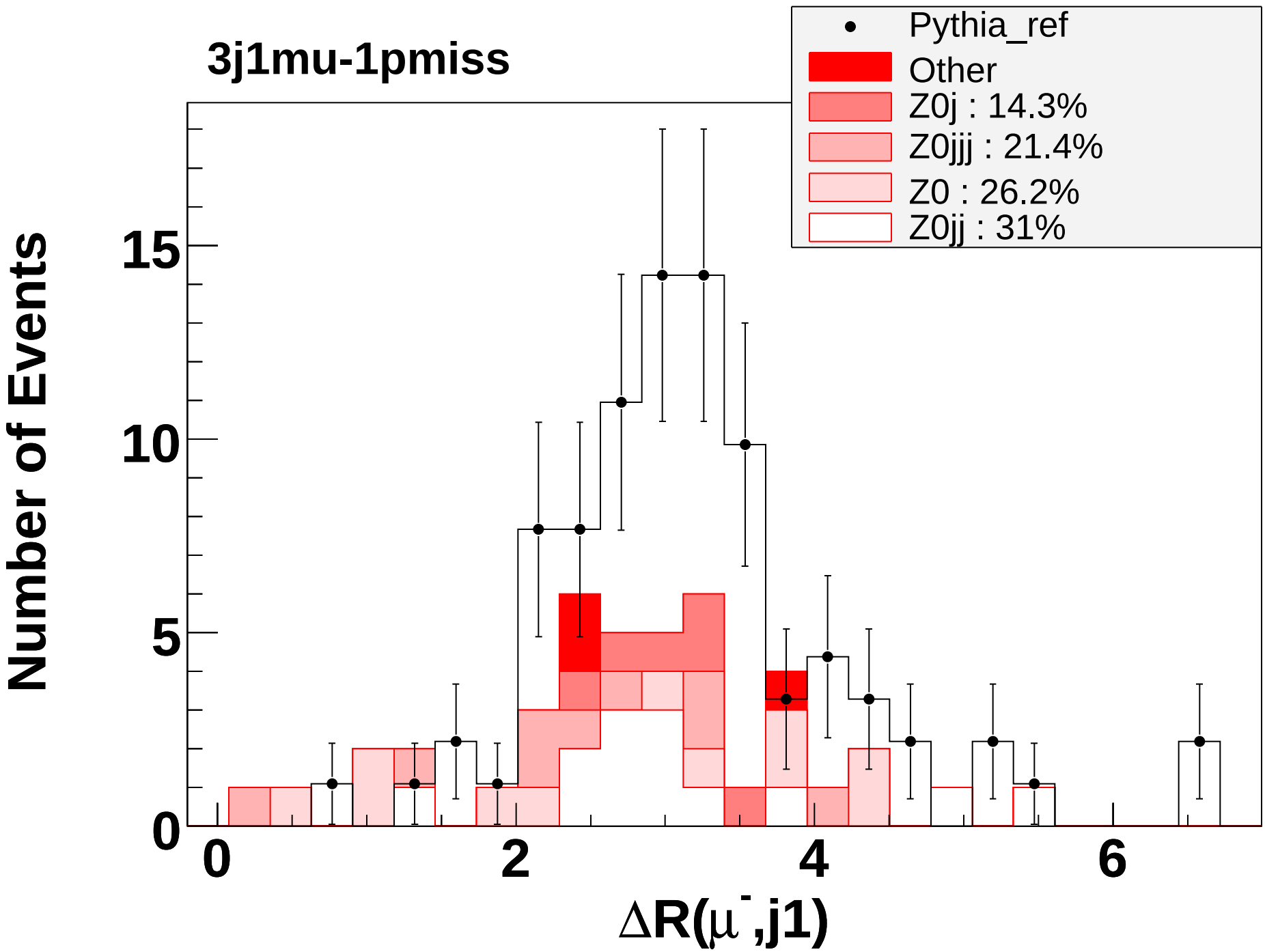

3j1mu-1pmiss
Pythia_ref
Other
Z0j : 14.3%
Z0jjj : 21.4%
Z0 : 26.2%
Z0jj : 31%
Number of Events
0
10
20
30
40
50
100
150
200
p_T (GeV)

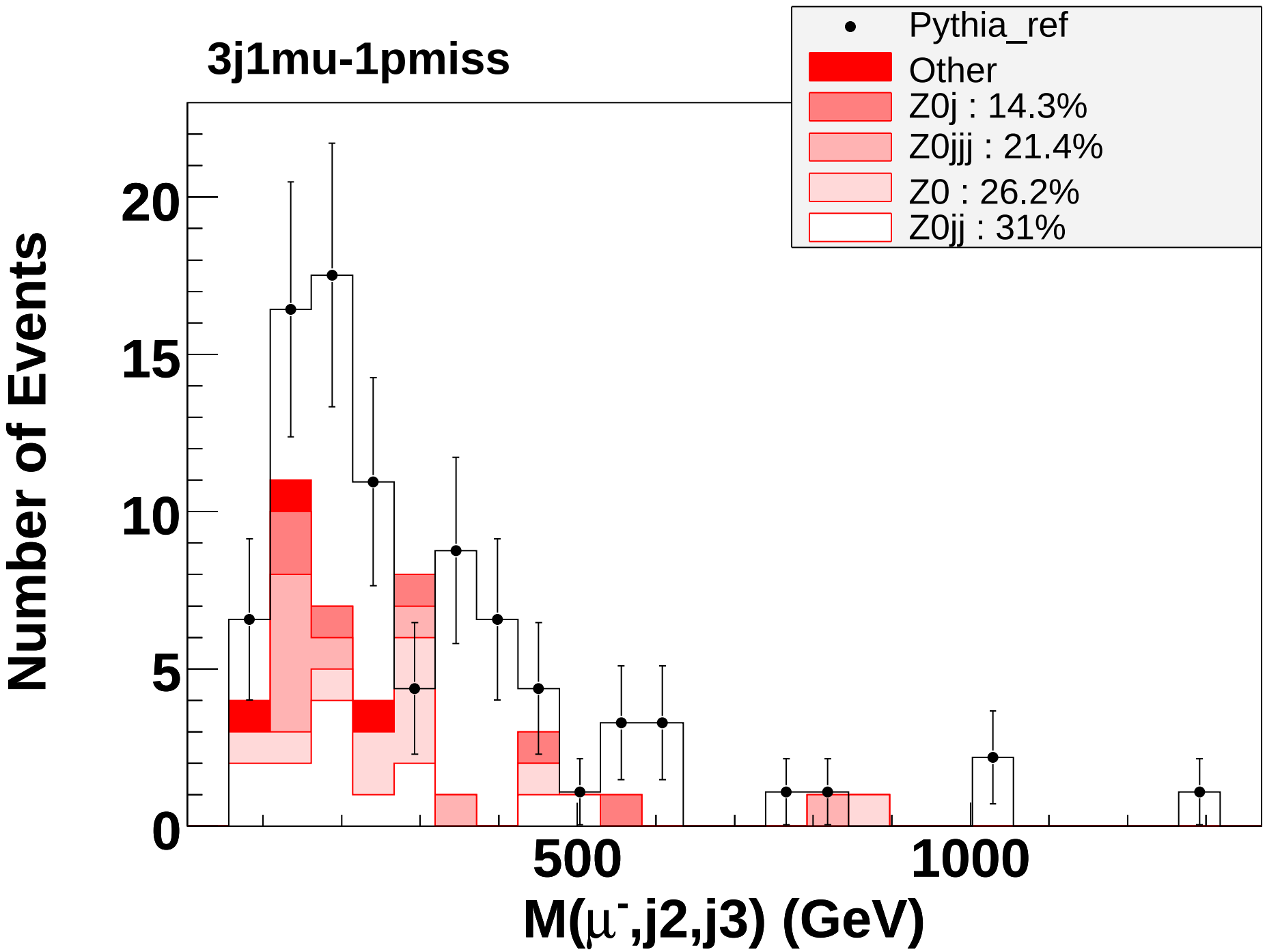

3j1mu-1pmiss
Pythia_ref
Other
Z0j : 14.3%
Z0jjj : 21.4%
Z0 : 26.2%
Z0jj : 31%
Number of Events
0
10
20
30
40
50
100
150
200
clusteredObjectsRecoil p_T (GeV)

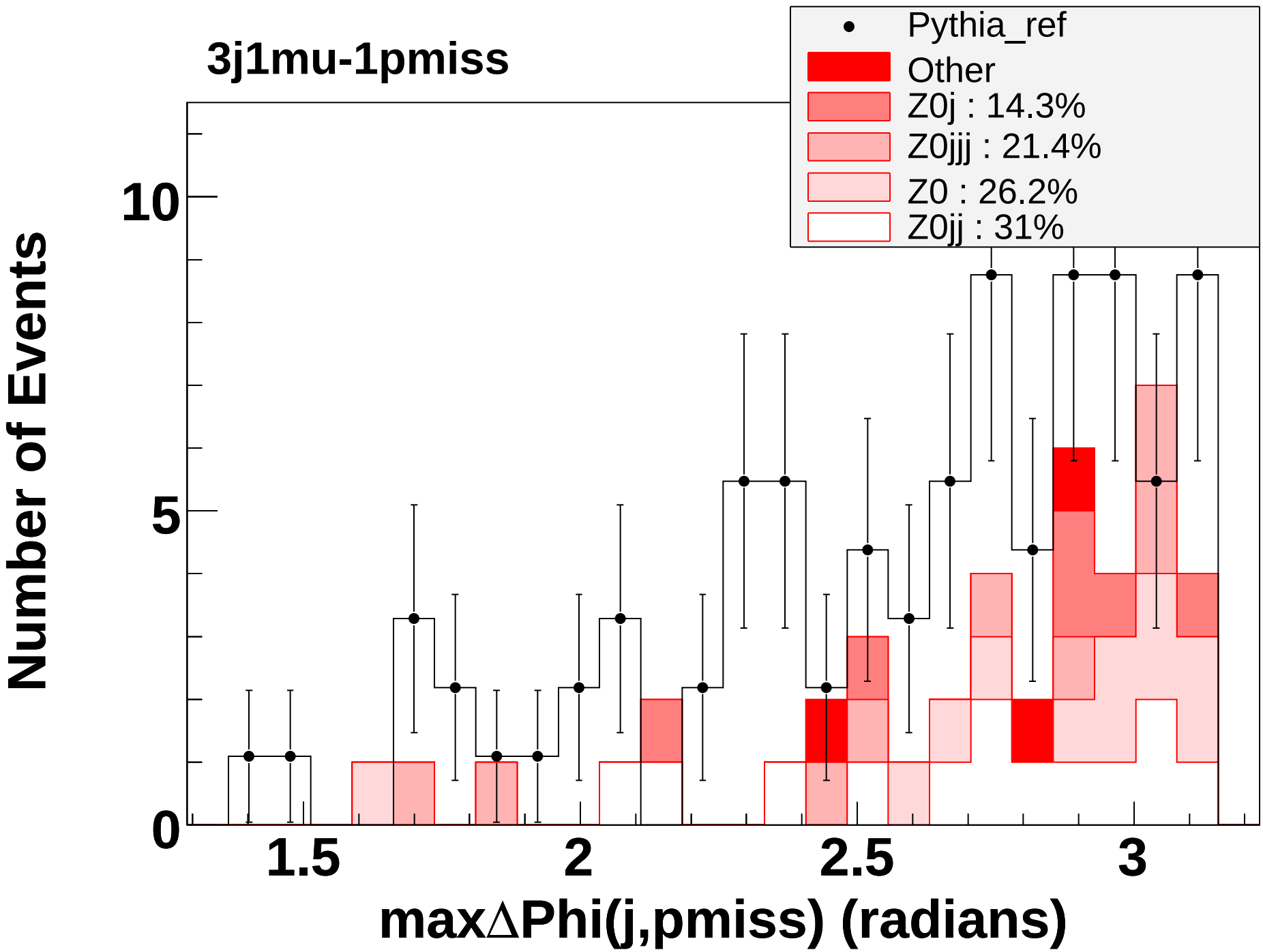

3j1mu-1pmiss
Pythia_ref
Other
Z0j : 14.3%
Z0jjj : 21.4%
Z0 : 26.2%
Z0jj : 31%
Number of Events
0
5
10
15
20
500
1000
1500
M(μ⁻,j1,j3) (GeV)

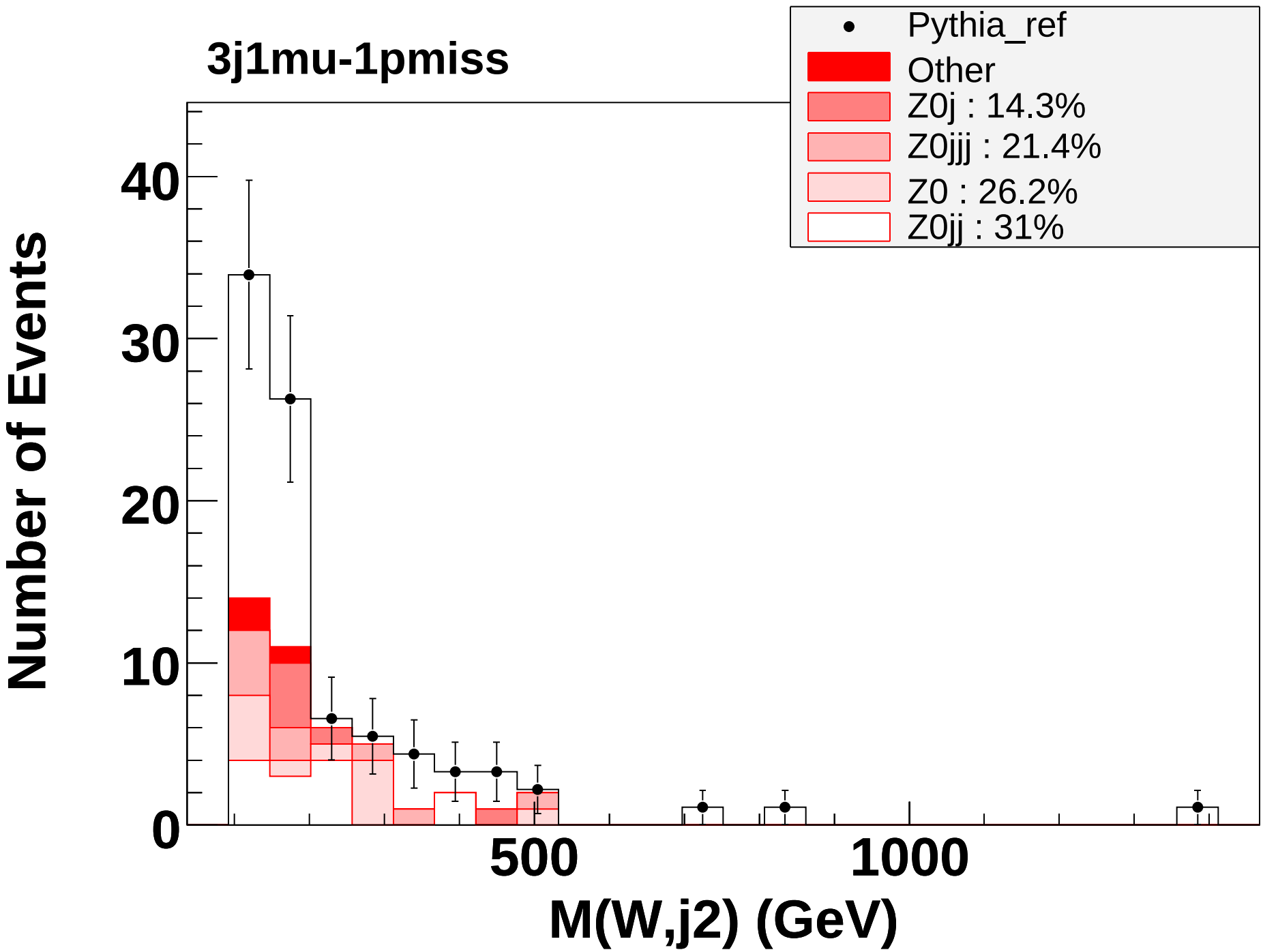

3j1mu-1pmiss
Pythia_ref
Other
Z0j : 14.3%
Z0jjj : 21.4%
Z0 : 26.2%
Z0jj : 31%
Number of Events
0
5
10
-2
0
2
pmiss ϕ (radians)

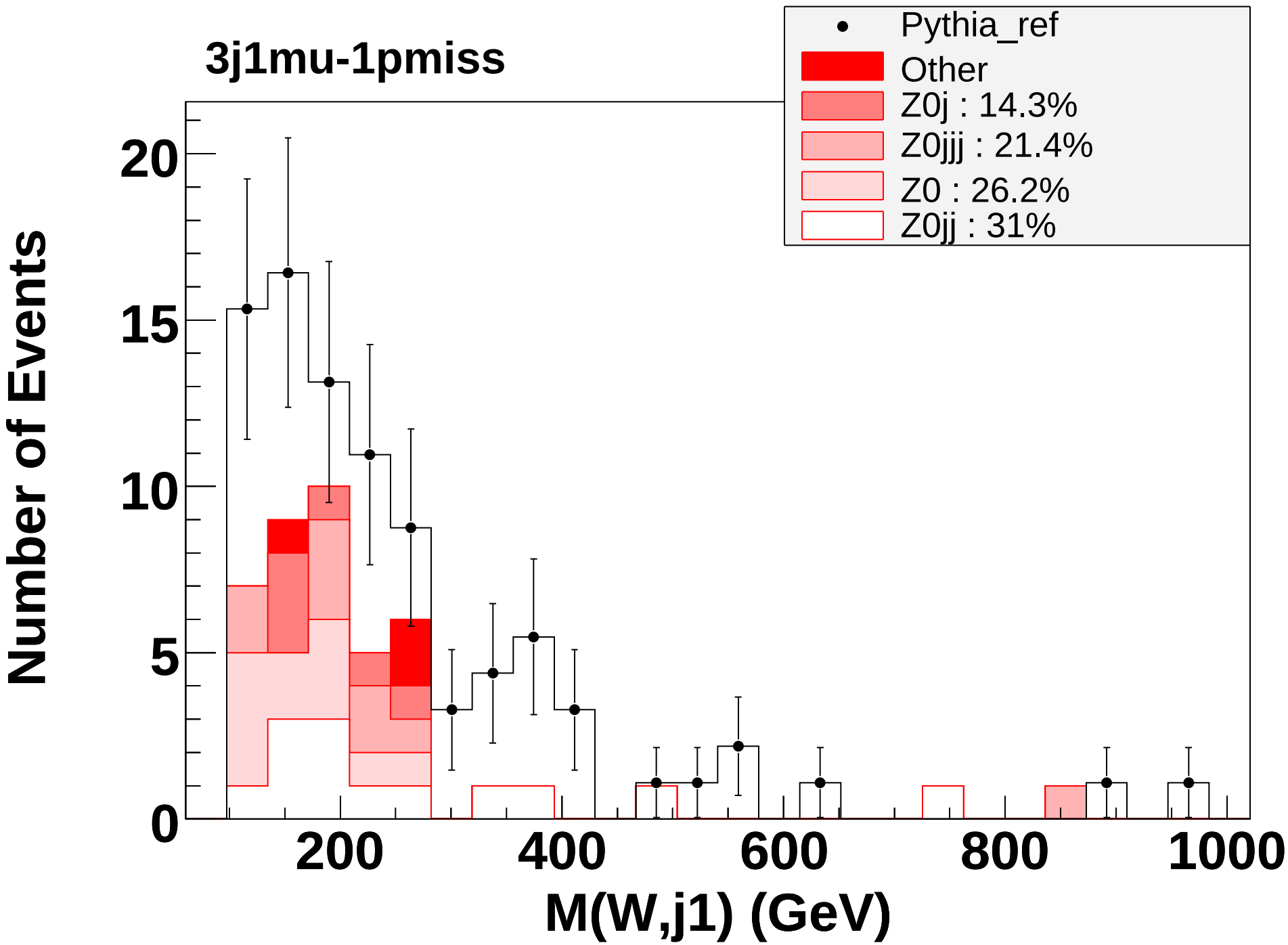

3j1mu-1pmiss
Pythia_ref
Other
Z0j : 14.3%
Z0jjj : 21.4%
Z0 : 26.2%
Z0jj : 31%
Number of Events
10
5
0
0
2
4
6
ΔEta(j2,j3)

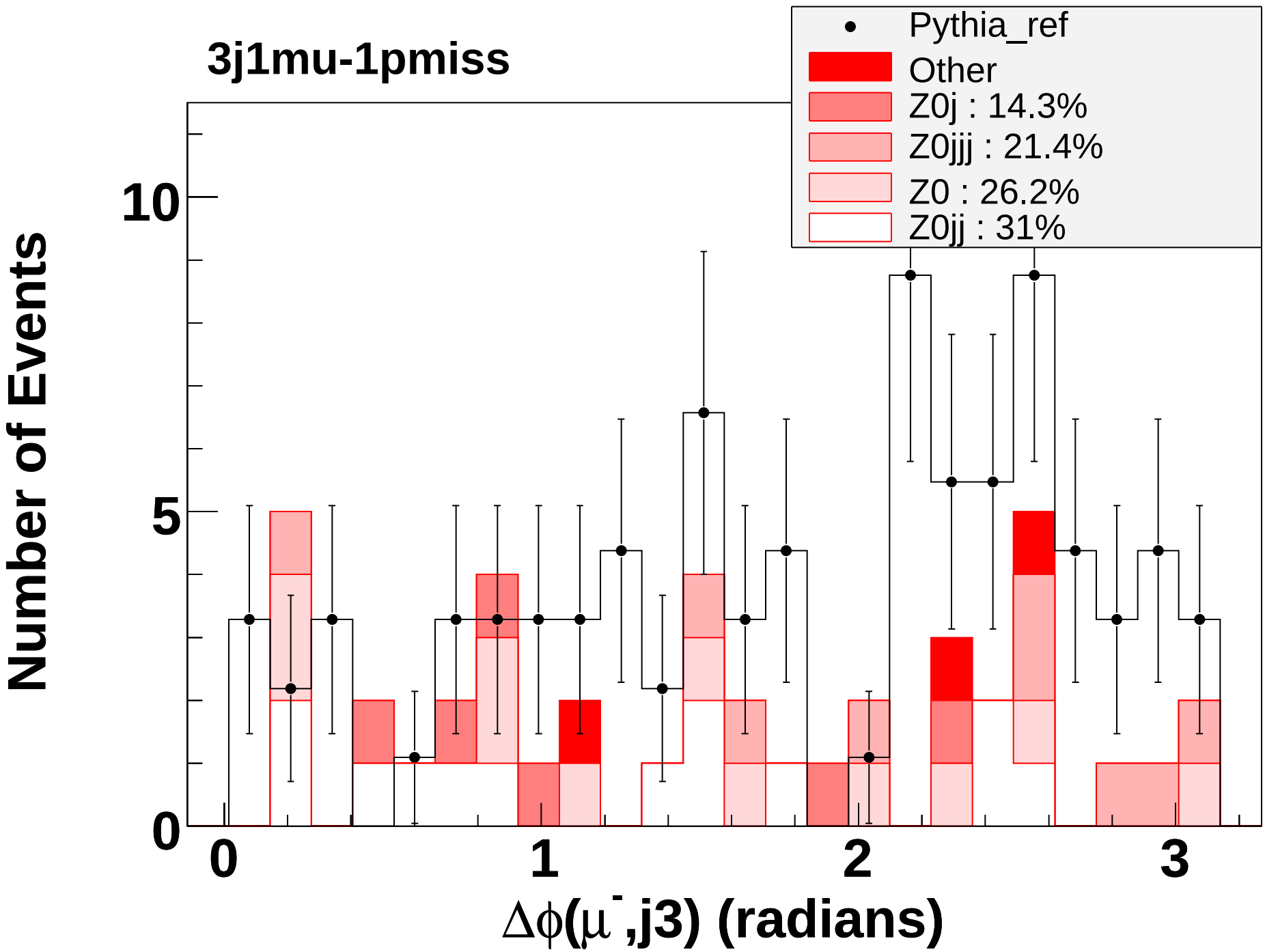

3j1mu-1pmiss
Pythia_ref
Other
Z0j : 14.3%
Z0jjj : 21.4%
Z0 : 26.2%
Z0jj : 31%
Number of Events
0
5
10
15
0
2
4
6
ΔR(μ⁻,j1)

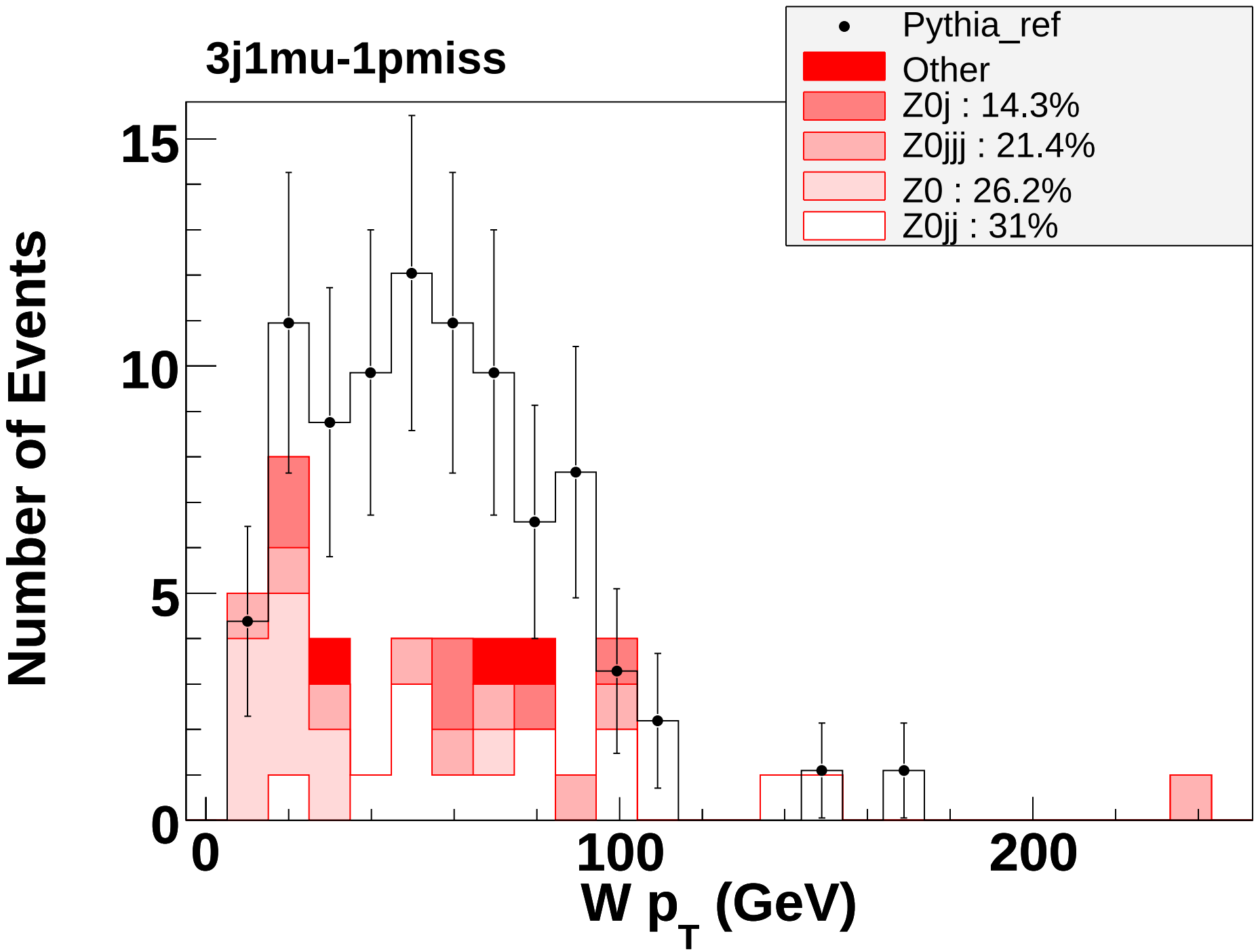

3j1mu-1pmiss
Pythia_ref
Other
Z0j : 14.3%
Z0jjj : 21.4%
Z0 : 26.2%
Z0jj : 31%
Number of Events
0
5
10
15
20
500
1000
M(μ⁻,j2,j3) (GeV)

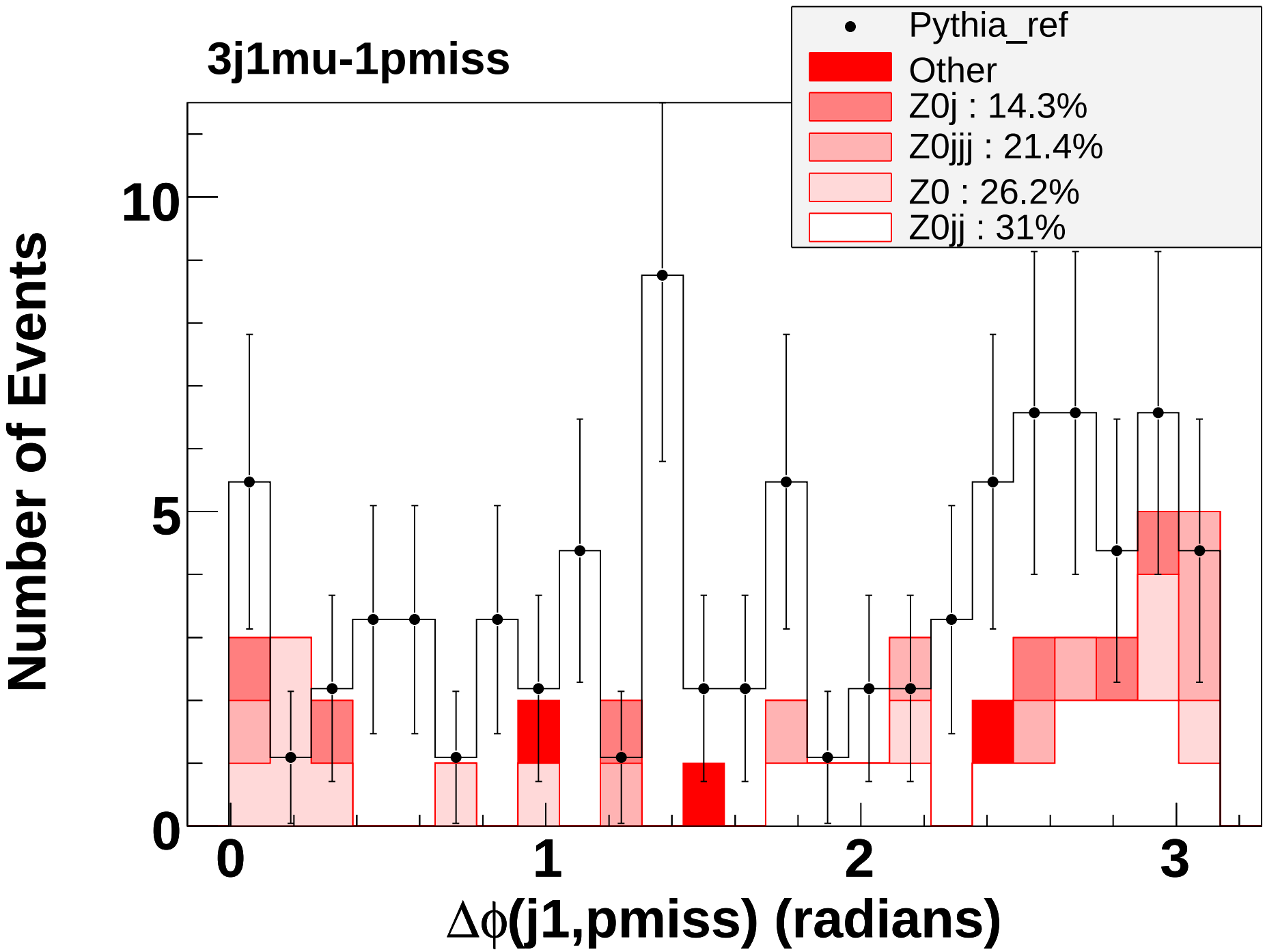

3j1mu-1pmiss
Pythia_ref
Other
Z0j : 14.3%
Z0jjj : 21.4%
Z0 : 26.2%
Z0jj : 31%
Number of Events
0
5
10
1.5
2
2.5
3
maxΔPhi(j,pmiss) (radians)

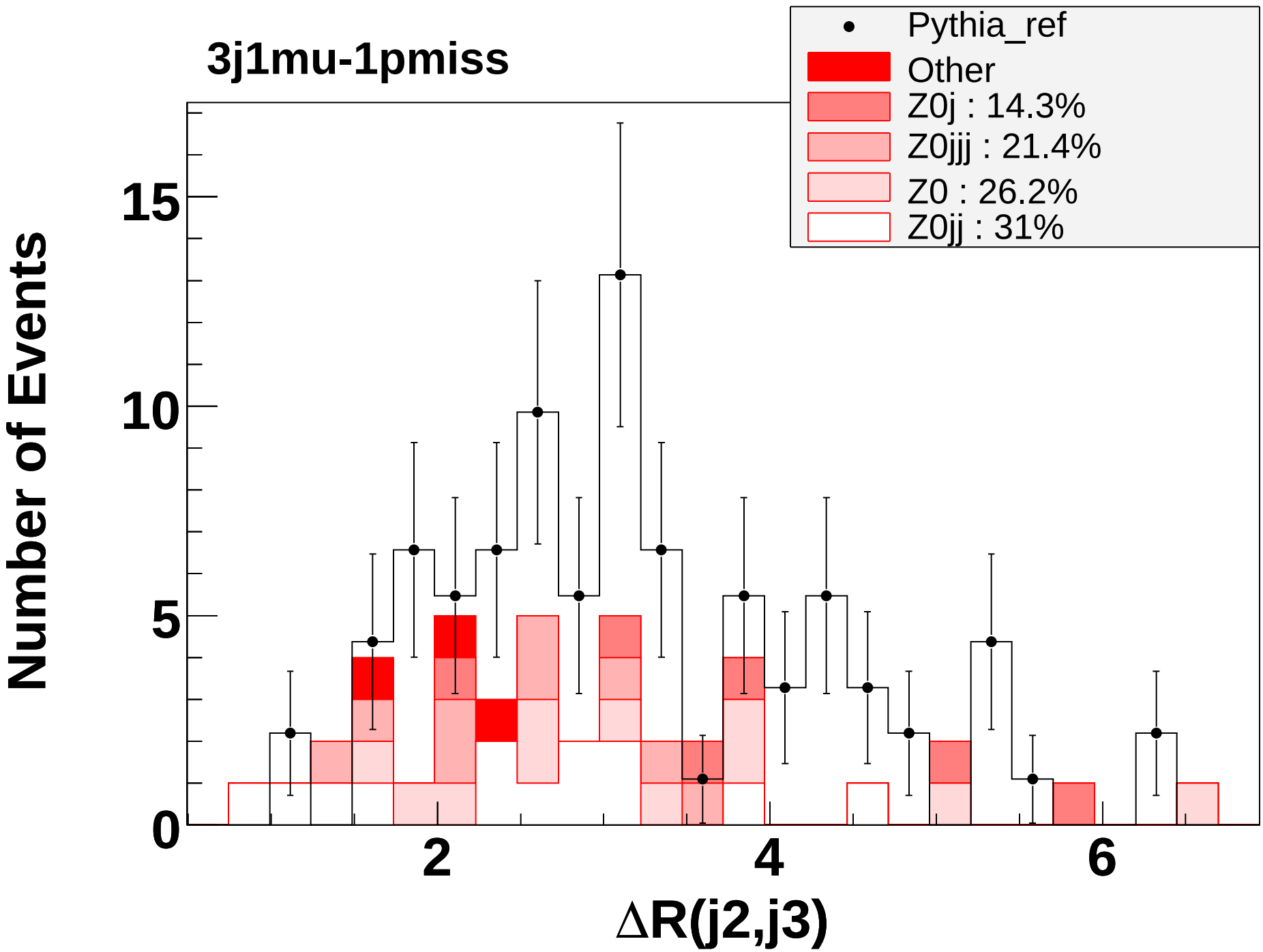

3j1mu-1pmiss
Pythia_ref
Other
Z0j : 14.3%
Z0jjj : 21.4%
Z0 : 26.2%
Z0jj : 31%
Number of Events
0
10
20
30
40
500
1000
M(W,j2) (GeV)

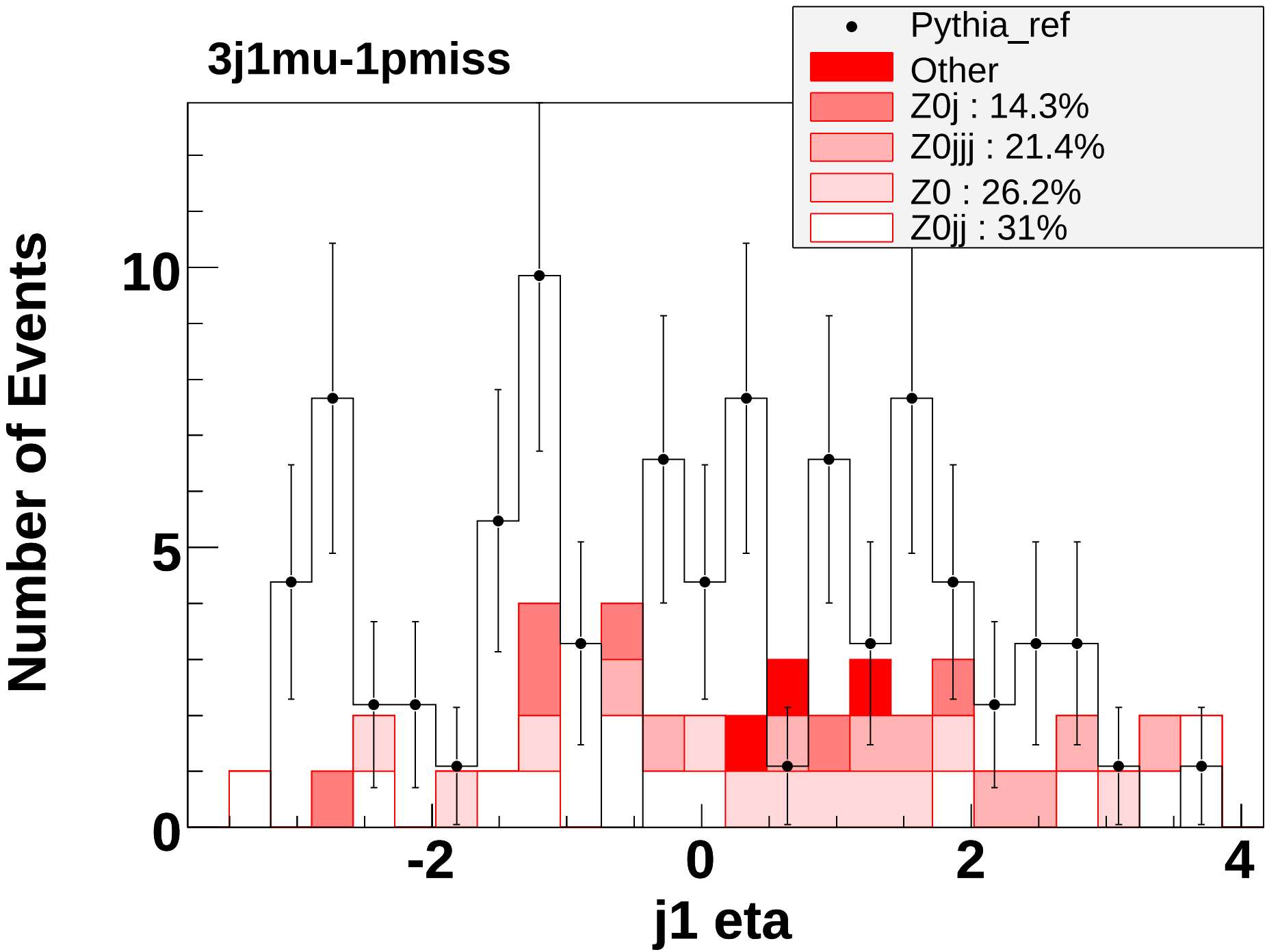

3j1mu-1pmiss
Pythia_ref
Other
Z0j : 14.3%
Z0jjj : 21.4%
Z0 : 26.2%
Z0jj : 31%
Number of Events
0
5
10
15
20
200
400
600
800
1000
M(W,j1) (GeV)

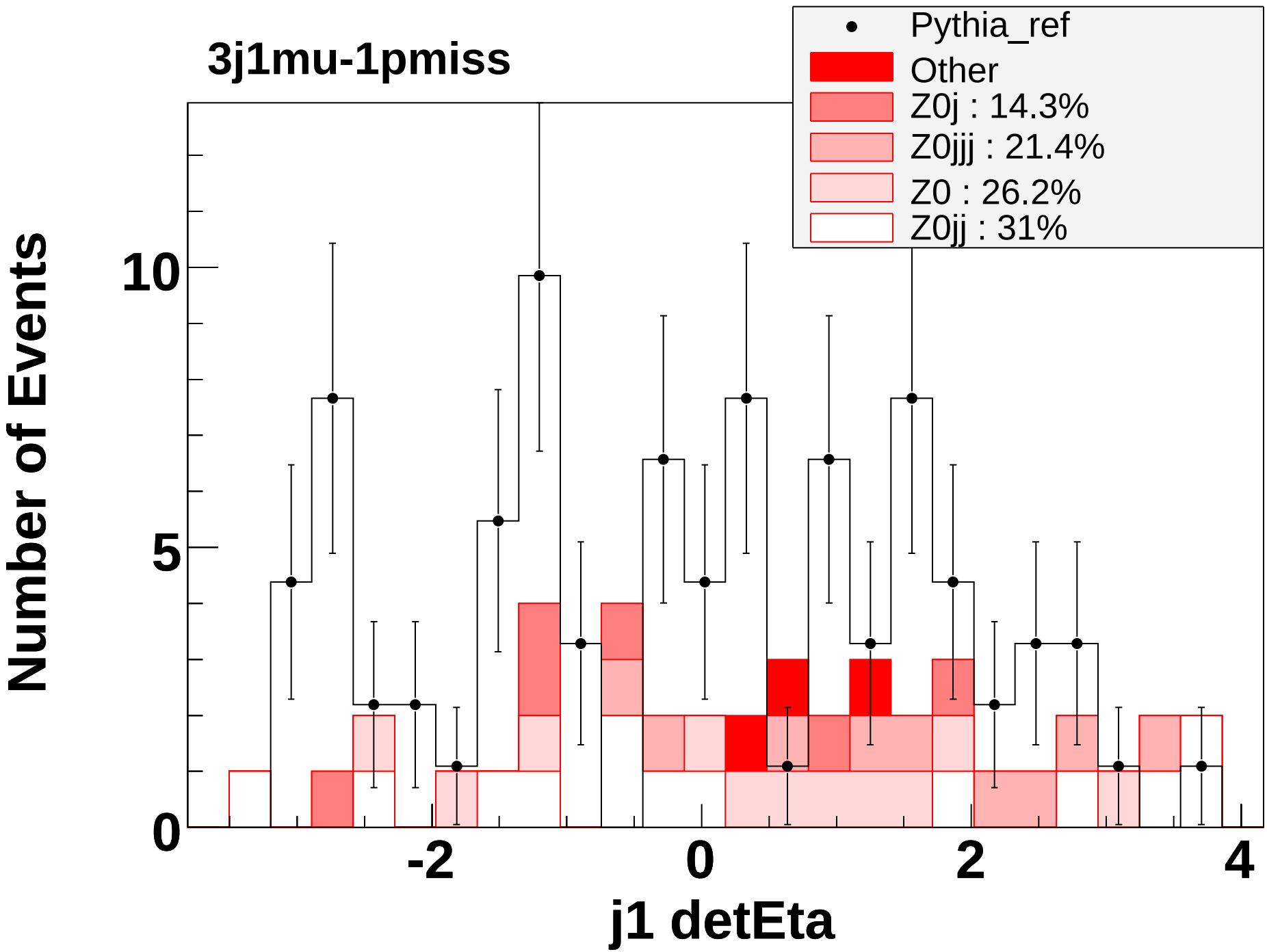

3j1mu-1pmiss
Pythia_ref
Other
Z0j : 14.3%
Z0jjj : 21.4%
Z0 : 26.2%
Z0jj : 31%
Number of Events
0
5
10
0
1
2
3
Δφ(μ⁻,j3) (radians)

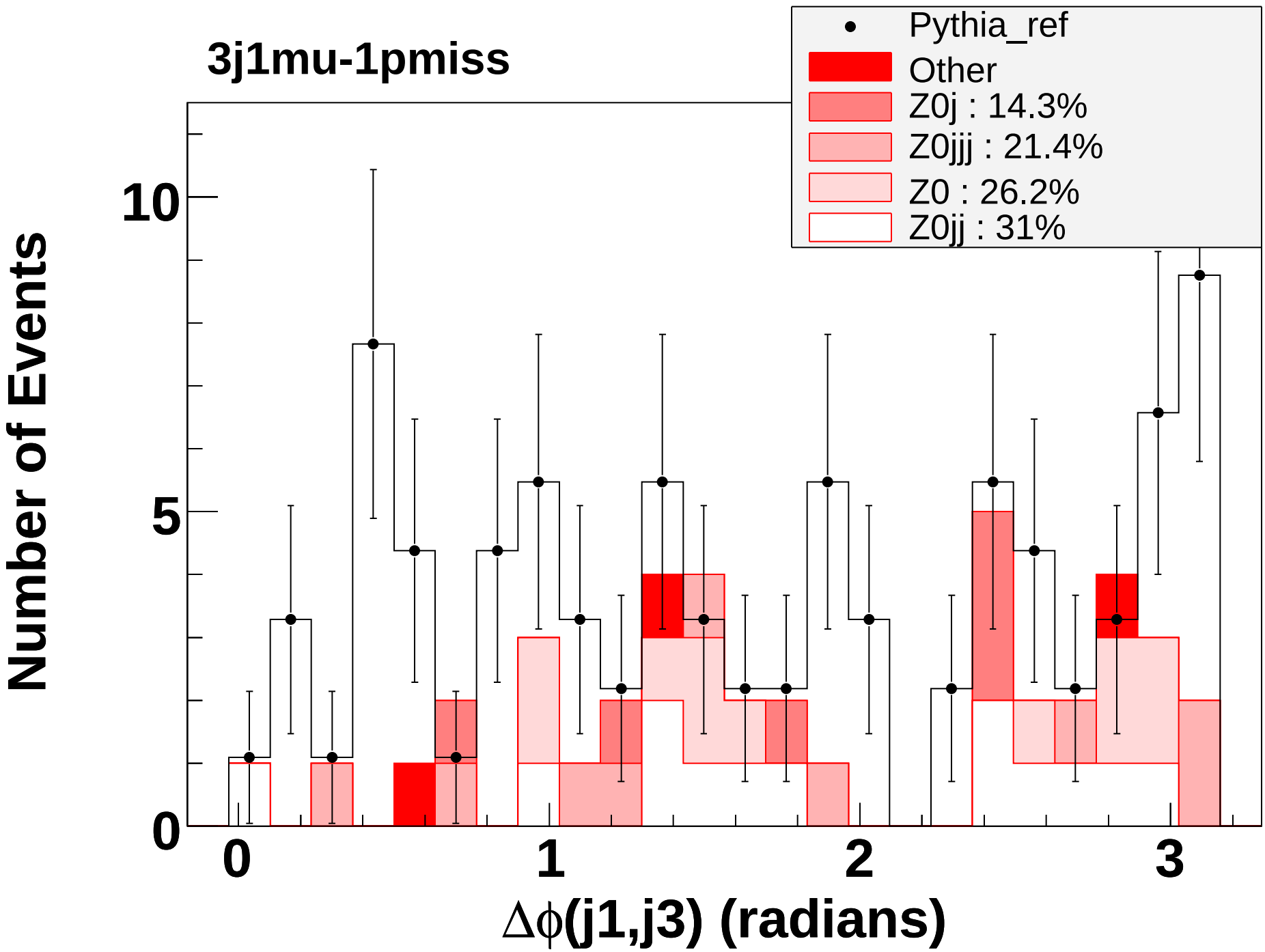

3j1mu-1pmiss
Pythia_ref
Other
Z0j : 14.3%
Z0jjj : 21.4%
Z0 : 26.2%
Z0jj : 31%
Number of Events
0
5
10
15
0
100
200
W p_T (GeV)

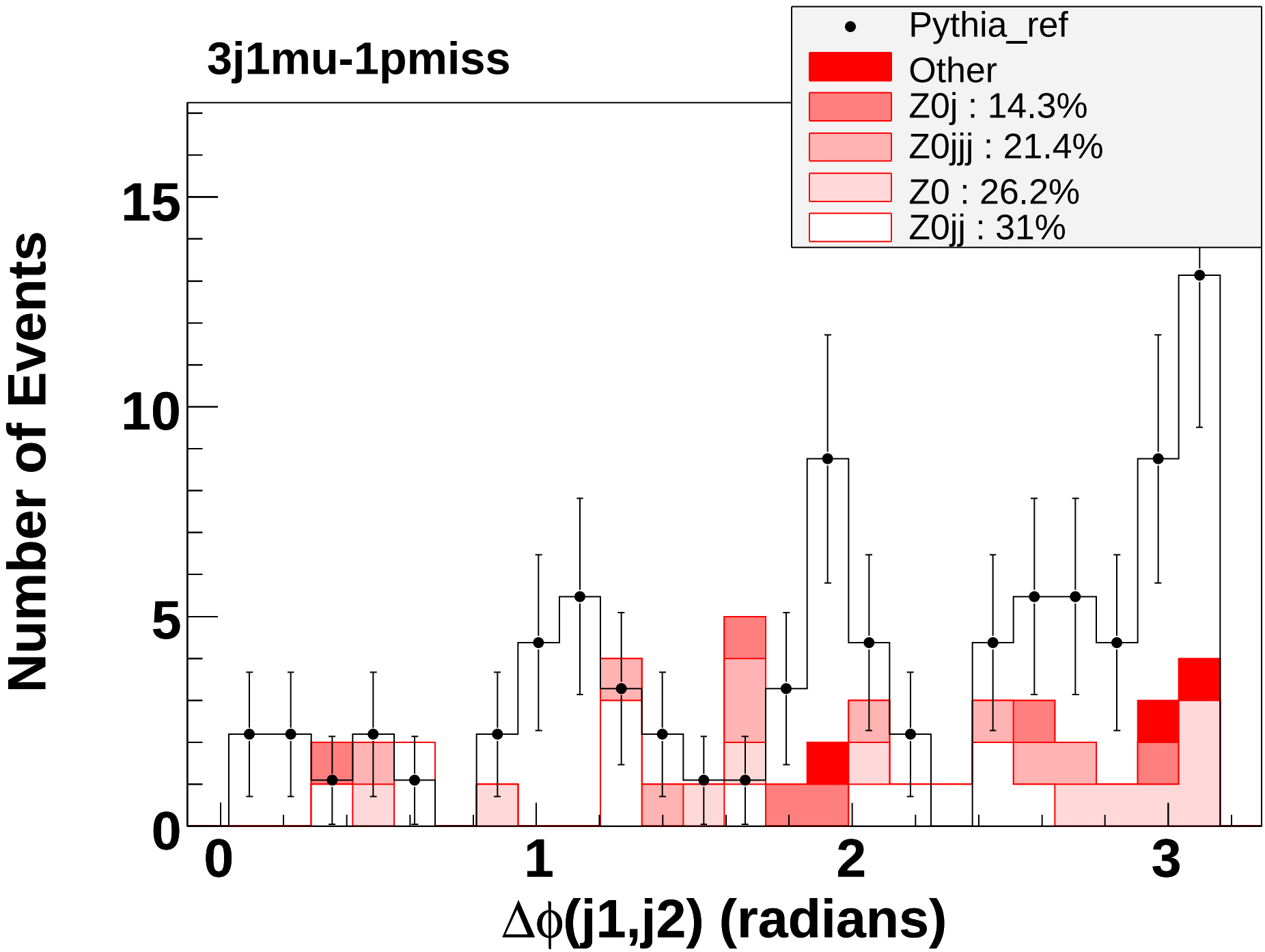

3j1mu-1pmiss
Pythia_ref
Other
Z0j : 14.3%
Z0jjj : 21.4%
Z0 : 26.2%
Z0jj : 31%
Number of Events
0
5
10
0
1
2
3
Δϕ(j1,pmiss) (radians)

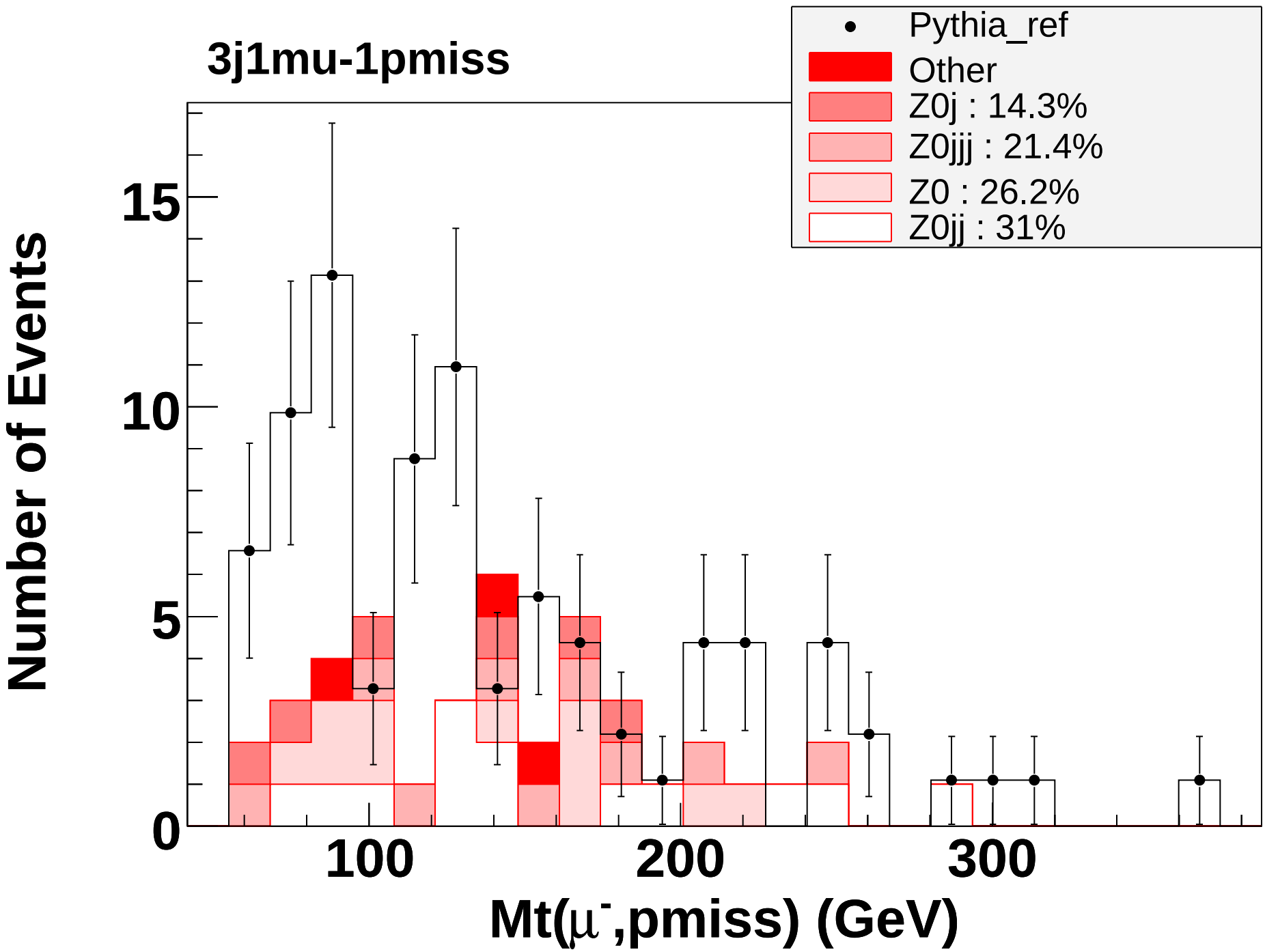

3j1mu-1pmiss
Pythia_ref
Other
Z0j : 14.3%
Z0jjj : 21.4%
Z0 : 26.2%
Z0jj : 31%
Number of Events
0
5
10
15
2
4
6
ΔR(j2,j3)

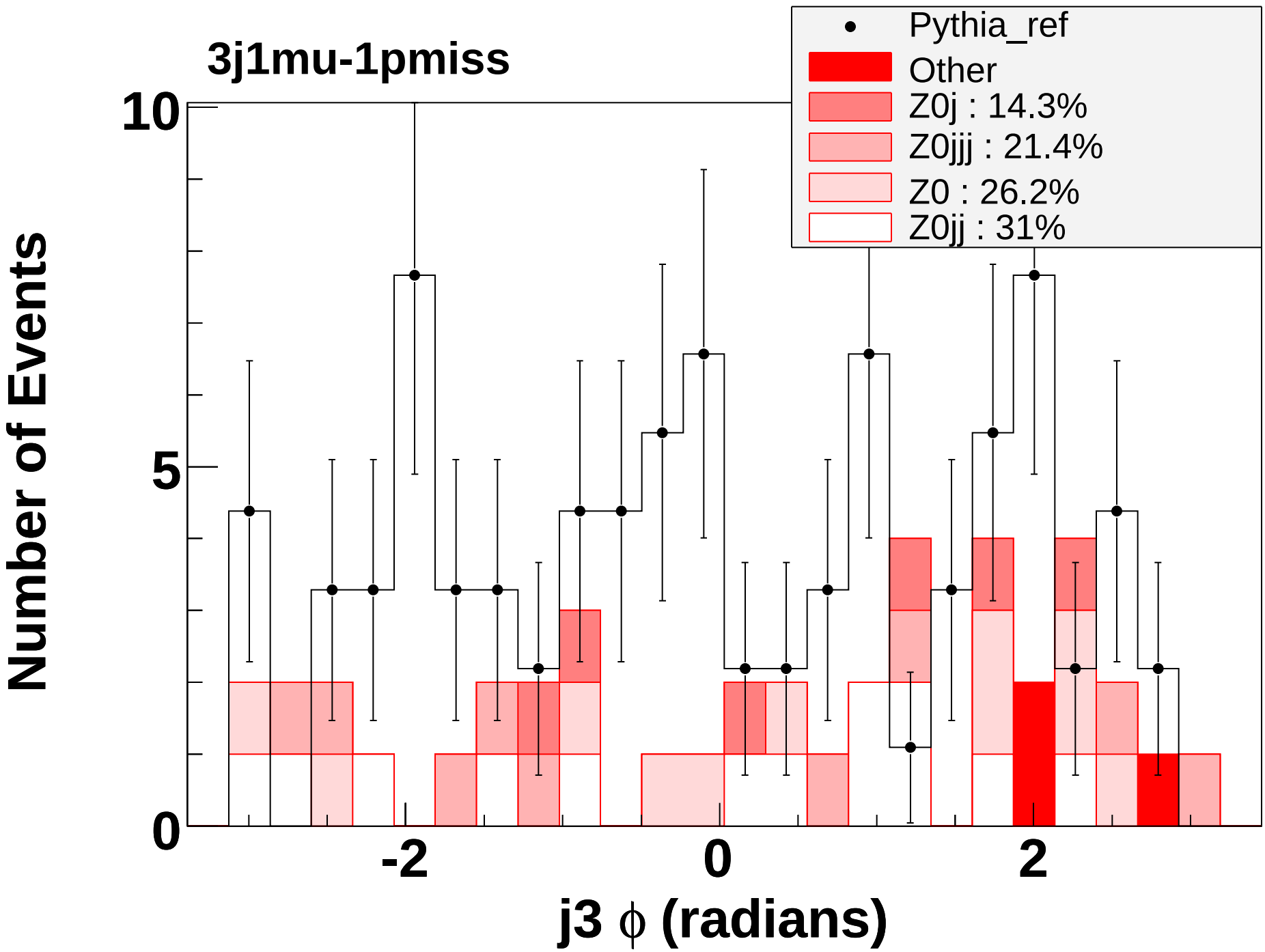

3j1mu-1pmiss
Pythia_ref
Other
Z0j : 14.3%
Z0jjj : 21.4%
Z0 : 26.2%
Z0jj : 31%
Number of Events
0
5
10
-2
0
2
4
j1 eta

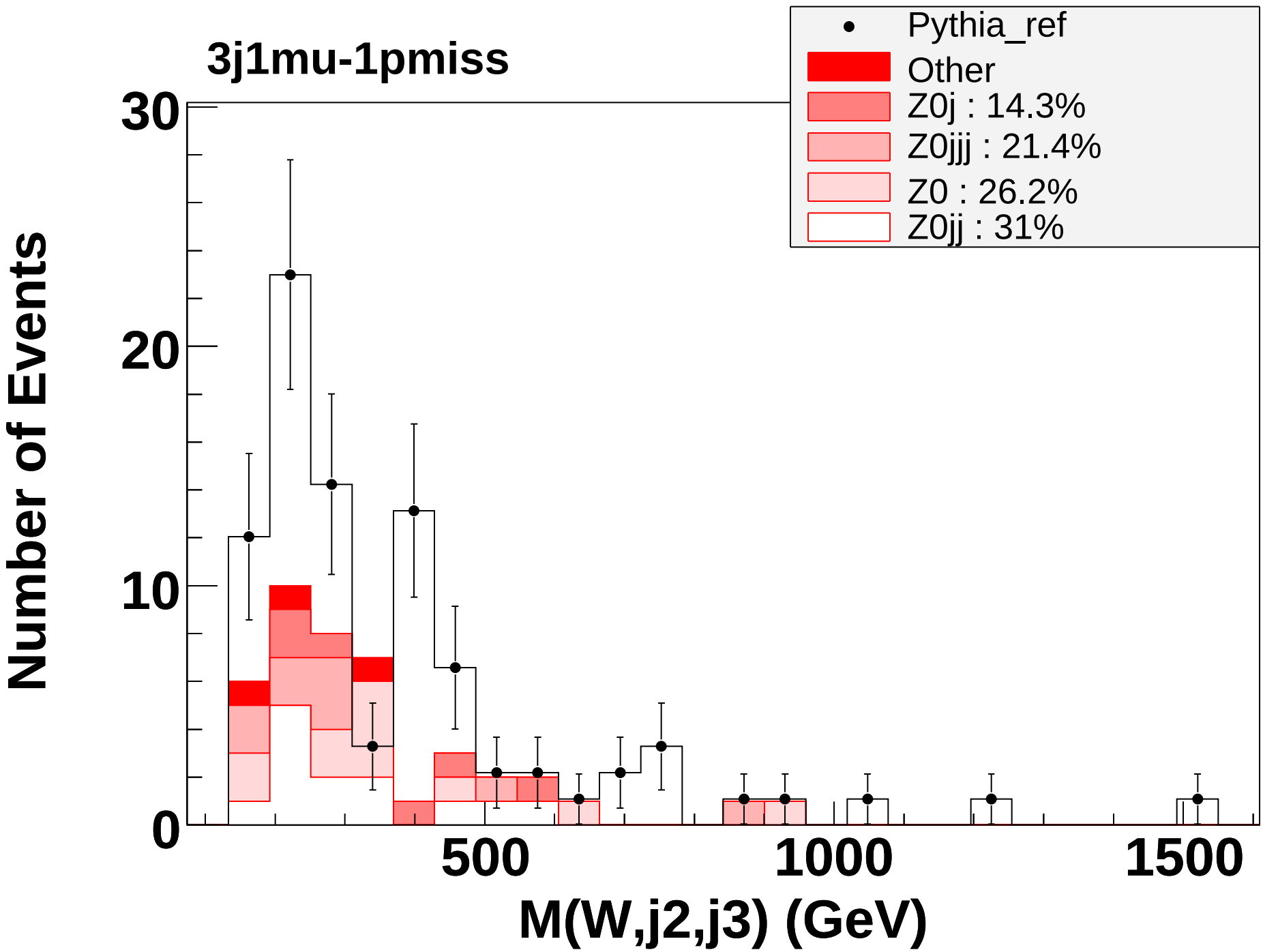

3j1mu-1pmiss
Pythia_ref
Other
Z0j : 14.3%
Z0jjj : 21.4%
Z0 : 26.2%
Z0jj : 31%
Number of Events
0
5
10
-2
0
2
4
j1 detEta

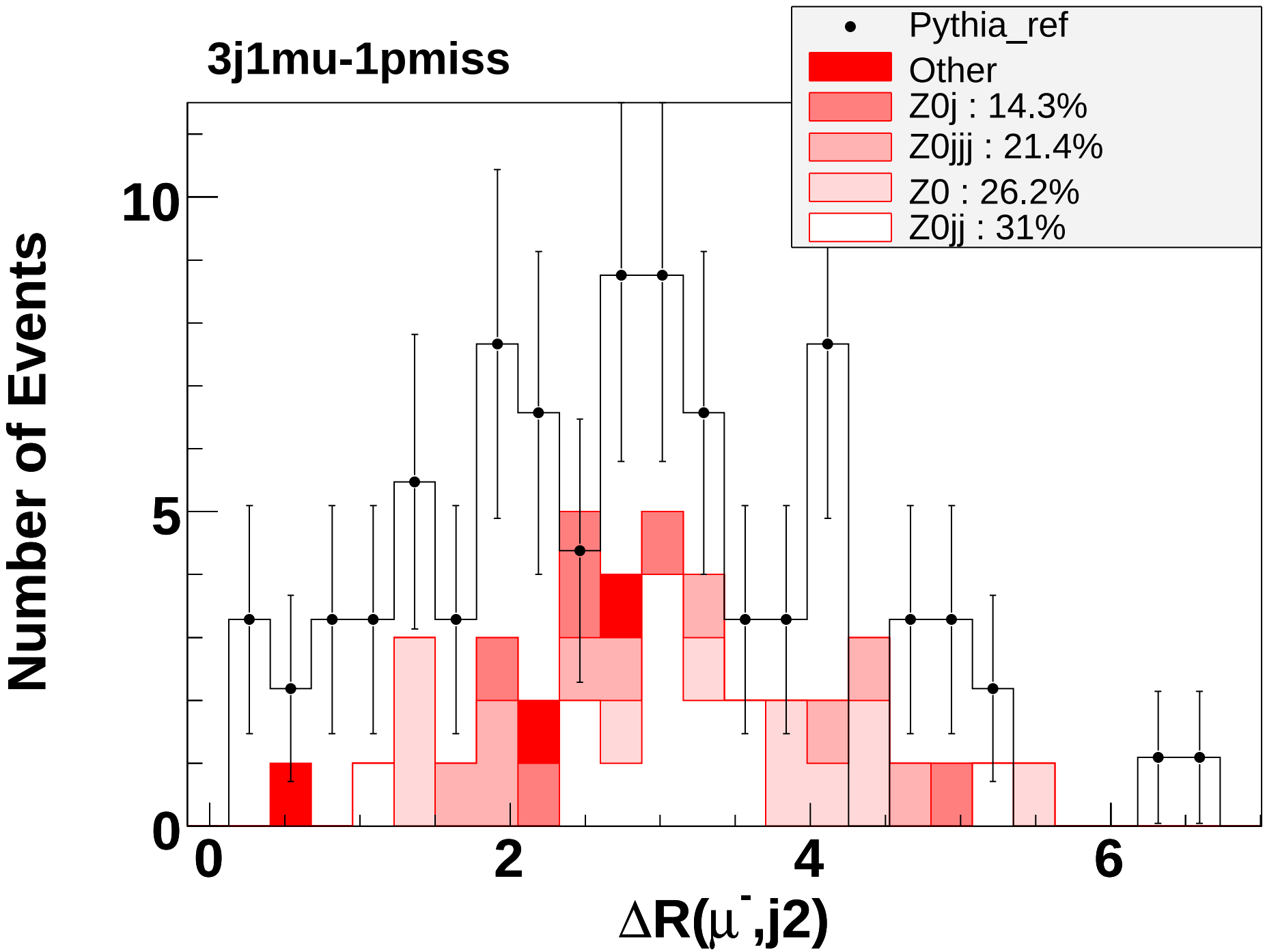

3j1mu-1pmiss
Pythia_ref
Other
Z0j : 14.3%
Z0jjj : 21.4%
Z0 : 26.2%
Z0jj : 31%
Number of Events
0
5
10
0
1
2
3
Δϕ(j1,j3) (radians)

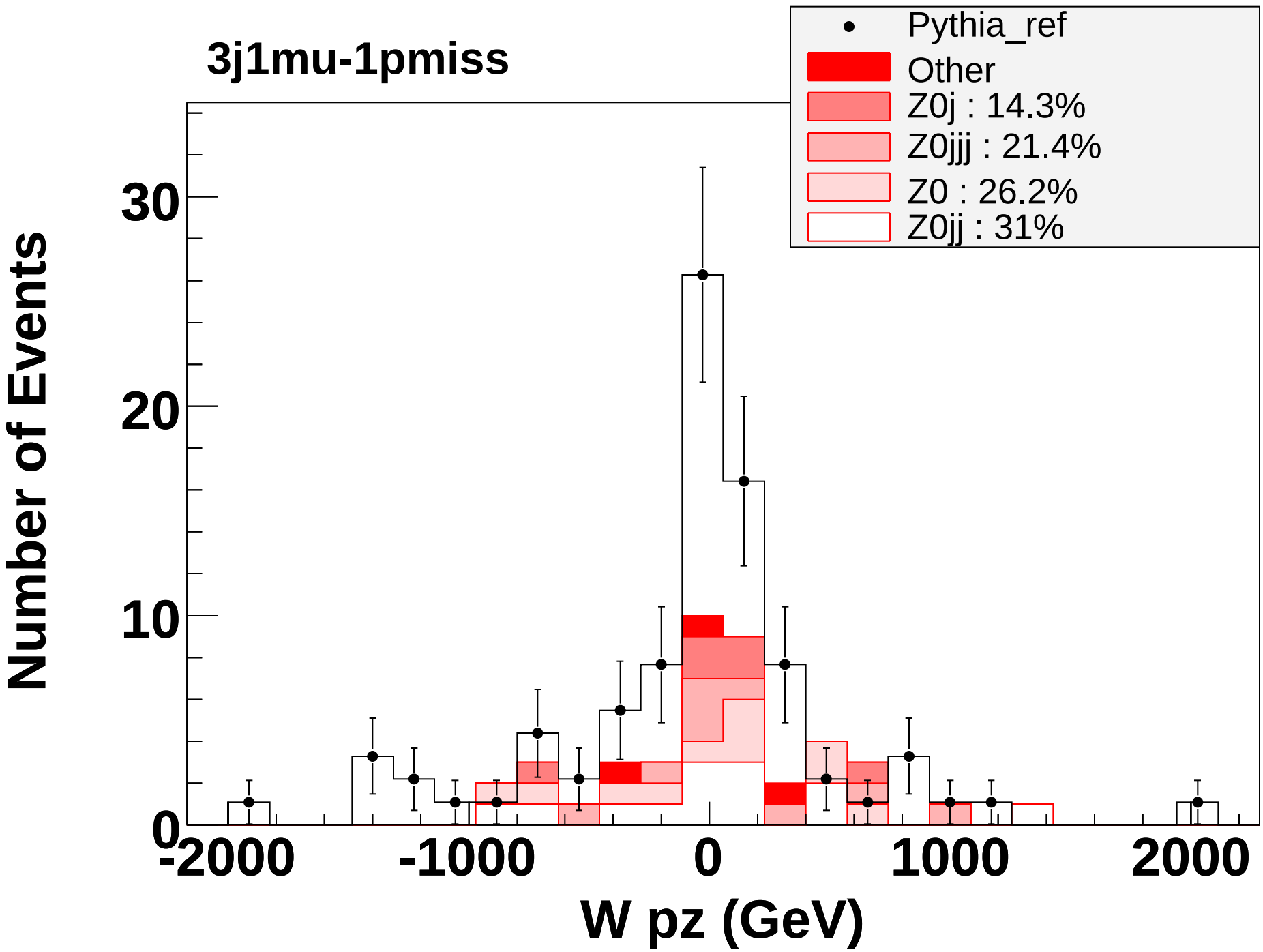

3j1mu-1pmiss
Pythia_ref
Other
Z0j : 14.3%
Z0jjj : 21.4%
Z0 : 26.2%
Z0jj : 31%
Number of Events
0
5
10
15
0
1
2
3
Δϕ(j1,j2) (radians)

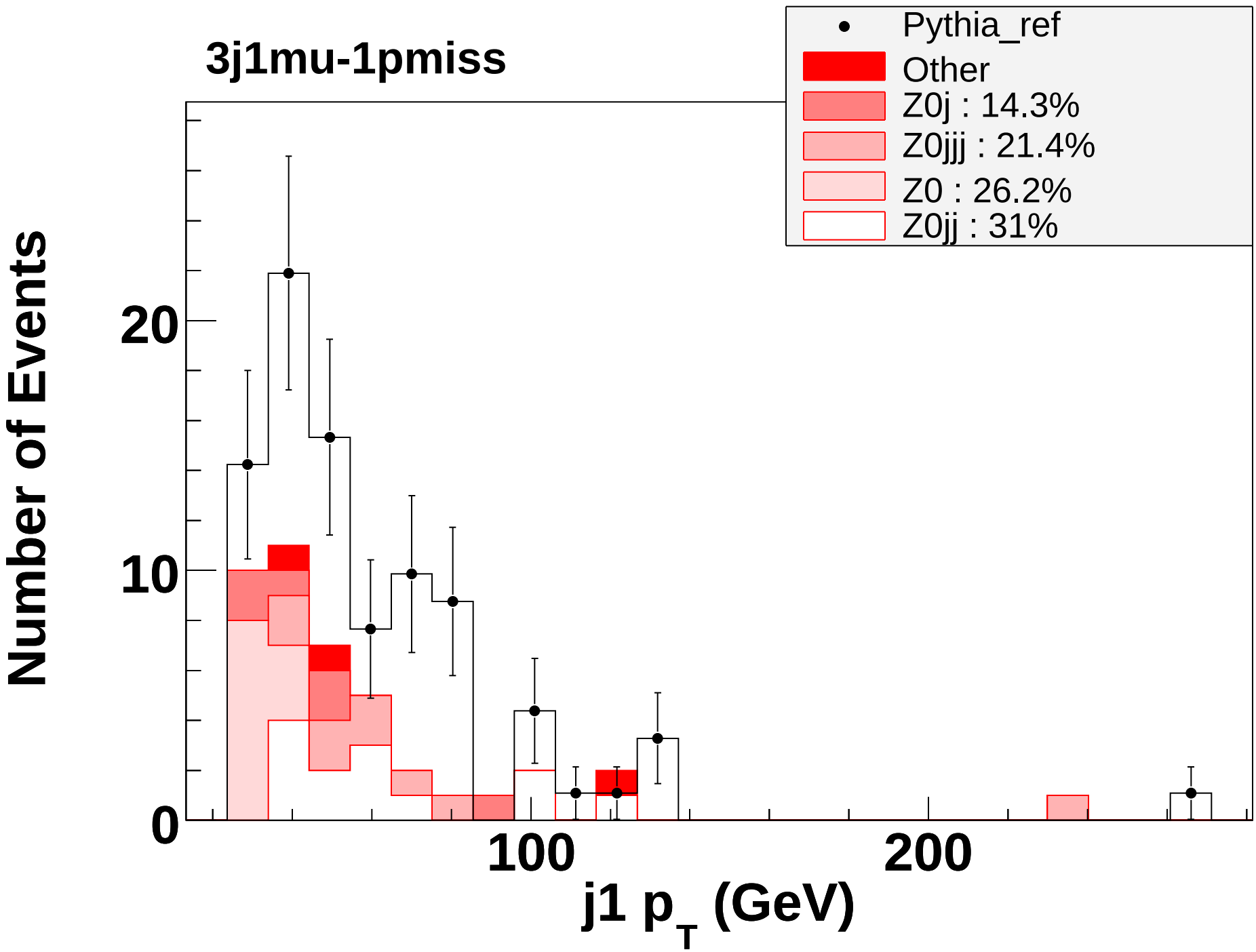

3j1mu-1pmiss
Pythia_ref
Other
Z0j : 14.3%
Z0jjj : 21.4%
Z0 : 26.2%
Z0jj : 31%
Number of Events
0
5
10
15
100
200
300
Mt(μ⁻,pmiss) (GeV)

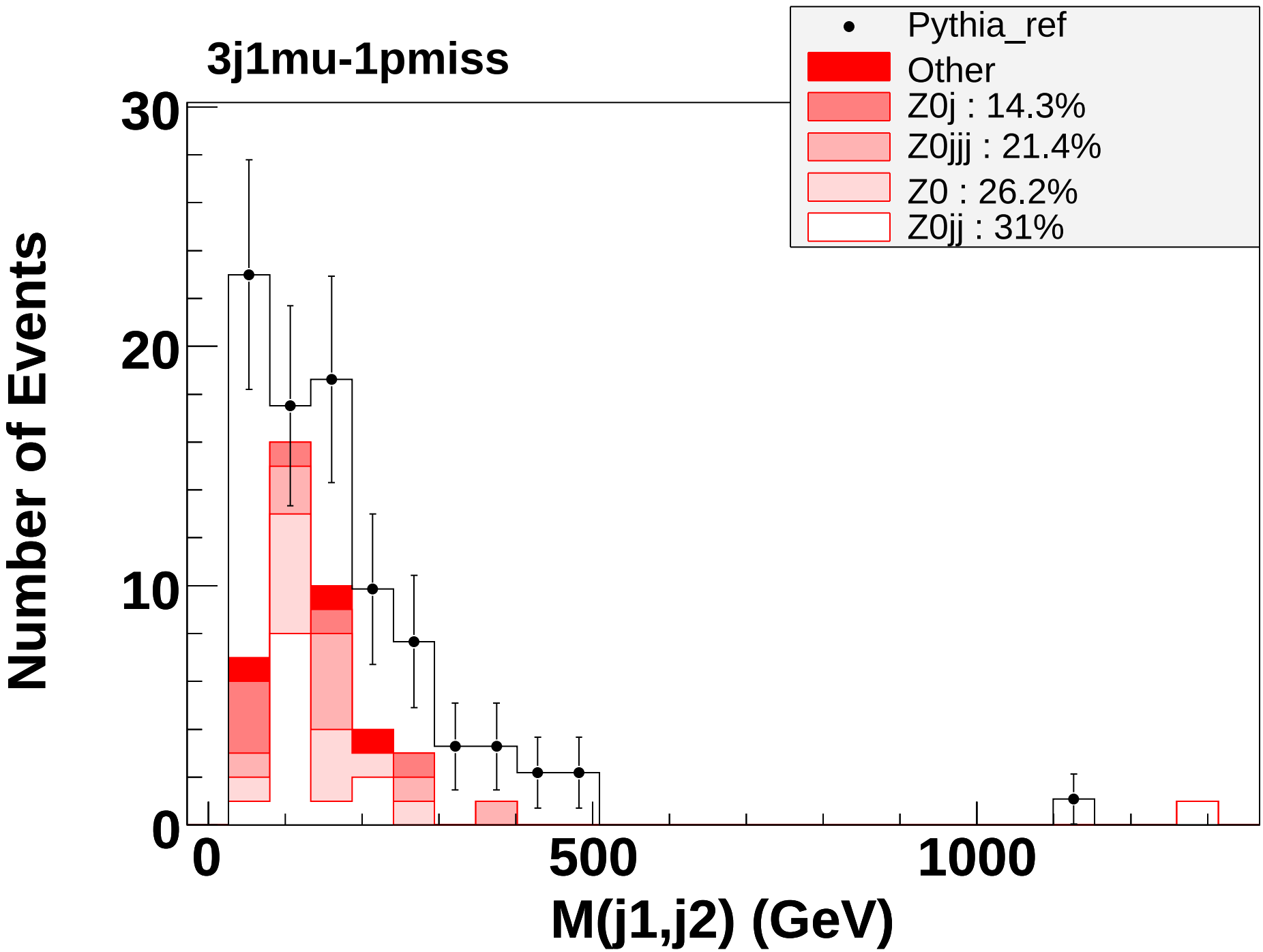

3j1mu-1pmiss
Pythia_ref
Other
Z0j : 14.3%
Z0jjj : 21.4%
Z0 : 26.2%
Z0jj : 31%
Number of Events
10
5
0
-2
0
2
j3 ϕ (radians)

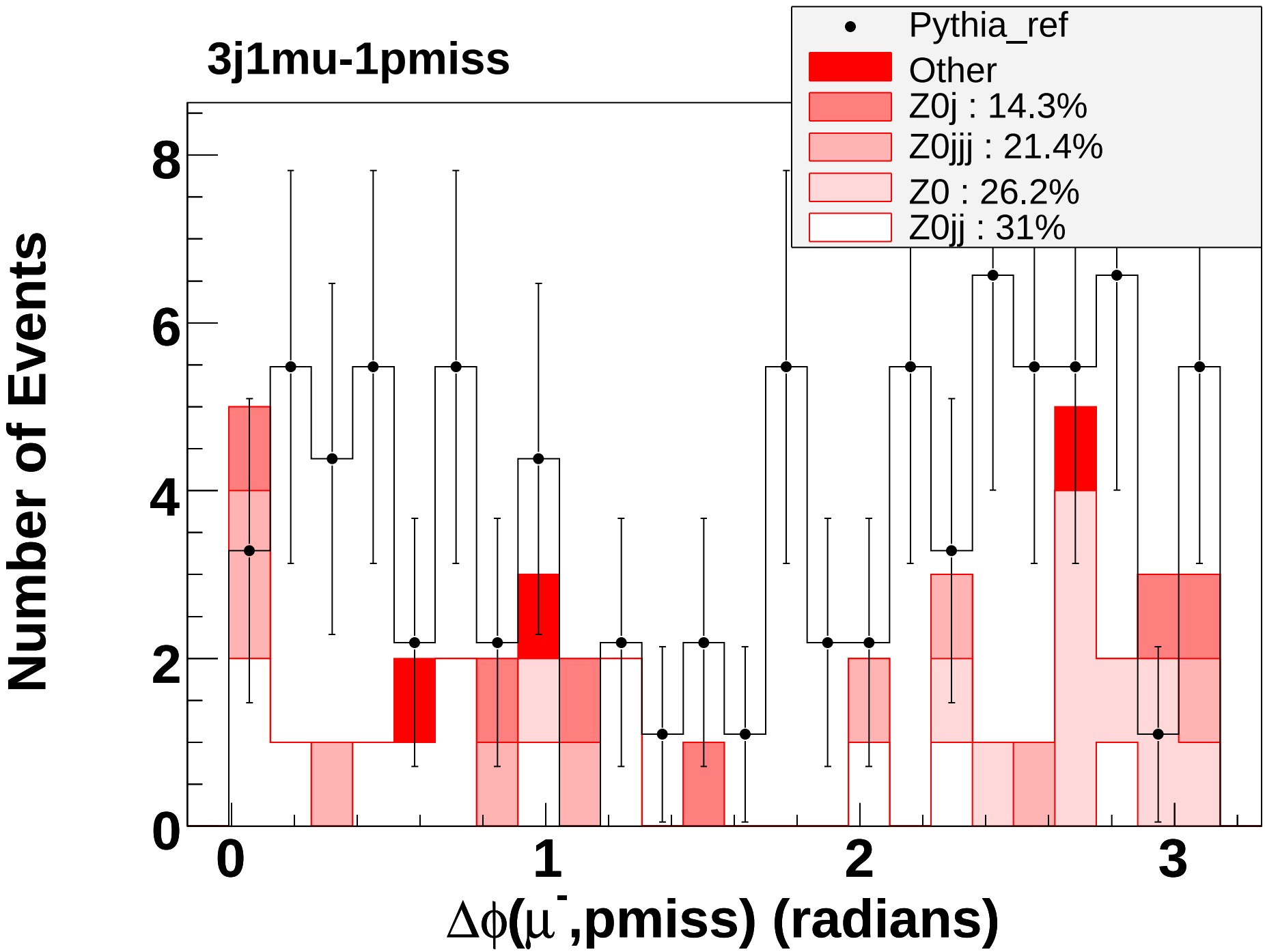

3j1mu-1pmiss
Pythia_ref
Other
Z0j : 14.3%
Z0jjj : 21.4%
Z0 : 26.2%
Z0jj : 31%
Number of Events
0
10
20
30
500
1000
1500
M(W,j2,j3) (GeV)

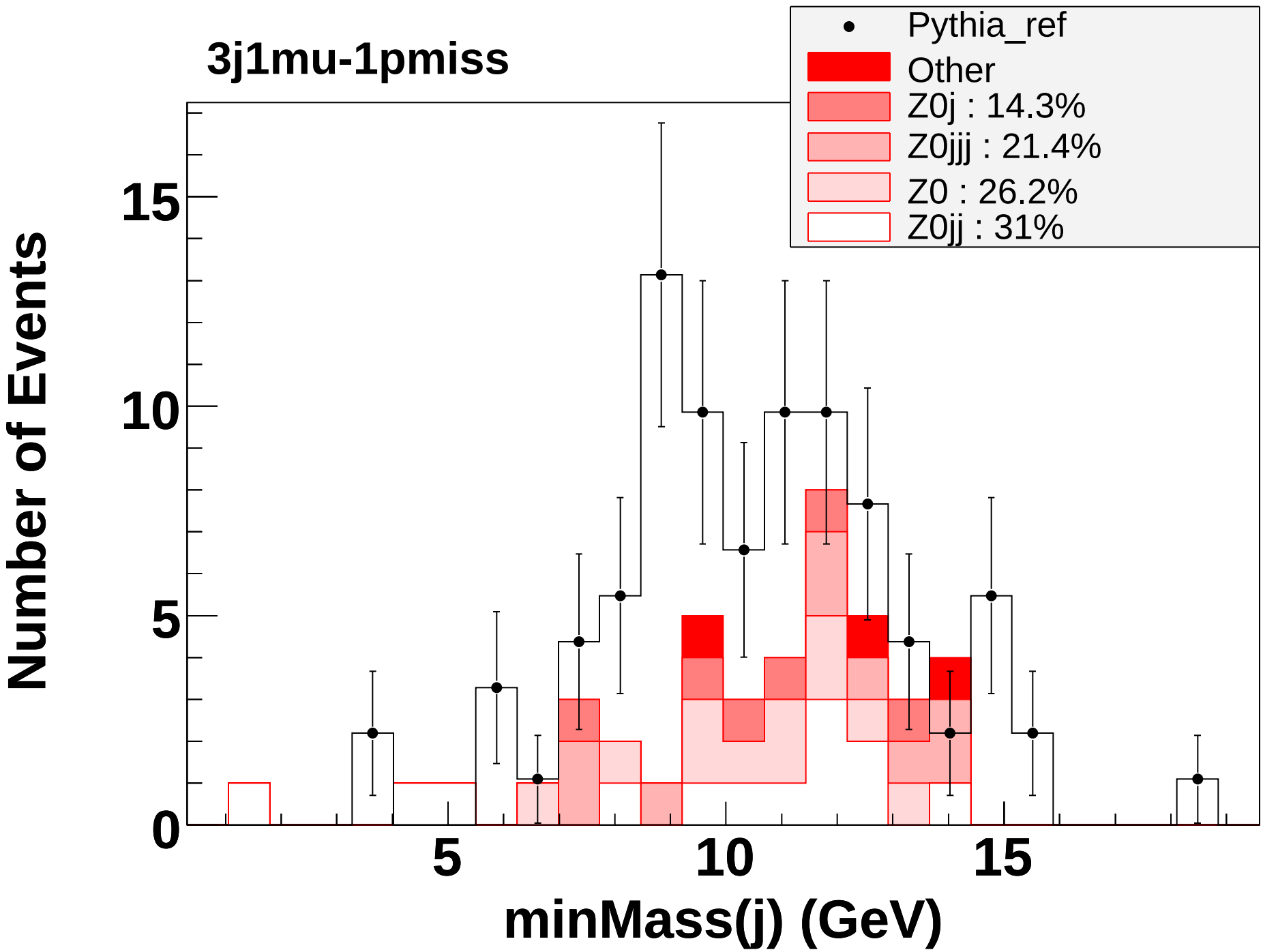

3j1mu-1pmiss
Pythia_ref
Other
Z0j : 14.3%
Z0jjj : 21.4%
Z0 : 26.2%
Z0jj : 31%
Number of Events
0
5
10
0
2
4
6
ΔR(μ⁻,j2)

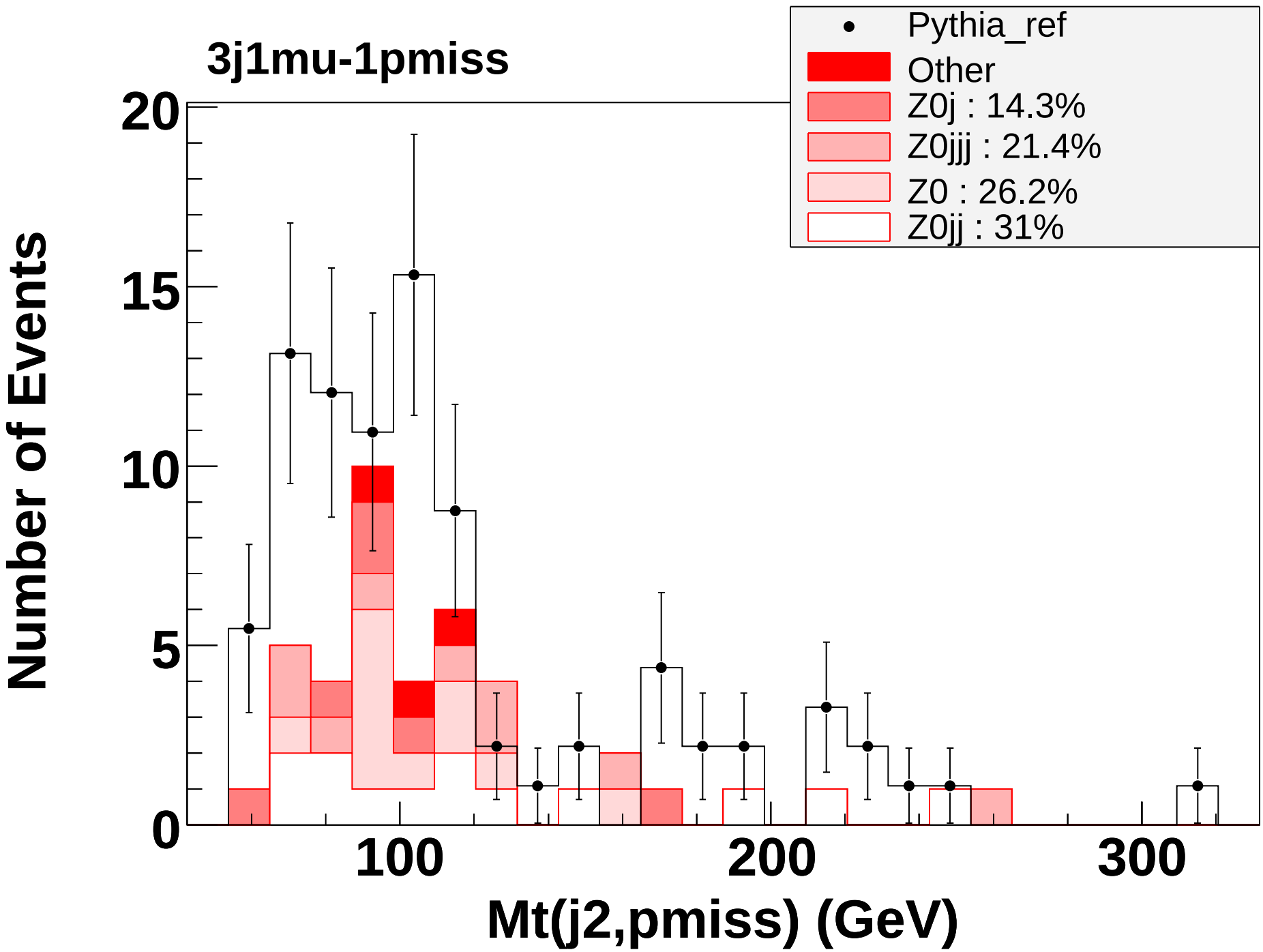

3j1mu-1pmiss
Pythia_ref
Other
Z0j : 14.3%
Z0jjj : 21.4%
Z0 : 26.2%
Z0jj : 31%
Number of Events
0
10
20
30
-2000
-1000
0
1000
2000
W pz (GeV)

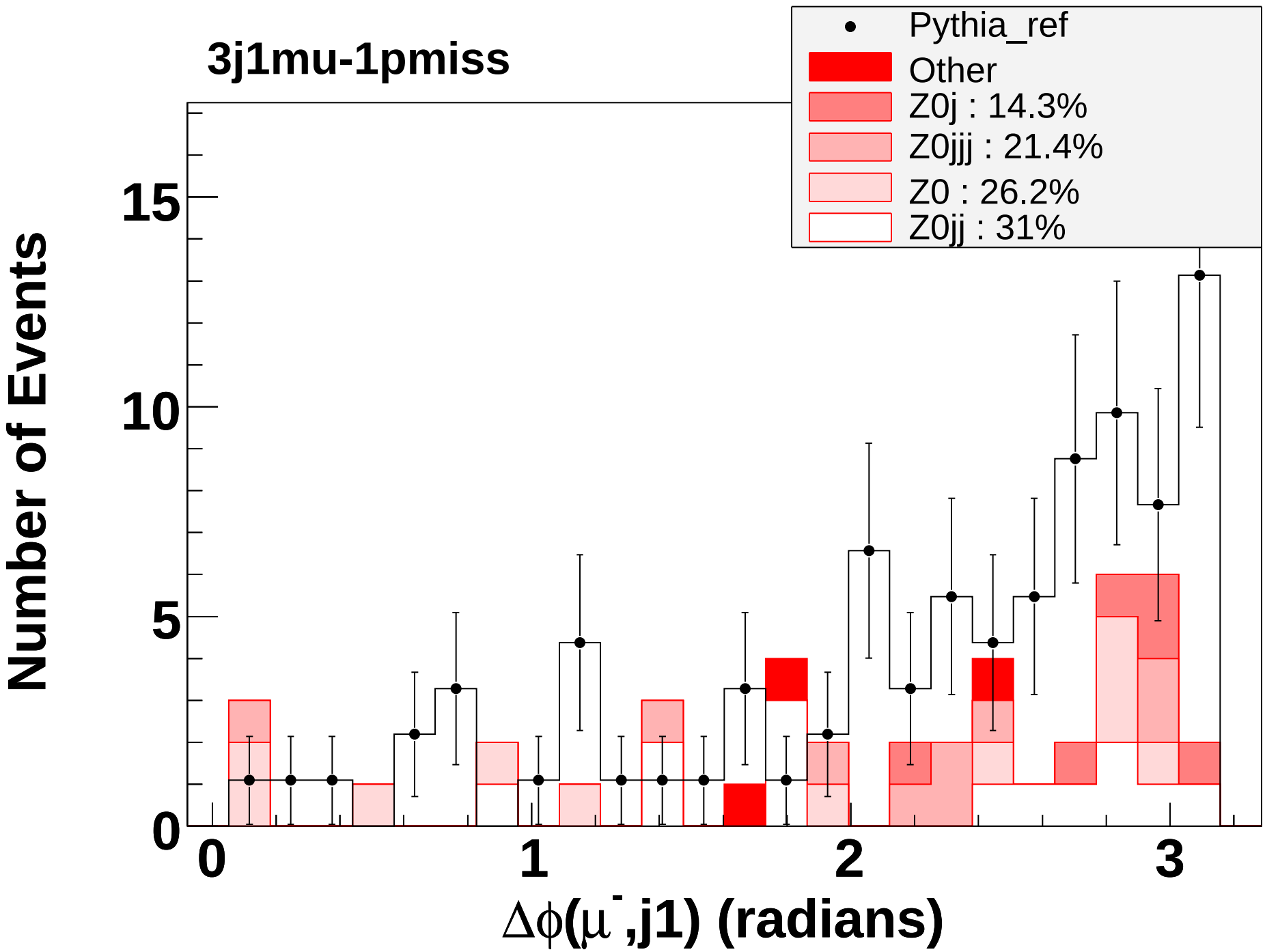

3j1mu-1pmiss
Pythia_ref
Other
Z0j : 14.3%
Z0jjj : 21.4%
Z0 : 26.2%
Z0jj : 31%
Number of Events
0
10
20
100
200
j1 p_T (GeV)

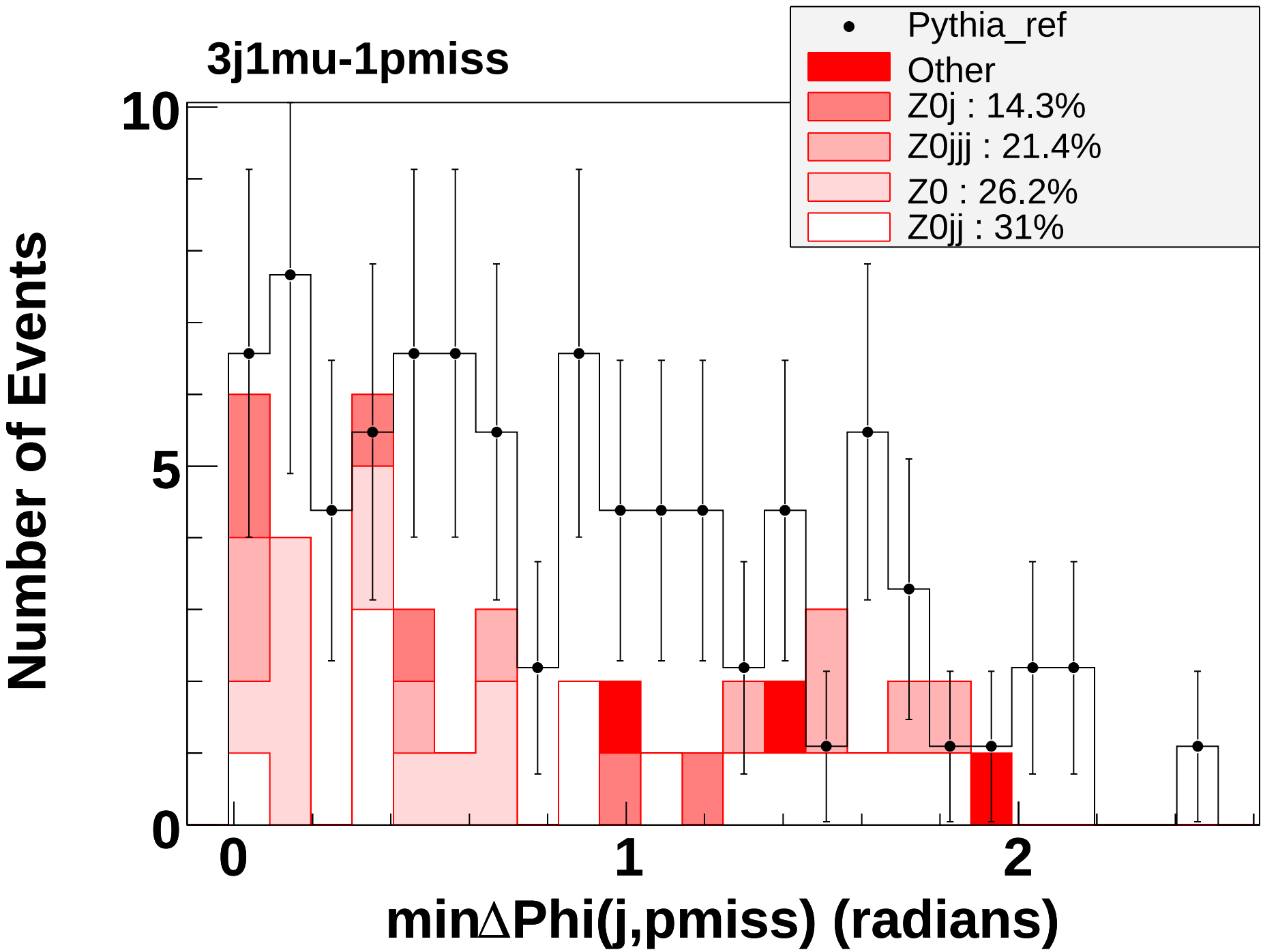

3j1mu-1pmiss
Pythia_ref
Other
Z0j : 14.3%
Z0jjj : 21.4%
Z0 : 26.2%
Z0jj : 31%
Number of Events
30
20
10
0
0
500
1000
M(j1,j2) (GeV)

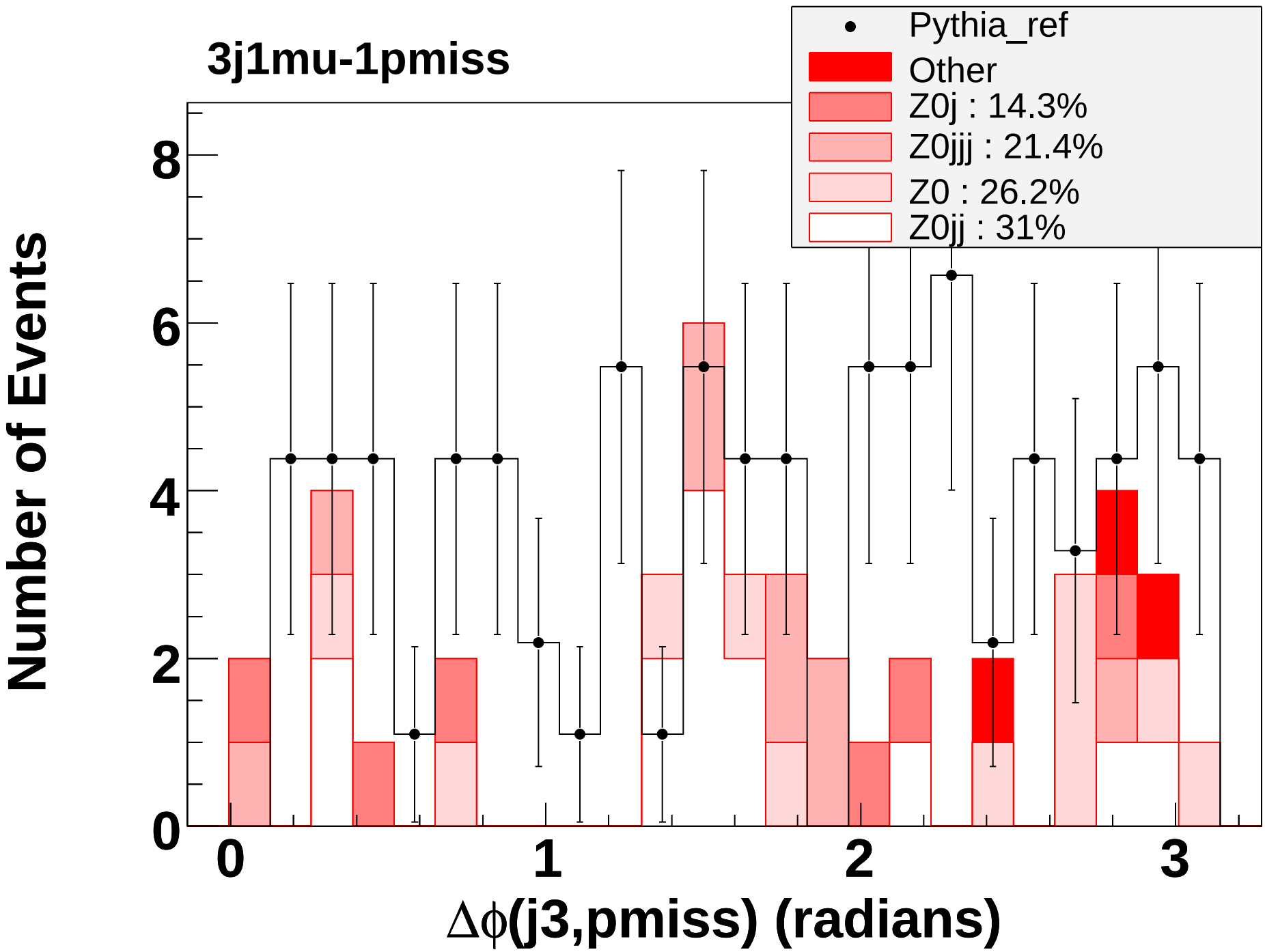

3j1mu-1pmiss
Pythia_ref
Other
Z0j : 14.3%
Z0jjj : 21.4%
Z0 : 26.2%
Z0jj : 31%
Number of Events
0
2
4
6
8
0
1
2
3
Δφ(μ⁻,pmiss) (radians)

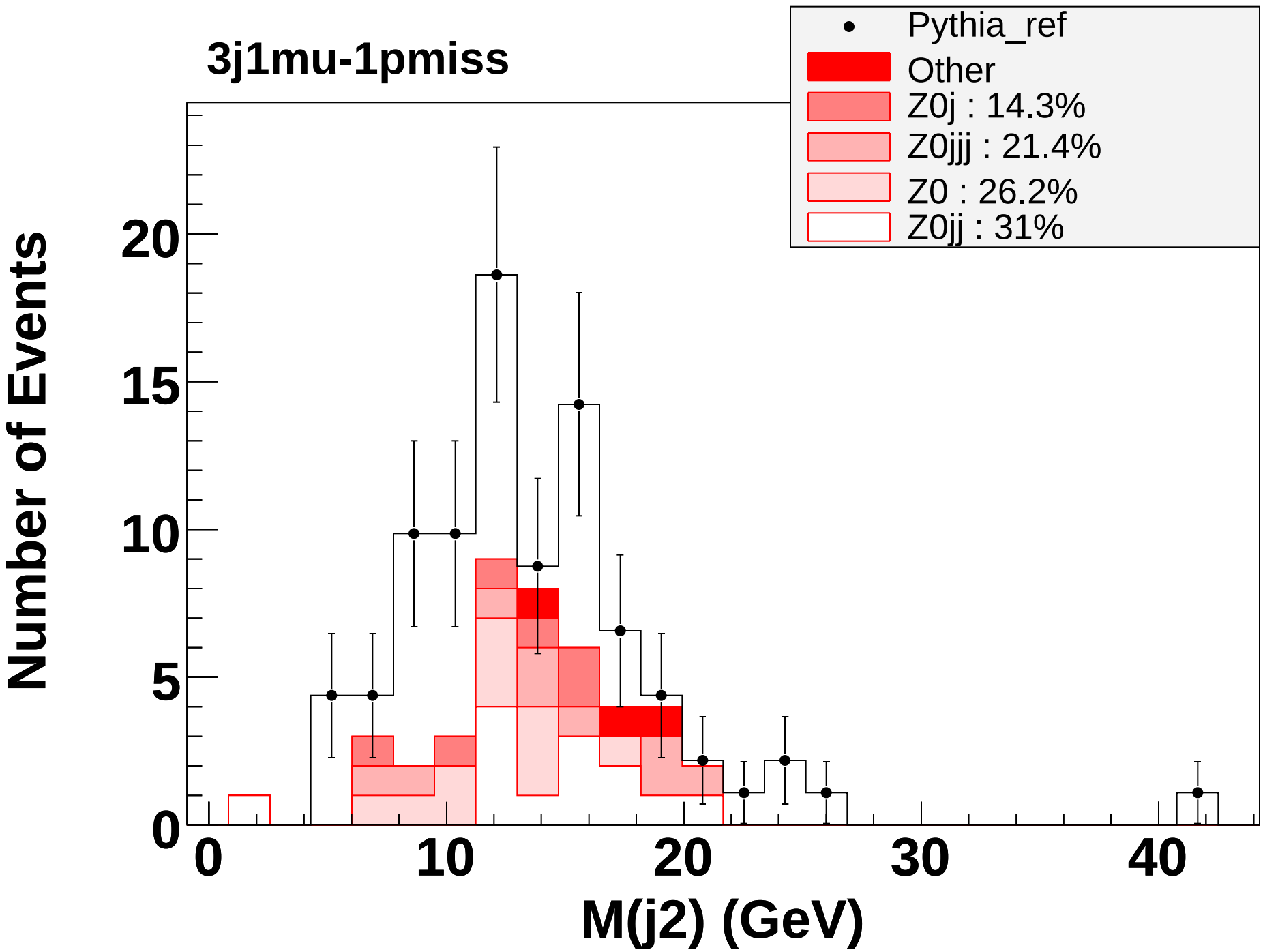

3j1mu-1pmiss
Pythia_ref
Other
Z0j : 14.3%
Z0jjj : 21.4%
Z0 : 26.2%
Z0jj : 31%
Number of Events
0
5
10
15
5
10
15
minMass(j) (GeV)

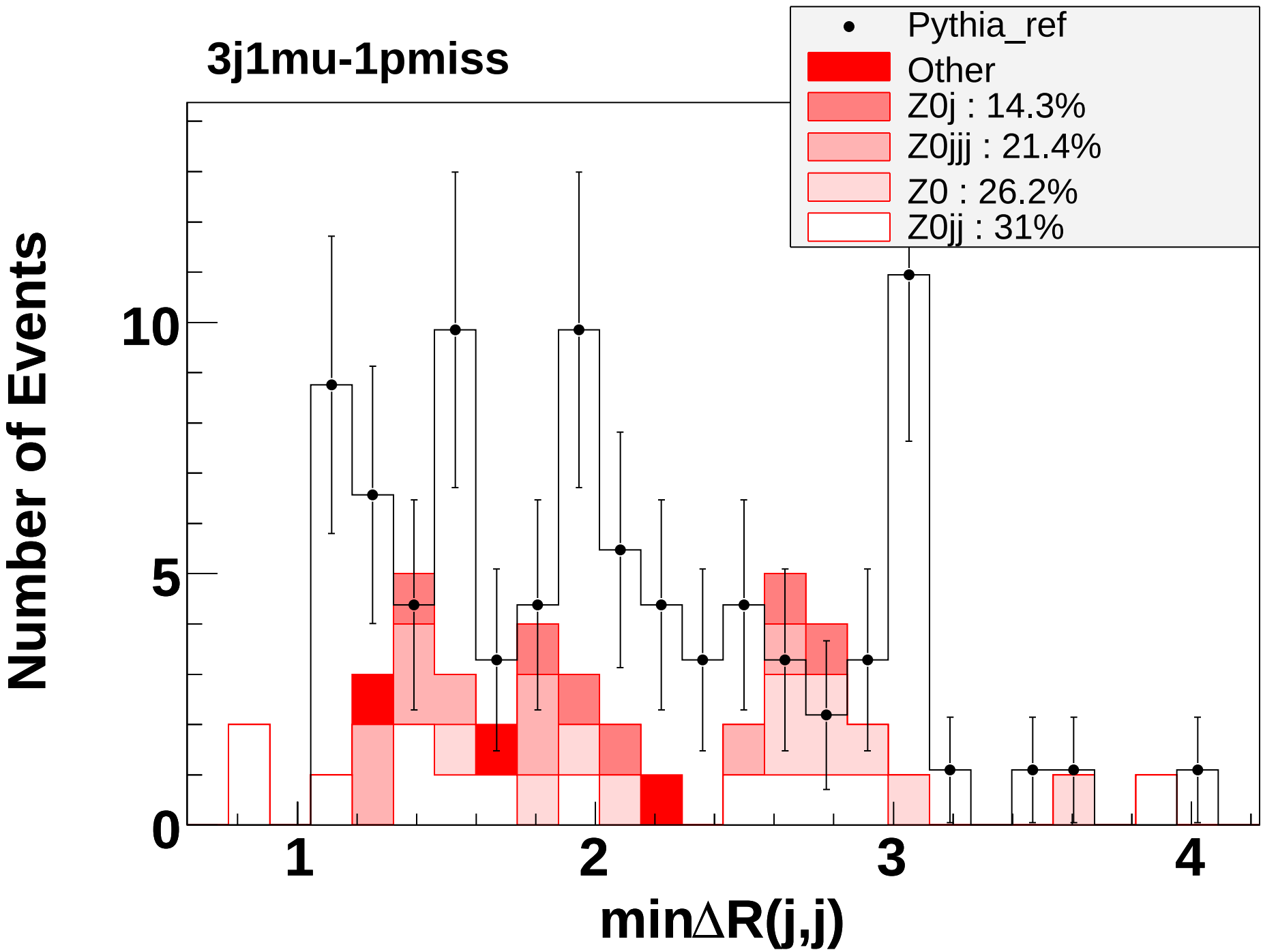

3j1mu-1pmiss
Pythia_ref
Other
Z0j : 14.3%
Z0jjj : 21.4%
Z0 : 26.2%
Z0jj : 31%
Number of Events
0
5
10
15
20
100
200
300
Mt(j2,pmiss) (GeV)

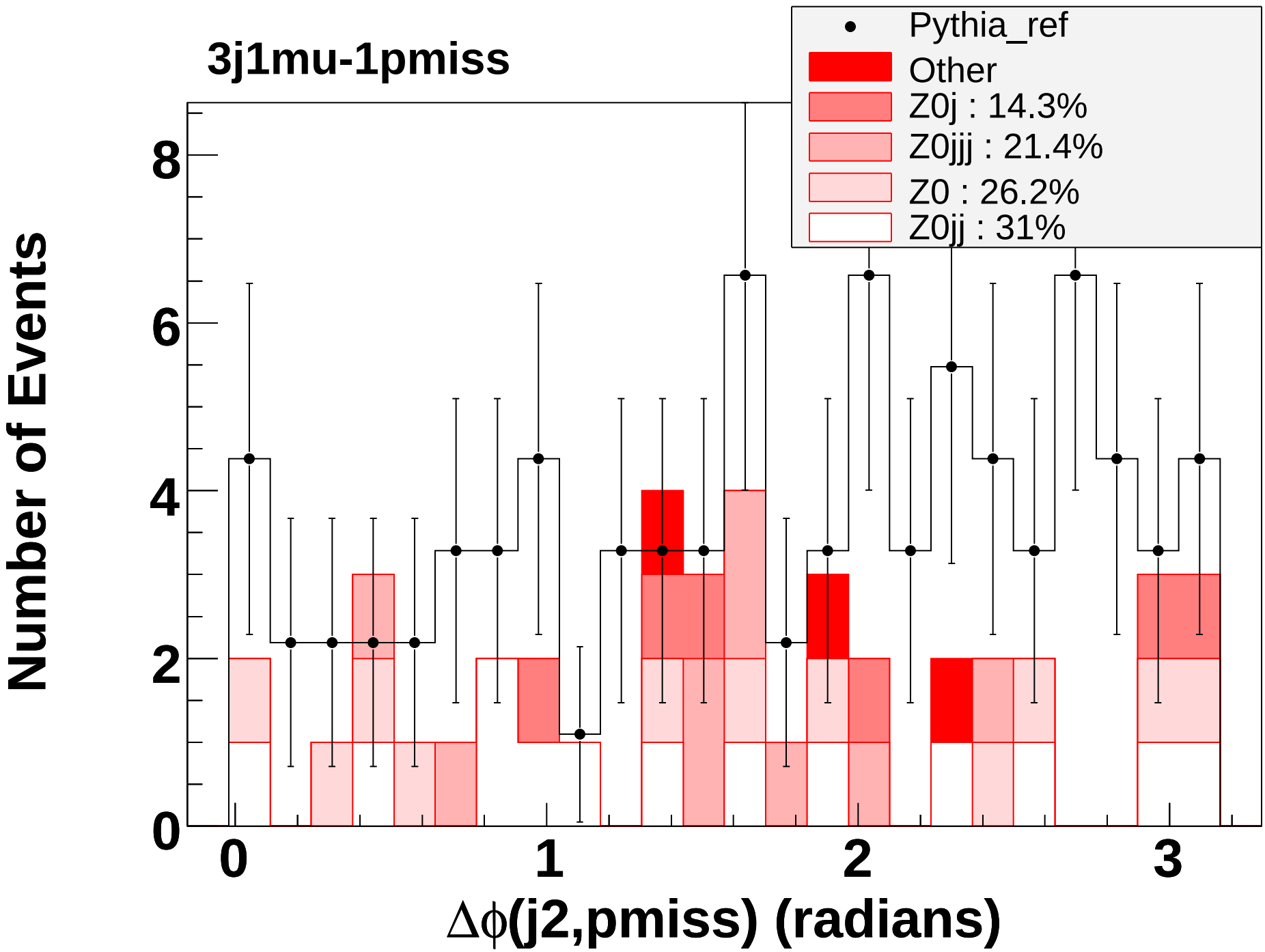

3j1mu-1pmiss
Pythia_ref
Other
Z0j : 14.3%
Z0jjj : 21.4%
Z0 : 26.2%
Z0jj : 31%
Number of Events
0
5
10
15
0
1
2
3
Δφ(μ⁻,j1) (radians)

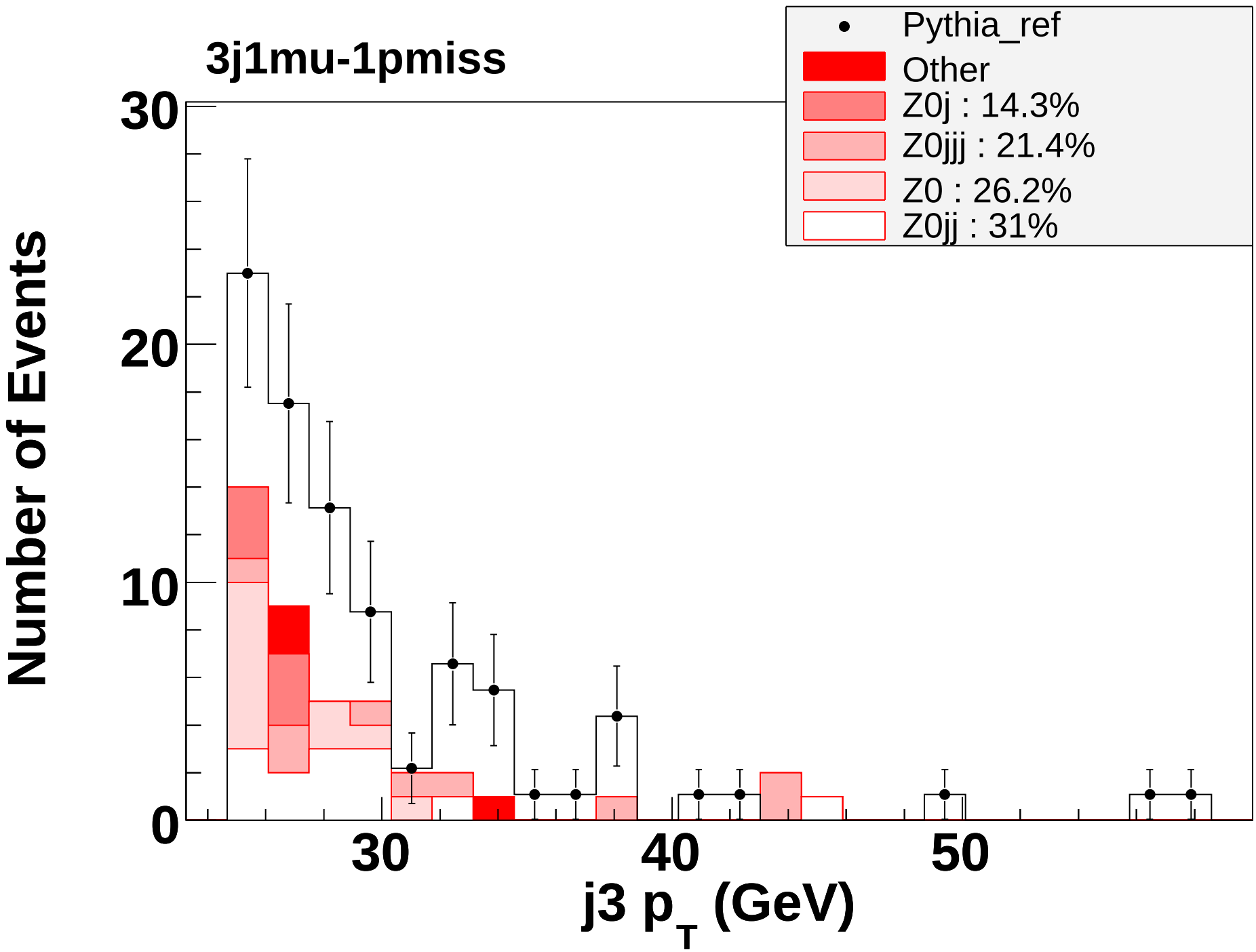

3j1mu-1pmiss
Pythia_ref
Other
Z0j : 14.3%
Z0jjj : 21.4%
Z0 : 26.2%
Z0jj : 31%
Number of Events
10
5
0
0
1
2
minΔPhi(j,pmiss) (radians)

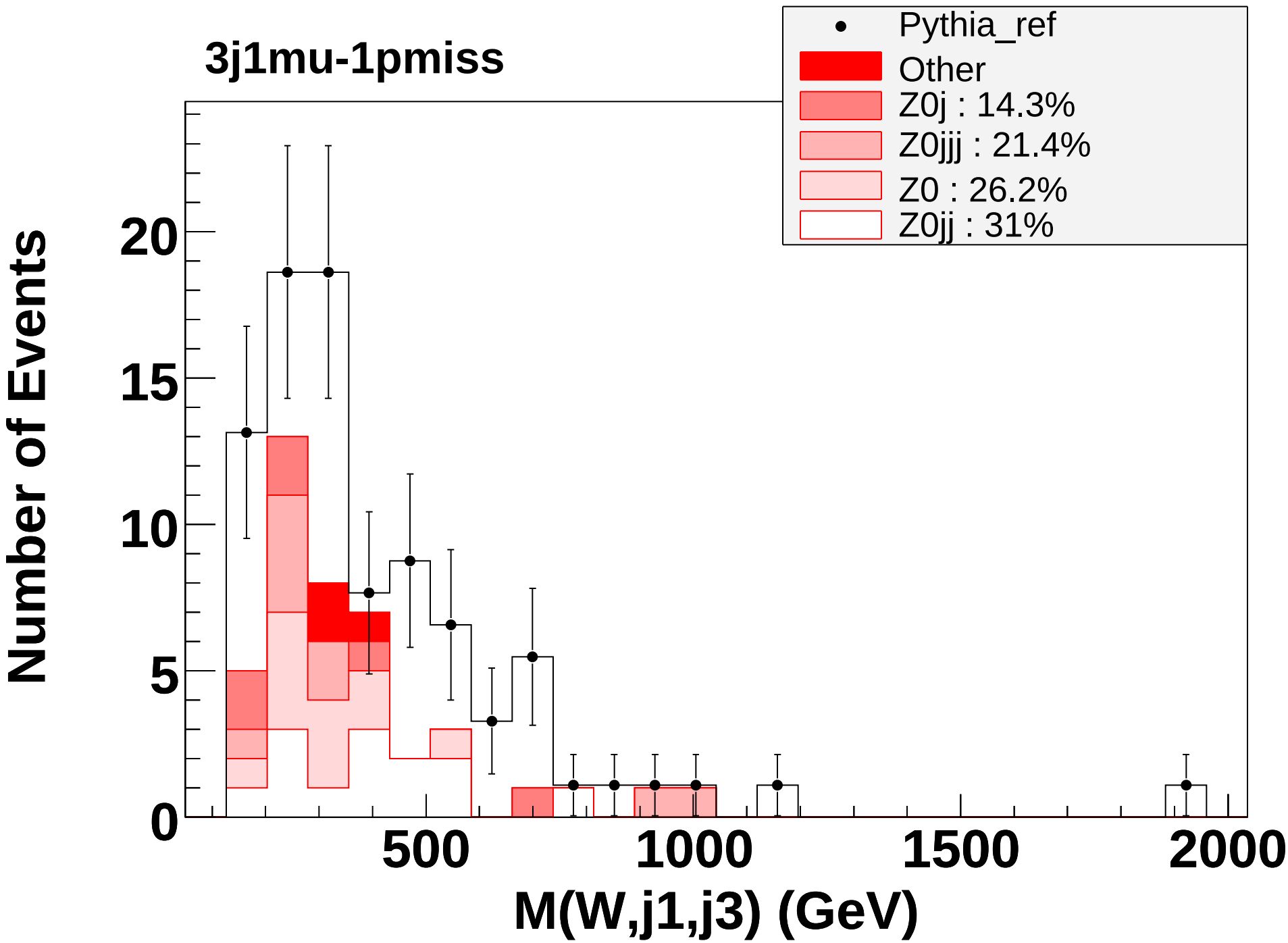

3j1mu-1pmiss
Pythia_ref
Other
Z0j : 14.3%
Z0jjj : 21.4%
Z0 : 26.2%
Z0jj : 31%
Number of Events
0
2
4
6
8
0
1
2
3
Δϕ(j3,pmiss) (radians)

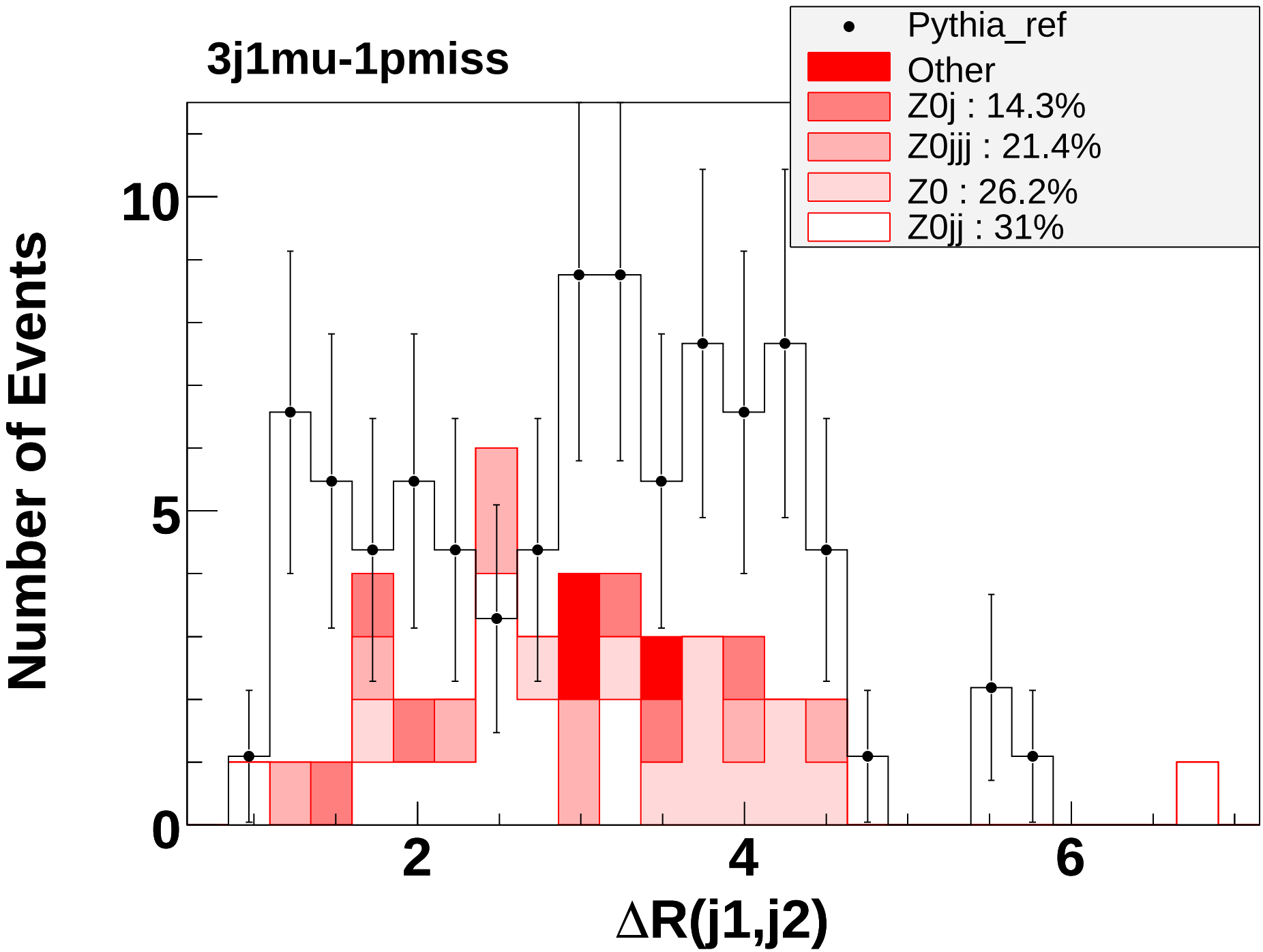

3j1mu-1pmiss
Pythia_ref
Other
Z0j : 14.3%
Z0jjj : 21.4%
Z0 : 26.2%
Z0jj : 31%
Number of Events
0
5
10
15
20
0
10
20
30
40
M(j2) (GeV)

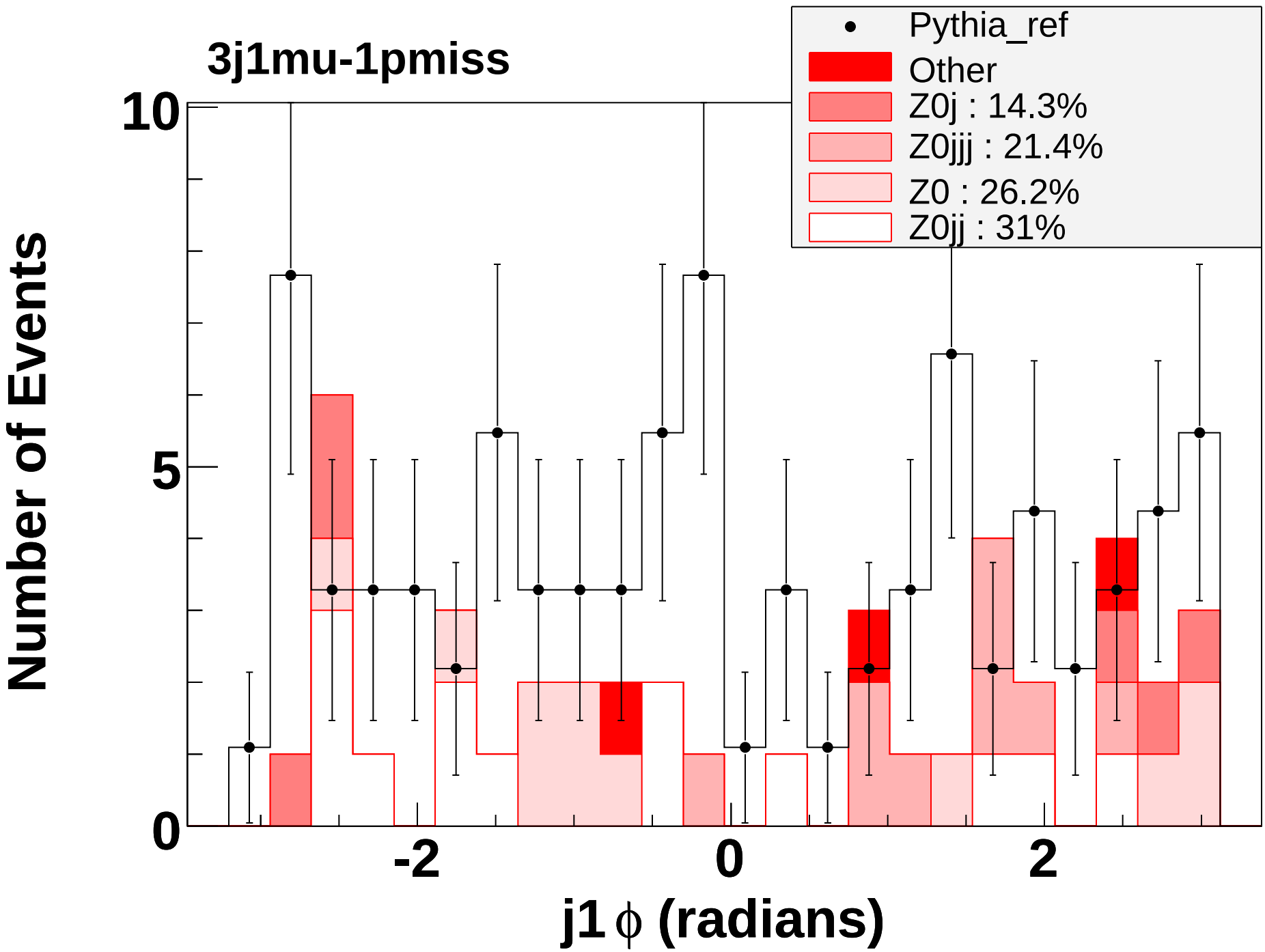

3j1mu-1pmiss
Pythia_ref
Other
Z0j : 14.3%
Z0jjj : 21.4%
Z0 : 26.2%
Z0jj : 31%
Number of Events
0
5
10
1
2
3
4
minΔR(j,j)

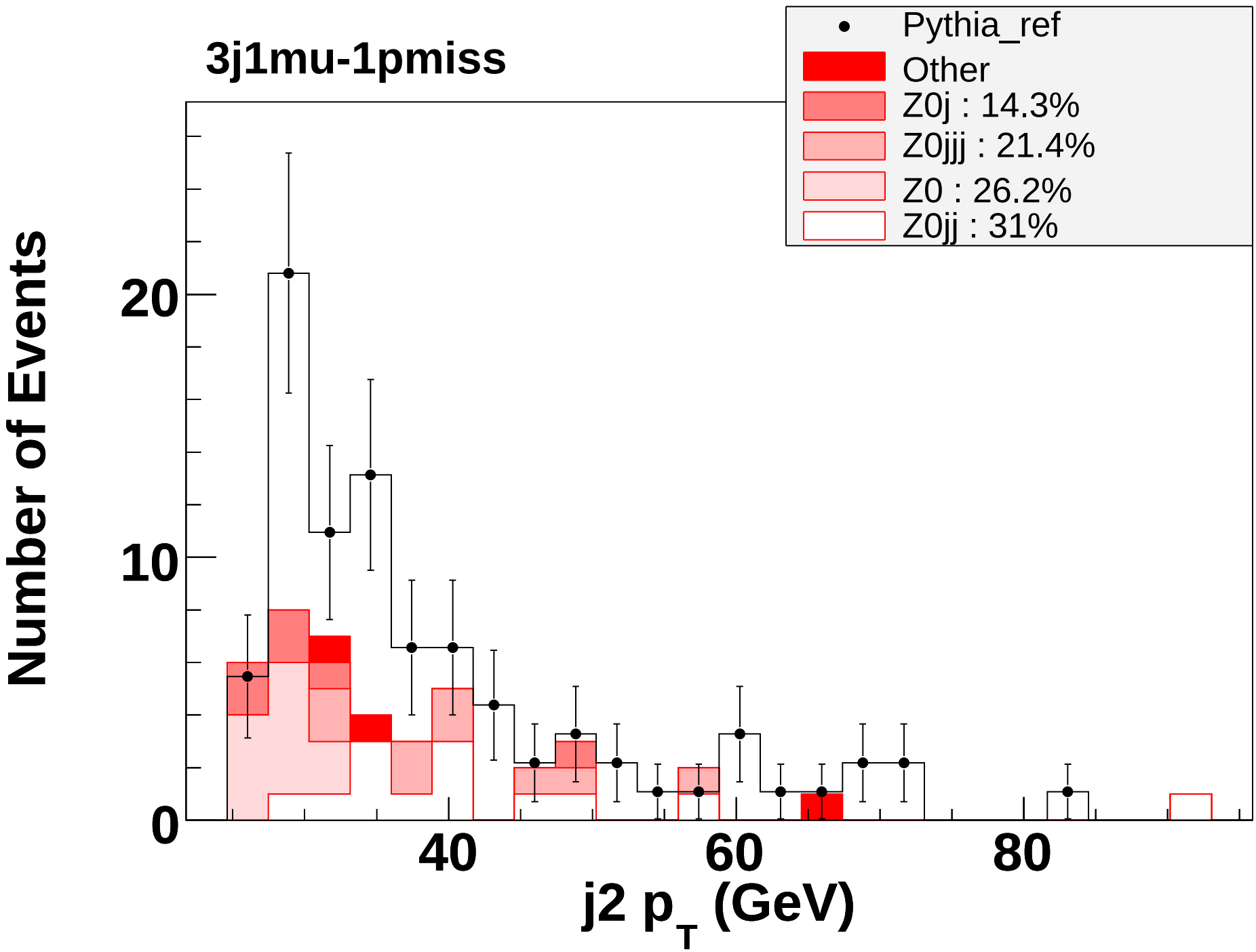

3j1mu-1pmiss
Pythia_ref
Other
Z0j : 14.3%
Z0jjj : 21.4%
Z0 : 26.2%
Z0jj : 31%
Number of Events
0
2
4
6
8
0
1
2
3
Δϕ(j2,pmiss) (radians)

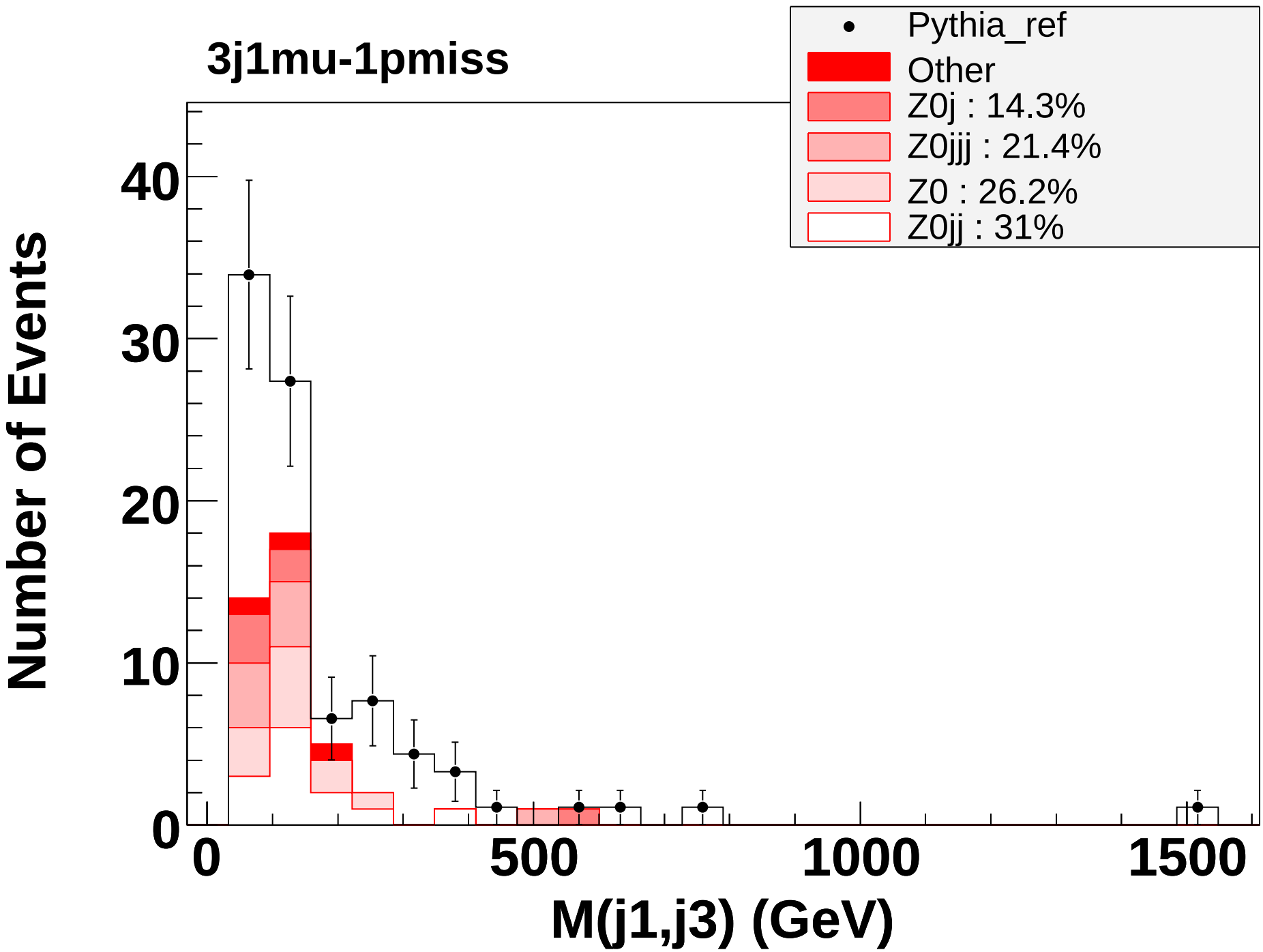

3j1mu-1pmiss
Pythia_ref
Other
Z0j : 14.3%
Z0jjj : 21.4%
Z0 : 26.2%
Z0jj : 31%
Number of Events
0
10
20
30
30
40
50
j3 p_T (GeV)

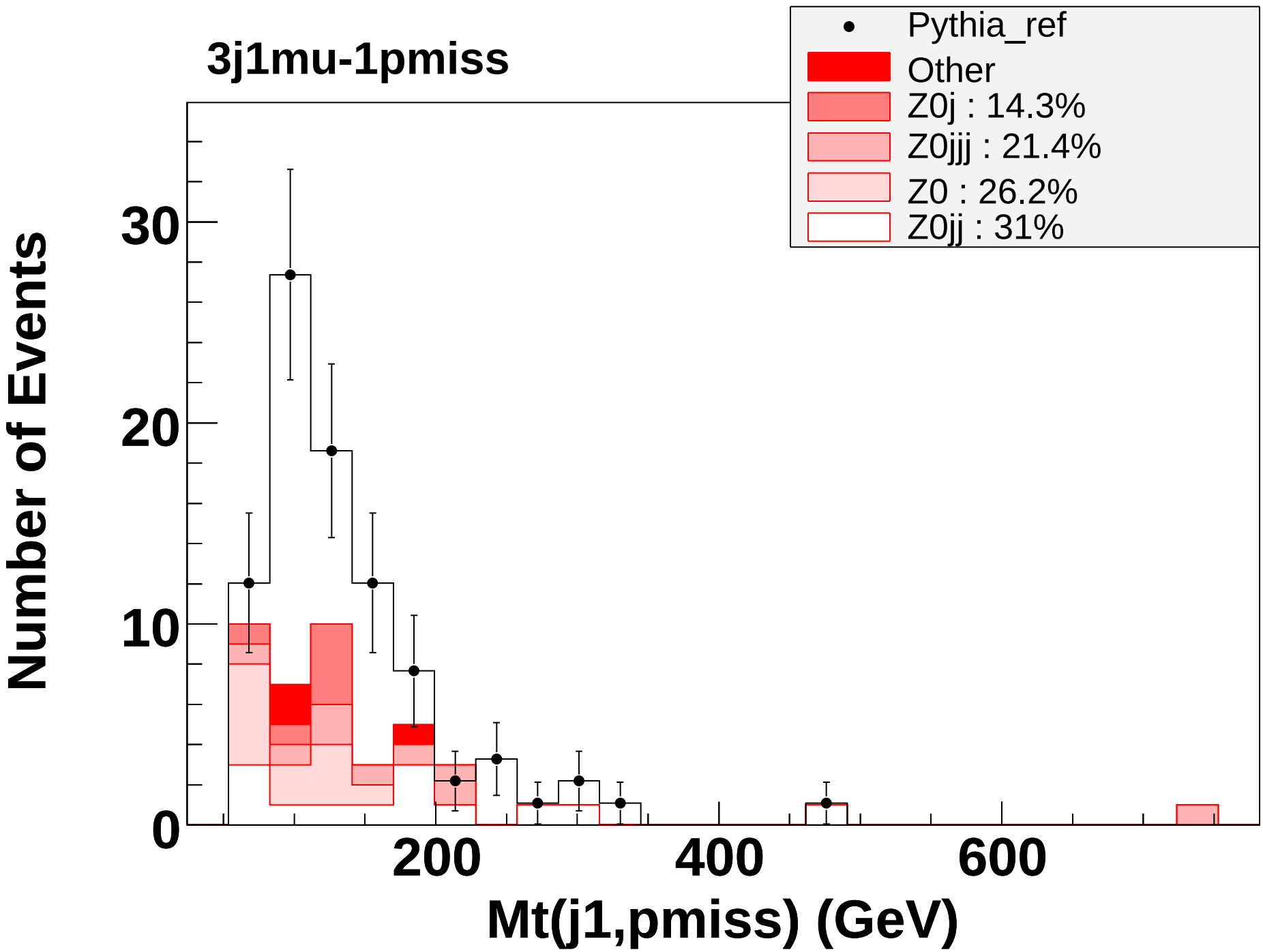

3j1mu-1pmiss
Pythia_ref
Other
Z0j : 14.3%
Z0jjj : 21.4%
Z0 : 26.2%
Z0jj : 31%
Number of Events
0
5
10
15
20
500
1000
1500
2000
M(W,j1,j3) (GeV)

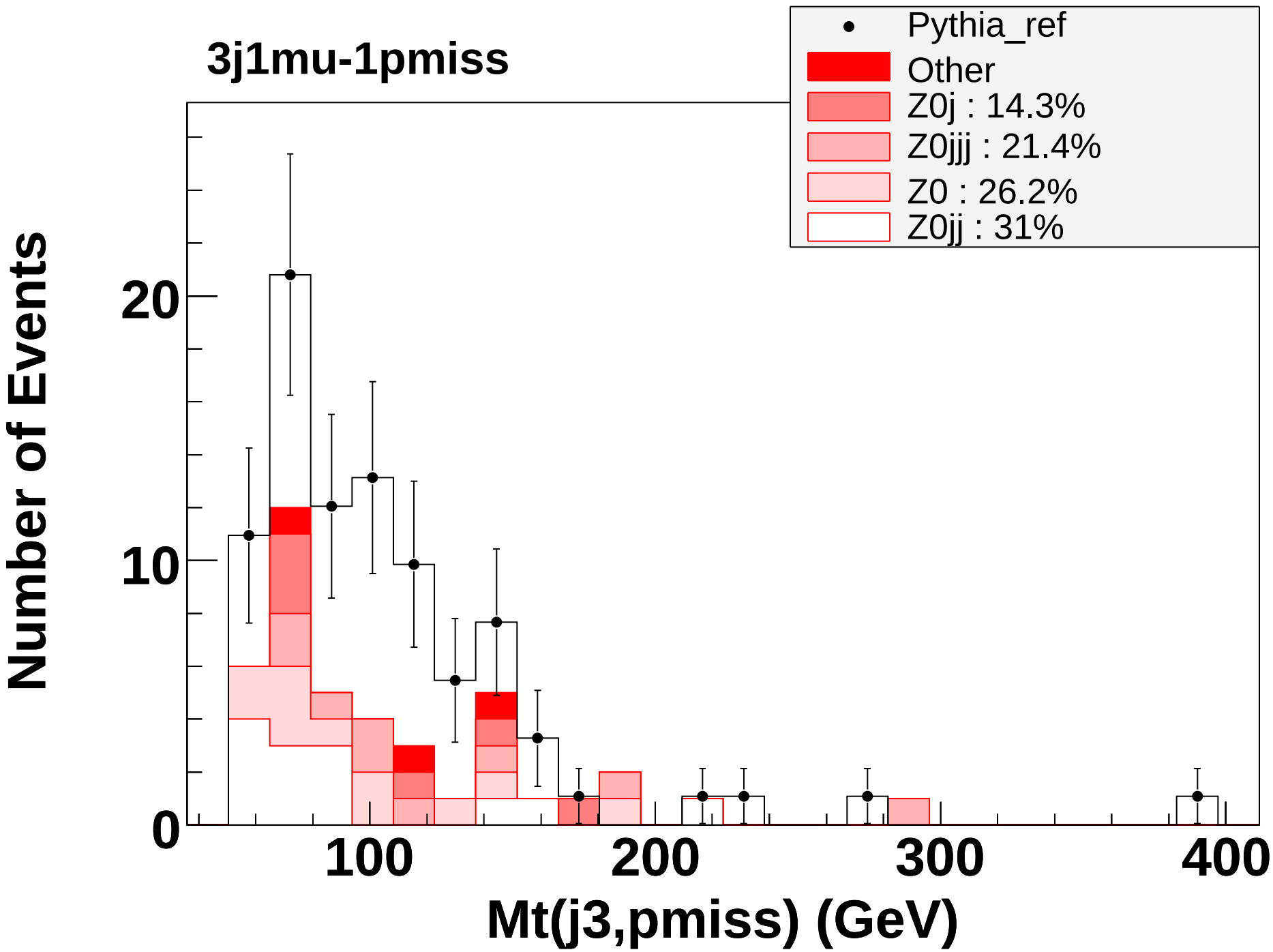

3j1mu-1pmiss
Pythia_ref
Other
Z0j : 14.3%
Z0jjj : 21.4%
Z0 : 26.2%
Z0jj : 31%
Number of Events
0
5
10
2
4
6
ΔR(j1,j2)

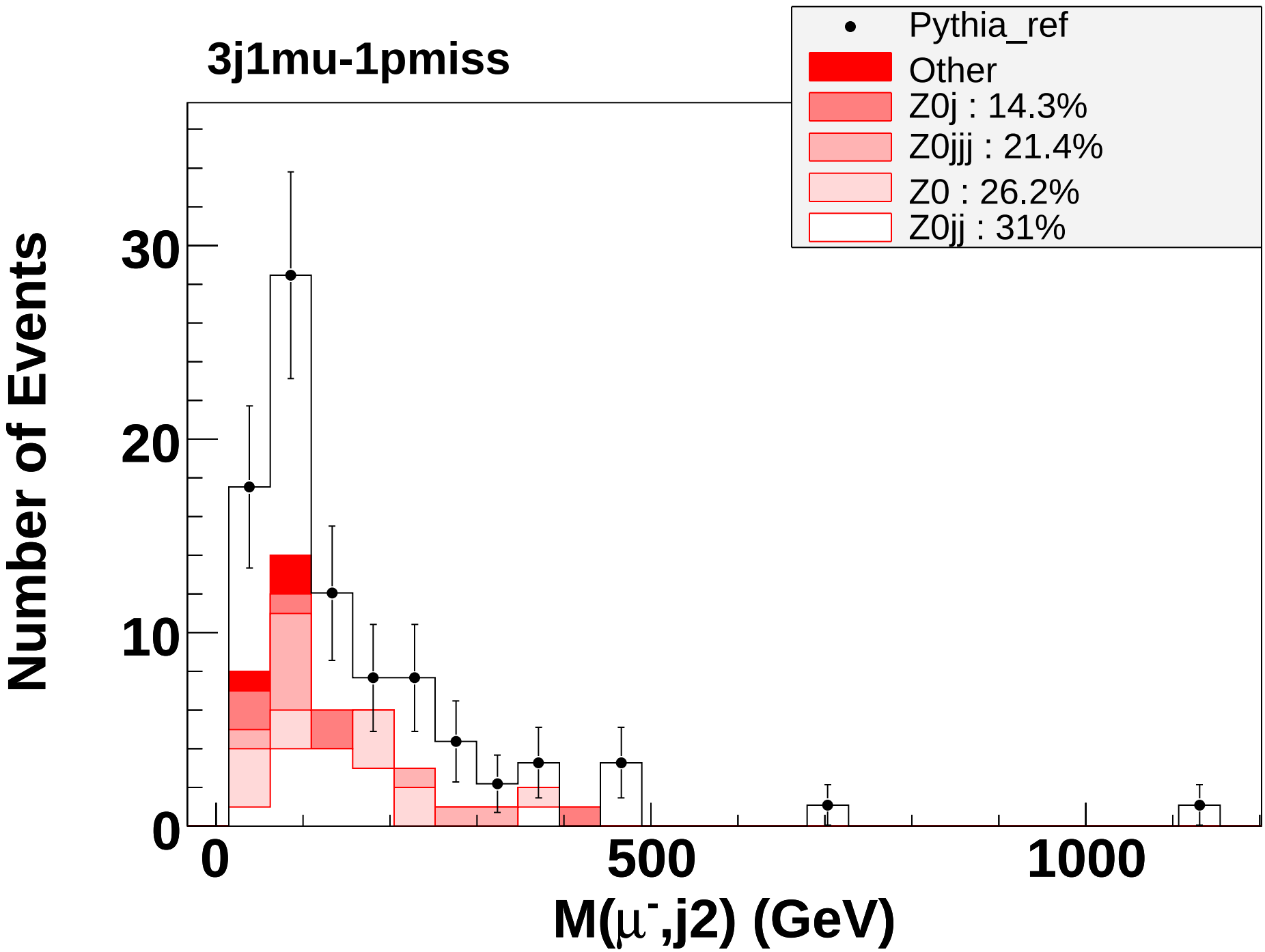

3j1mu-1pmiss
Pythia_ref
Other
Z0j : 14.3%
Z0jjj : 21.4%
Z0 : 26.2%
Z0jj : 31%
Number of Events
10
5
0
-2
0
2
j1 ϕ (radians)

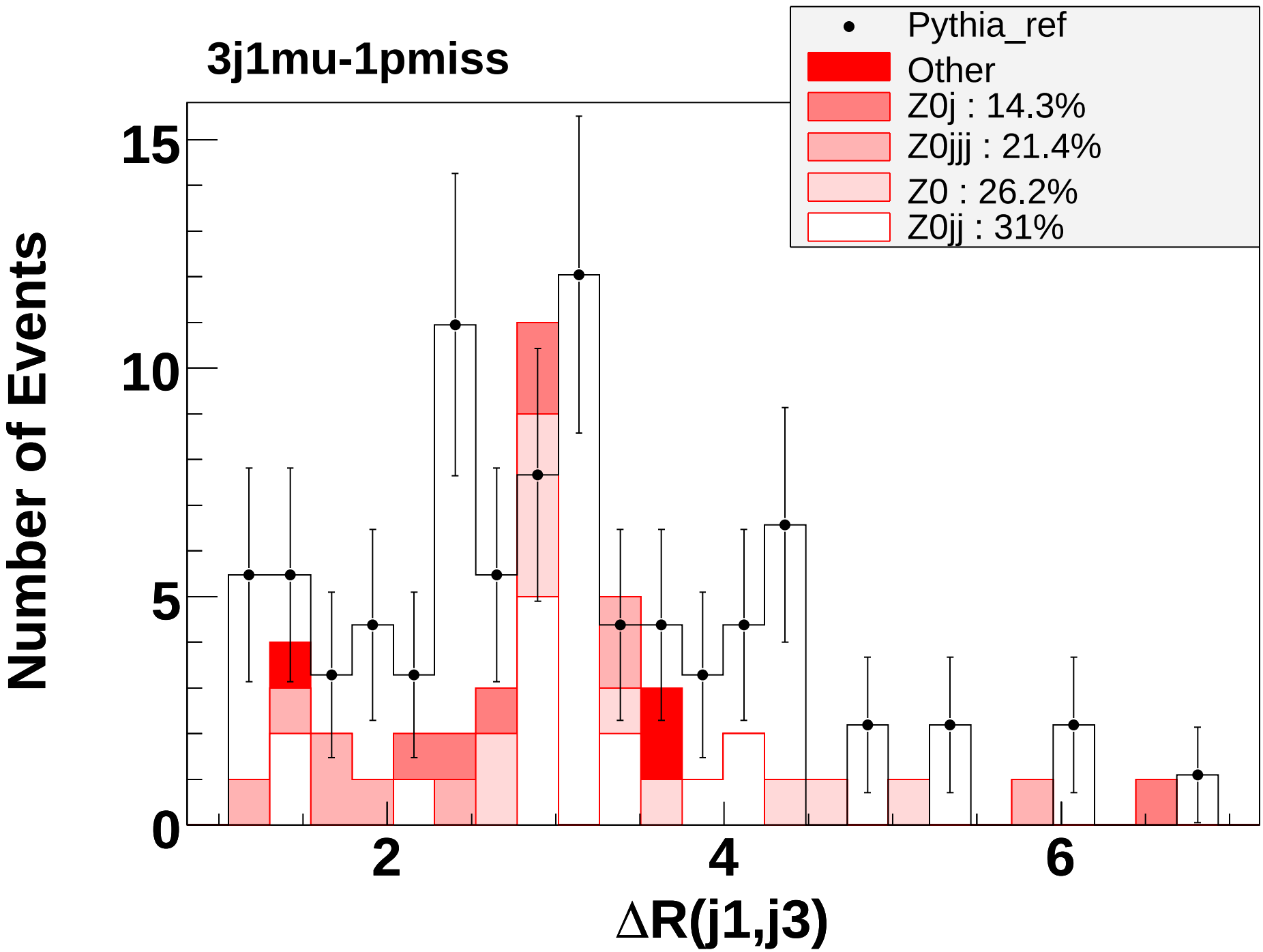

3j1mu-1pmiss
Pythia_ref
Other
Z0j : 14.3%
Z0jjj : 21.4%
Z0 : 26.2%
Z0jj : 31%
Number of Events
0
10
20
40
60
80
j2 p_T (GeV)

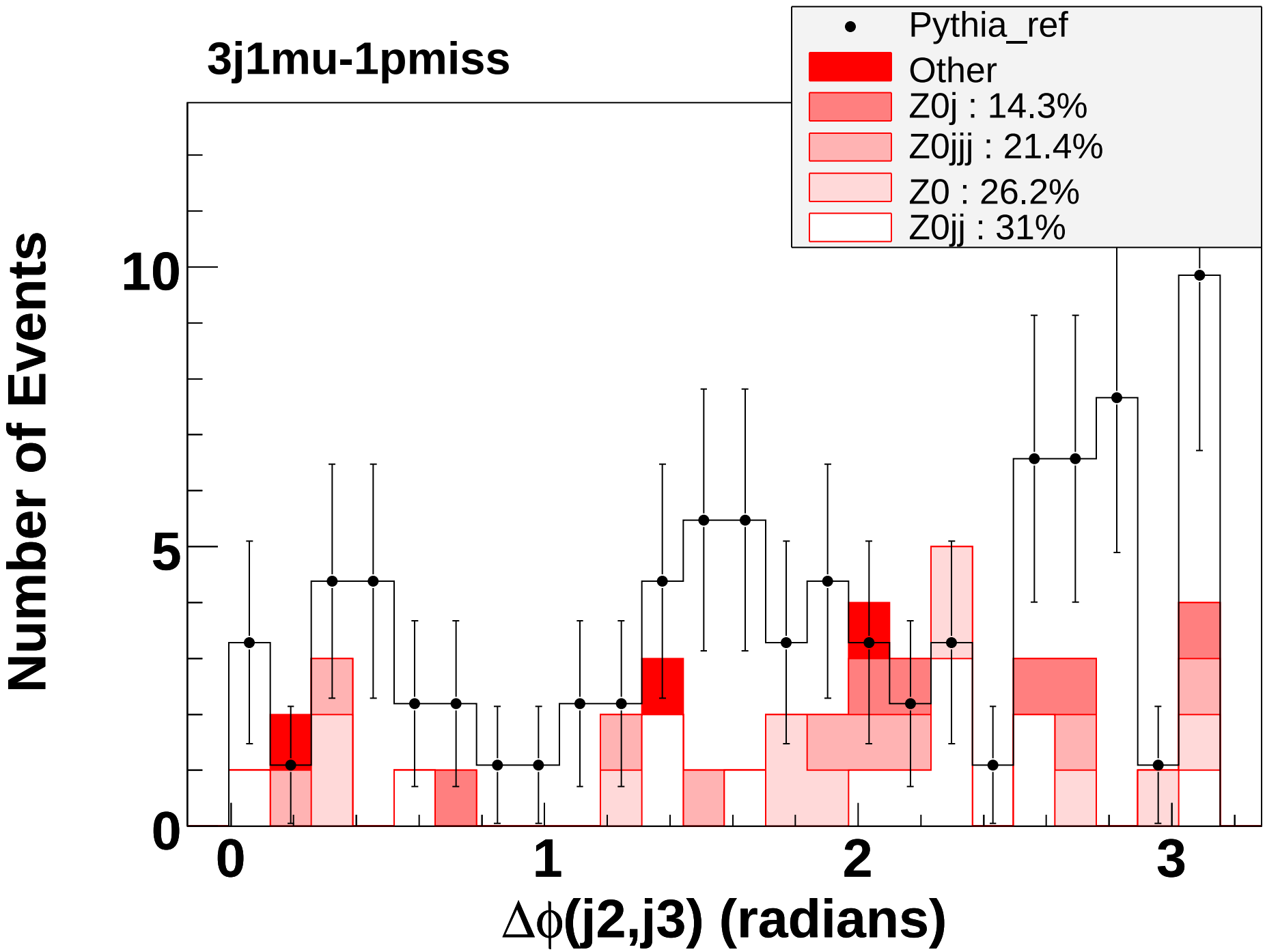

3j1mu-1pmiss
Pythia_ref
Other
Z0j : 14.3%
Z0jjj : 21.4%
Z0 : 26.2%
Z0jj : 31%
Number of Events
0
10
20
30
40
0
500
1000
1500
M(j1,j3) (GeV)

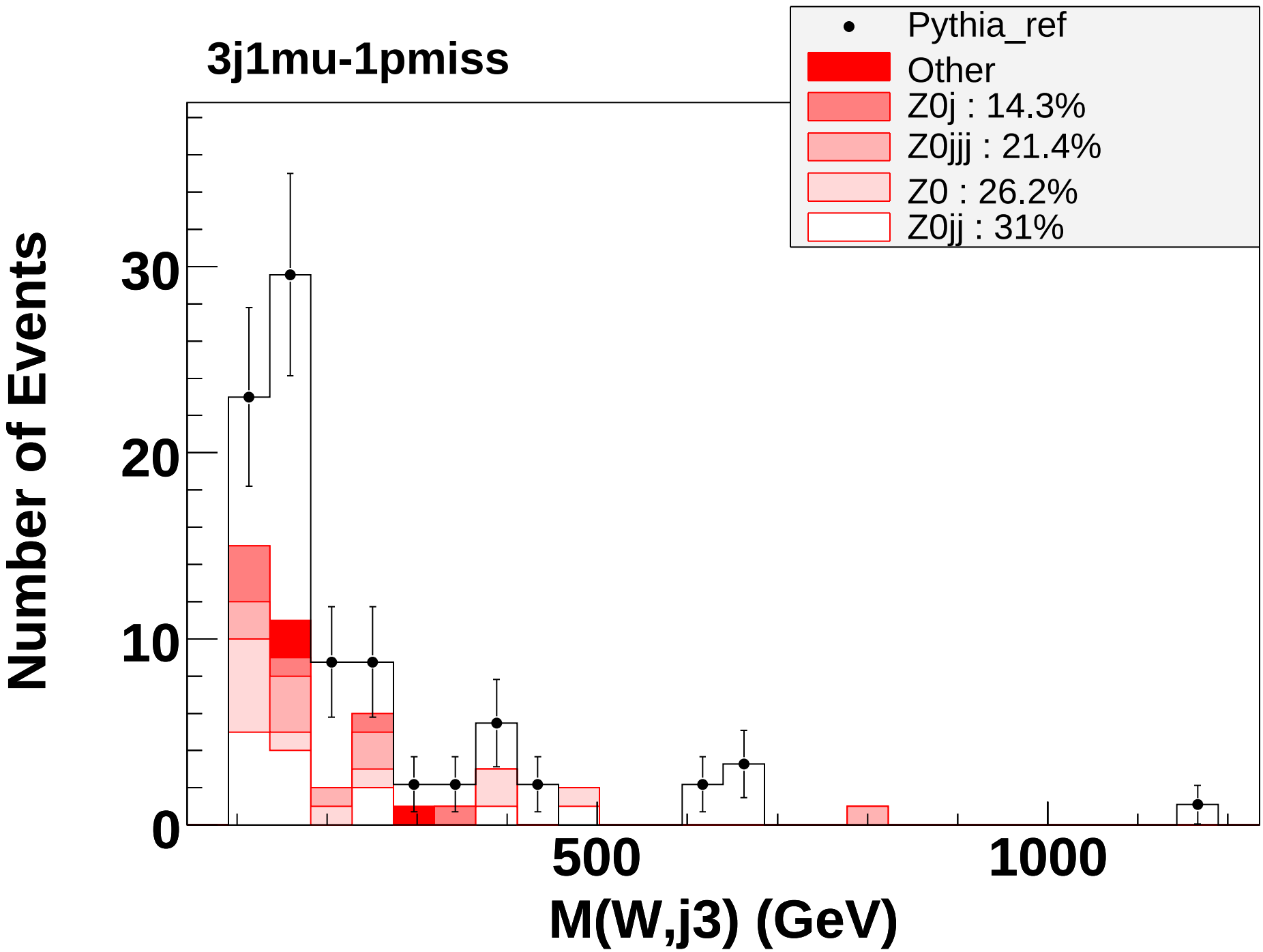

3j1mu-1pmiss
Pythia_ref
Other
Z0j : 14.3%
Z0jjj : 21.4%
Z0 : 26.2%
Z0jj : 31%
Number of Events
0
10
20
30
200
400
600
Mt(j1,pmiss) (GeV)

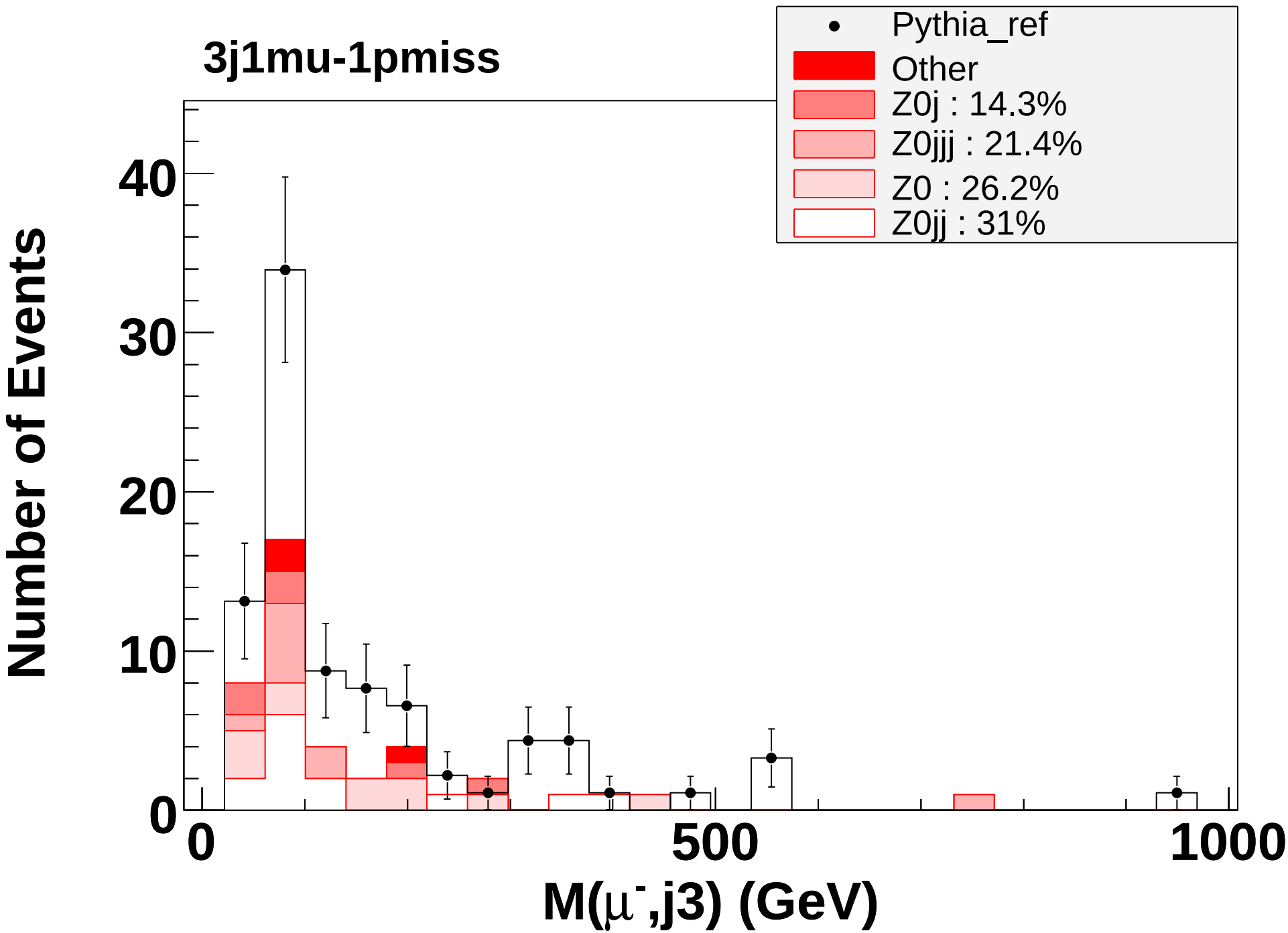

3j1mu-1pmiss
Pythia_ref
Other
Z0j : 14.3%
Z0jjj : 21.4%
Z0 : 26.2%
Z0jj : 31%
Number of Events
0
10
20
100
200
300
400
Mt(j3,pmiss) (GeV)

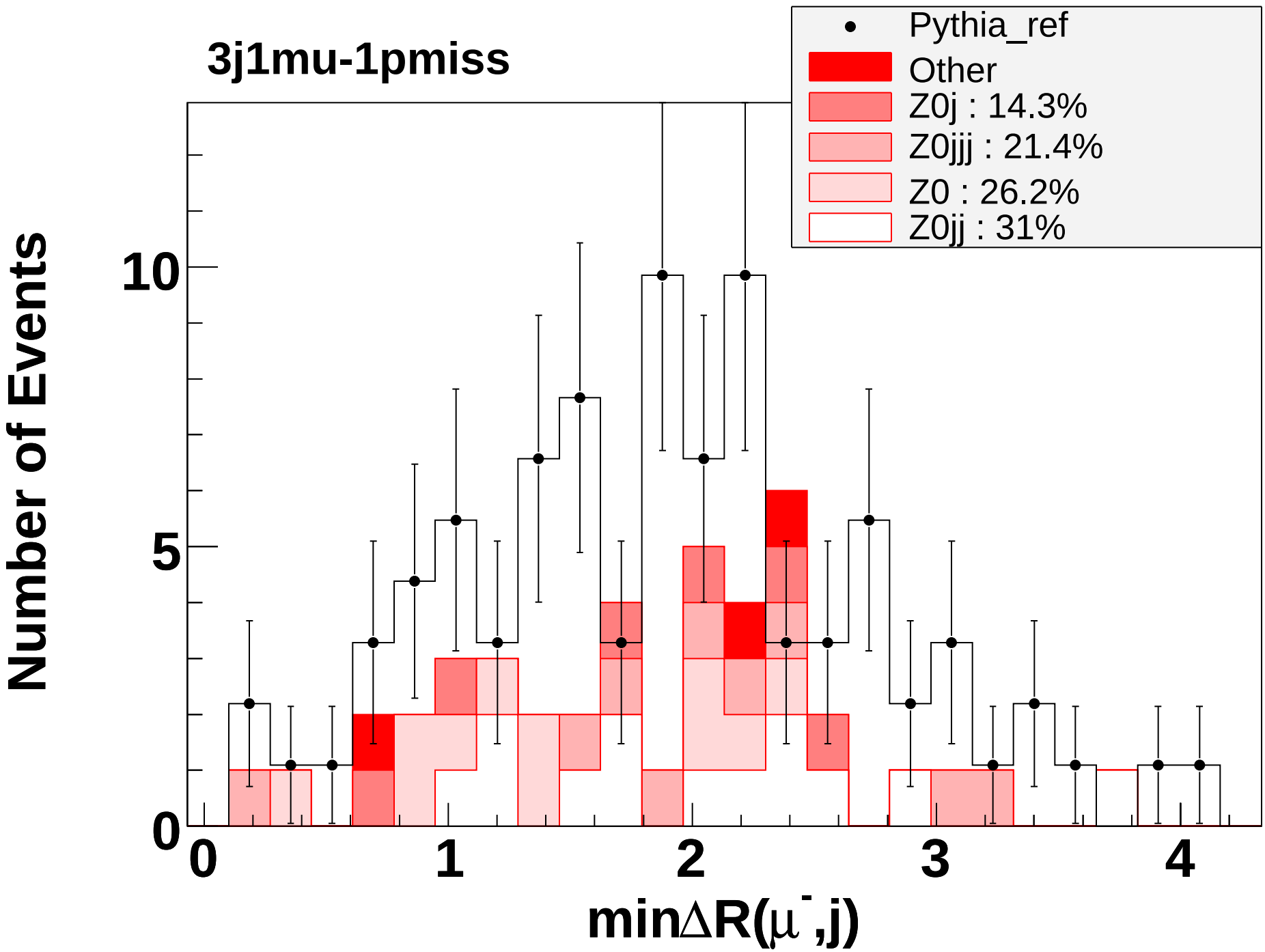

3j1mu-1pmiss
Pythia_ref
Other
Z0j : 14.3%
Z0jjj : 21.4%
Z0 : 26.2%
Z0jj : 31%
Number of Events
0
10
20
30
0
500
1000
M(μ⁻,j2) (GeV)

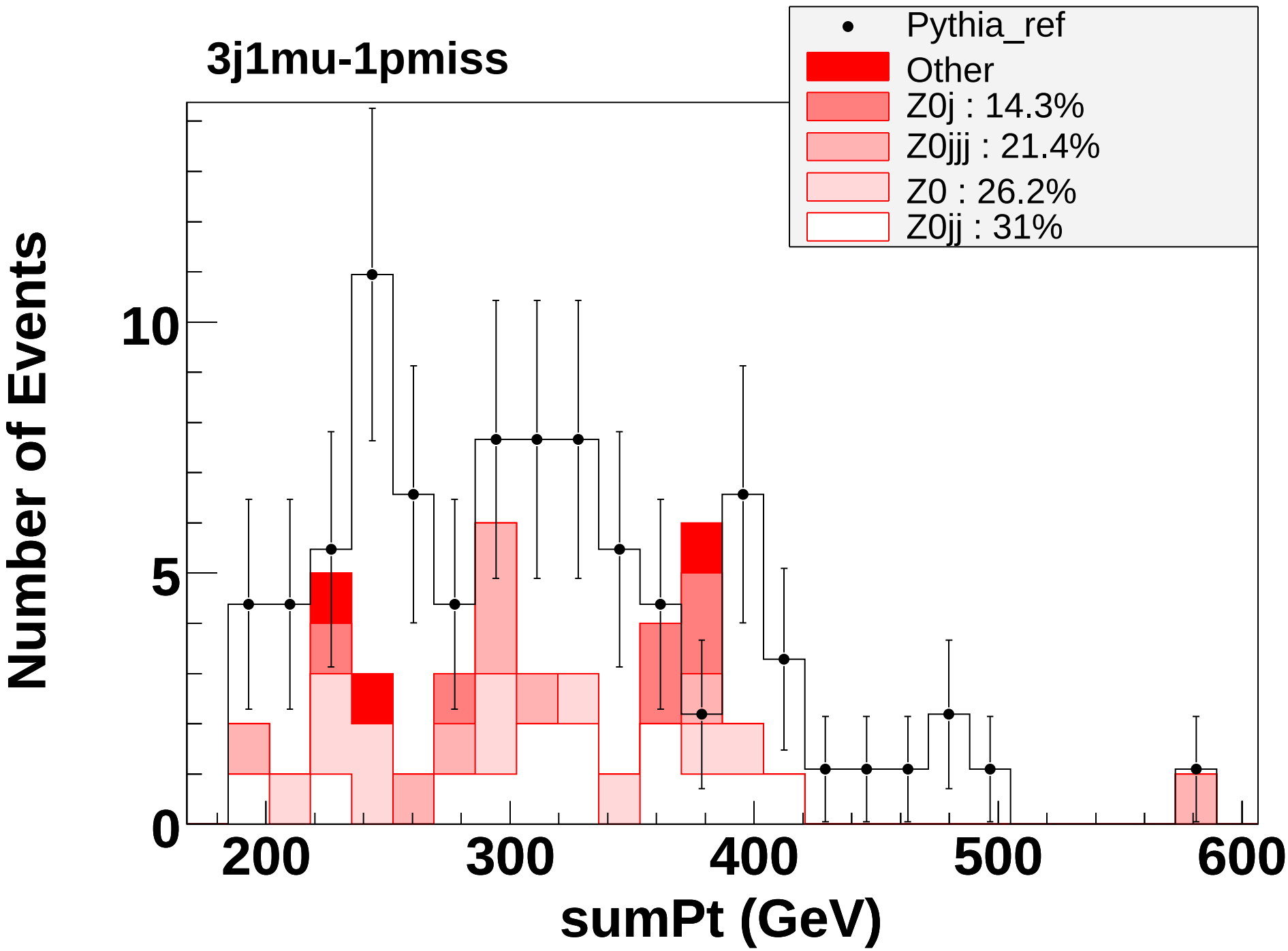

3j1mu-1pmiss
Pythia_ref
Other
Z0j : 14.3%
Z0jjj : 21.4%
Z0 : 26.2%
Z0jj : 31%
Number of Events
0
5
10
15
2
4
6
ΔR(j1,j3)

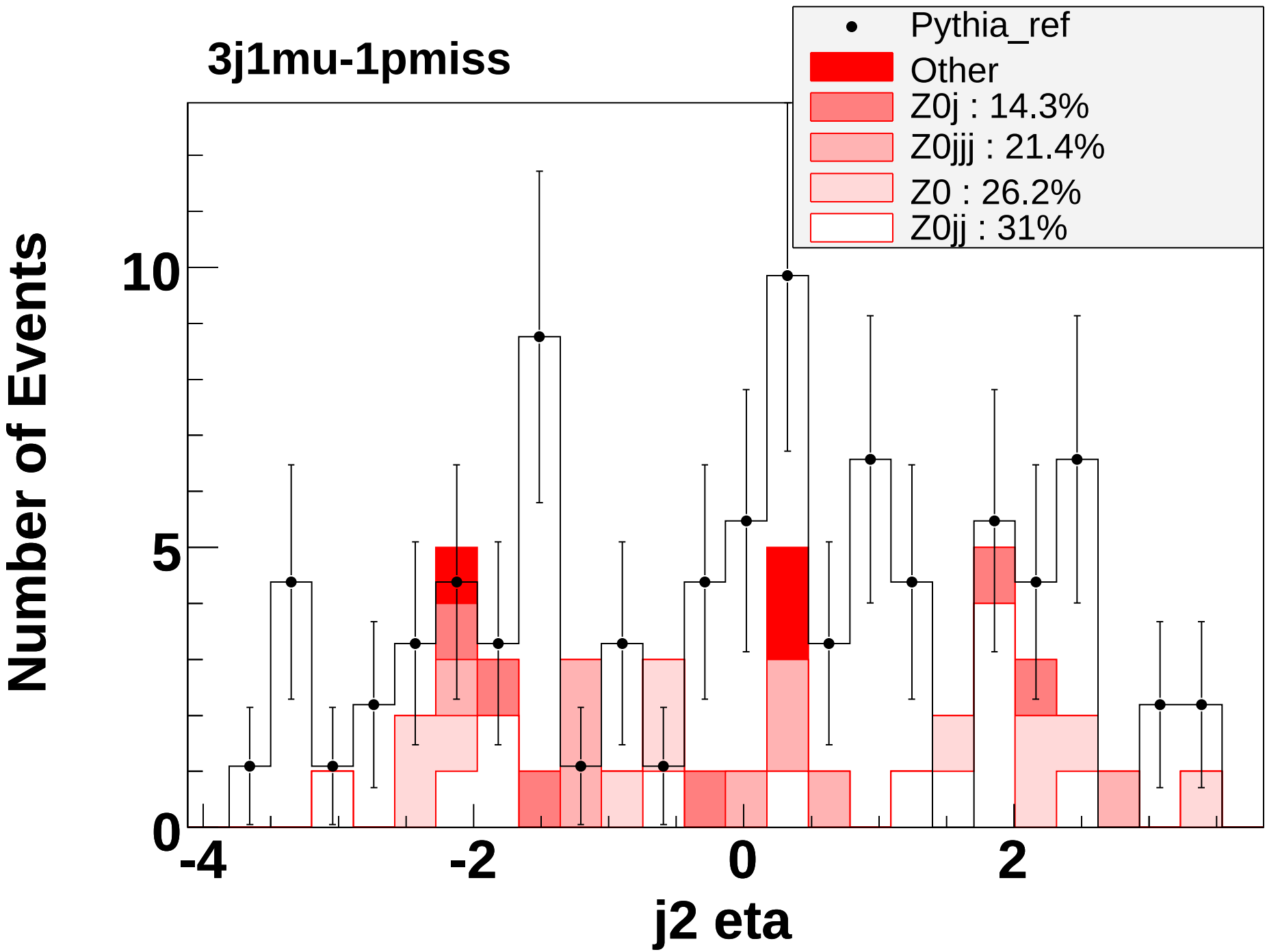

3j1mu-1pmiss
Pythia_ref
Other
Z0j : 14.3%
Z0jjj : 21.4%
Z0 : 26.2%
Z0jj : 31%
Number of Events
0
5
10
0
1
2
3
Δϕ(j2,j3) (radians)

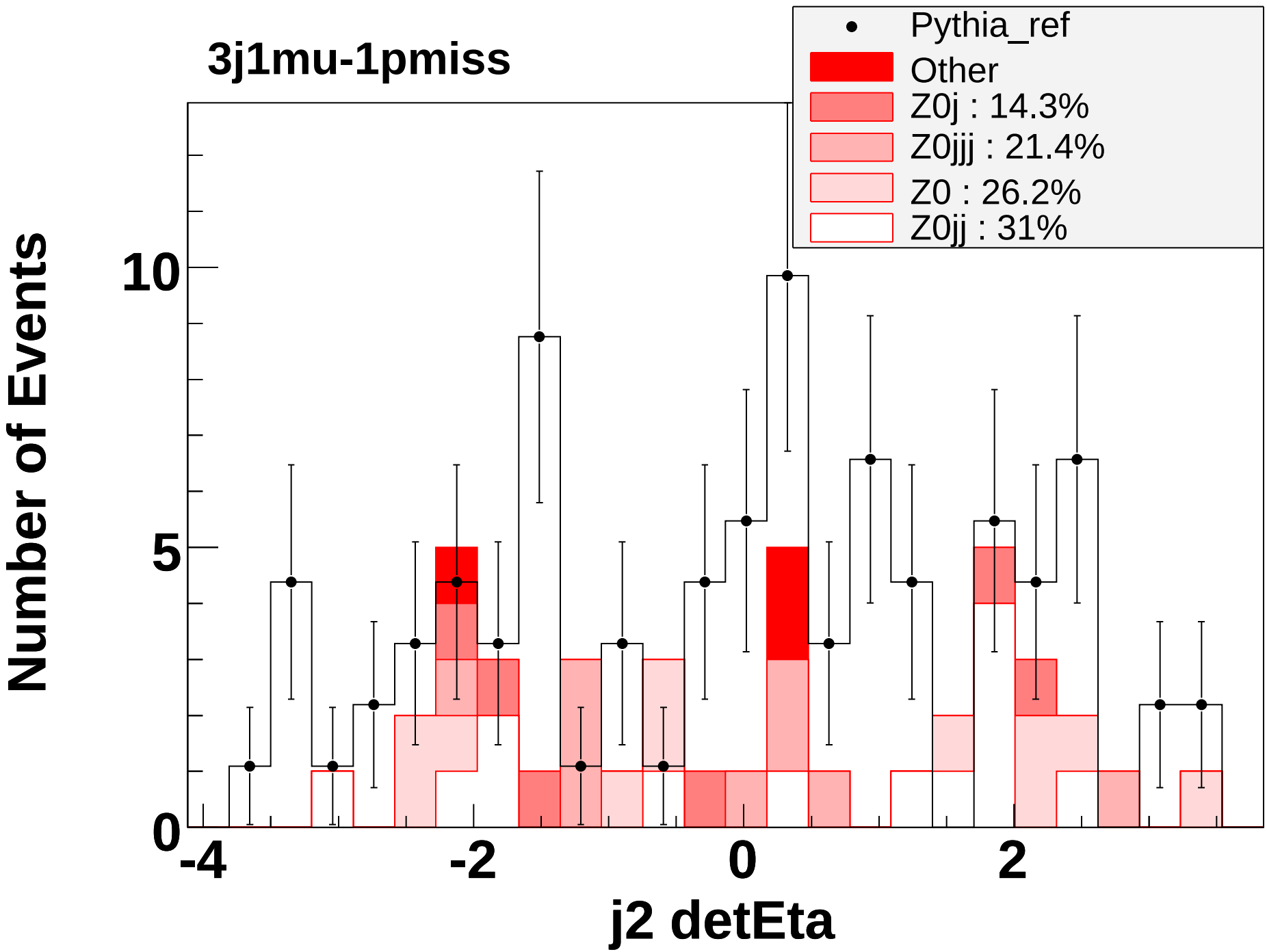

3j1mu-1pmiss
Pythia_ref
Other
Z0j : 14.3%
Z0jjj : 21.4%
Z0 : 26.2%
Z0jj : 31%
Number of Events
0
10
20
30
500
1000
M(W,j3) (GeV)

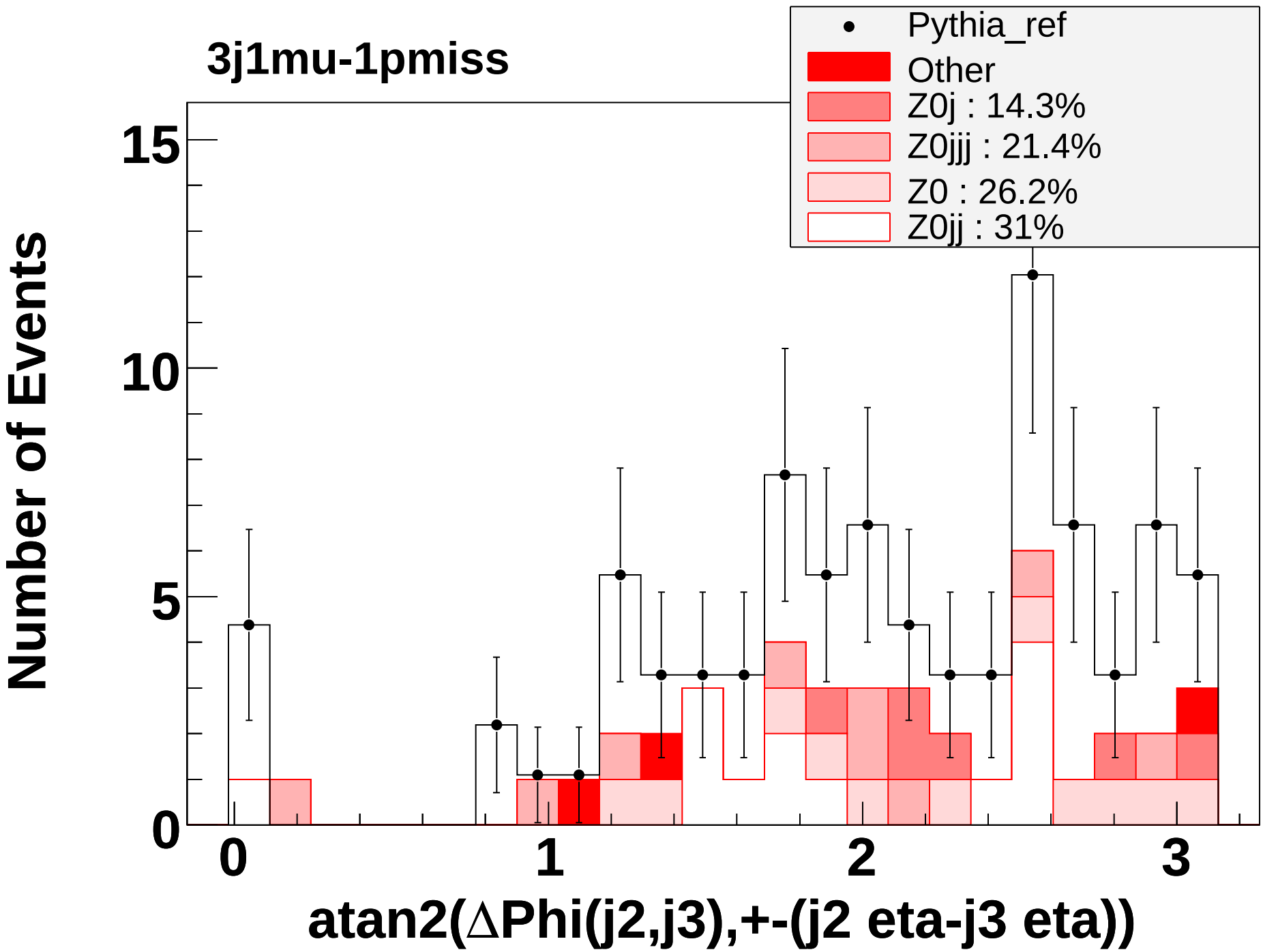

3j1mu-1pmiss
Pythia_ref
Other
Z0j : 14.3%
Z0jjj : 21.4%
Z0 : 26.2%
Z0jj : 31%
Number of Events
0
10
20
30
40
0
500
1000
M(μ⁻,j3) (GeV)

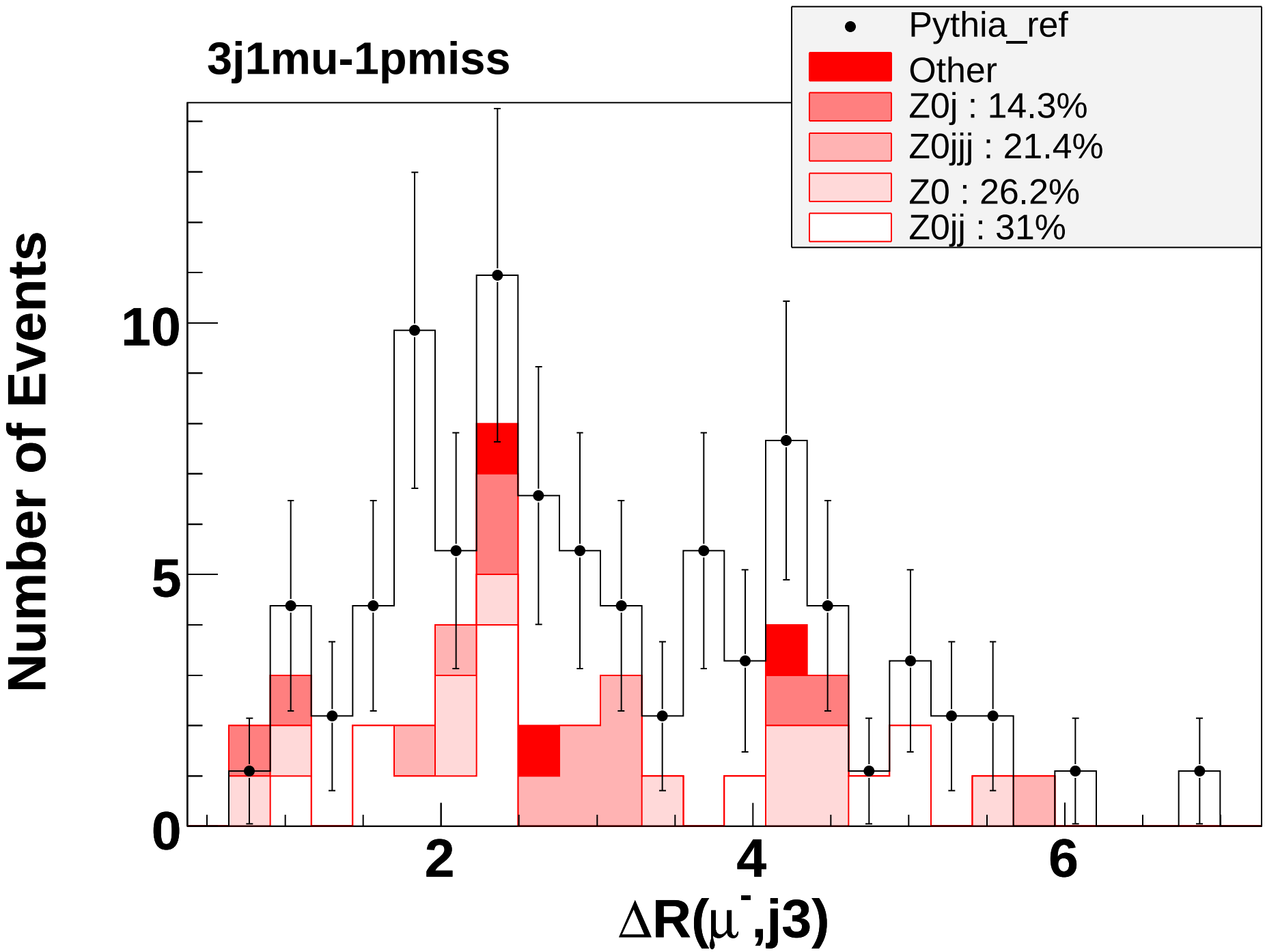

3j1mu-1pmiss
Pythia_ref
Other
Z0j : 14.3%
Z0jjj : 21.4%
Z0 : 26.2%
Z0jj : 31%
Number of Events
0
5
10
0
1
2
3
4
minΔR(μ⁻,j)

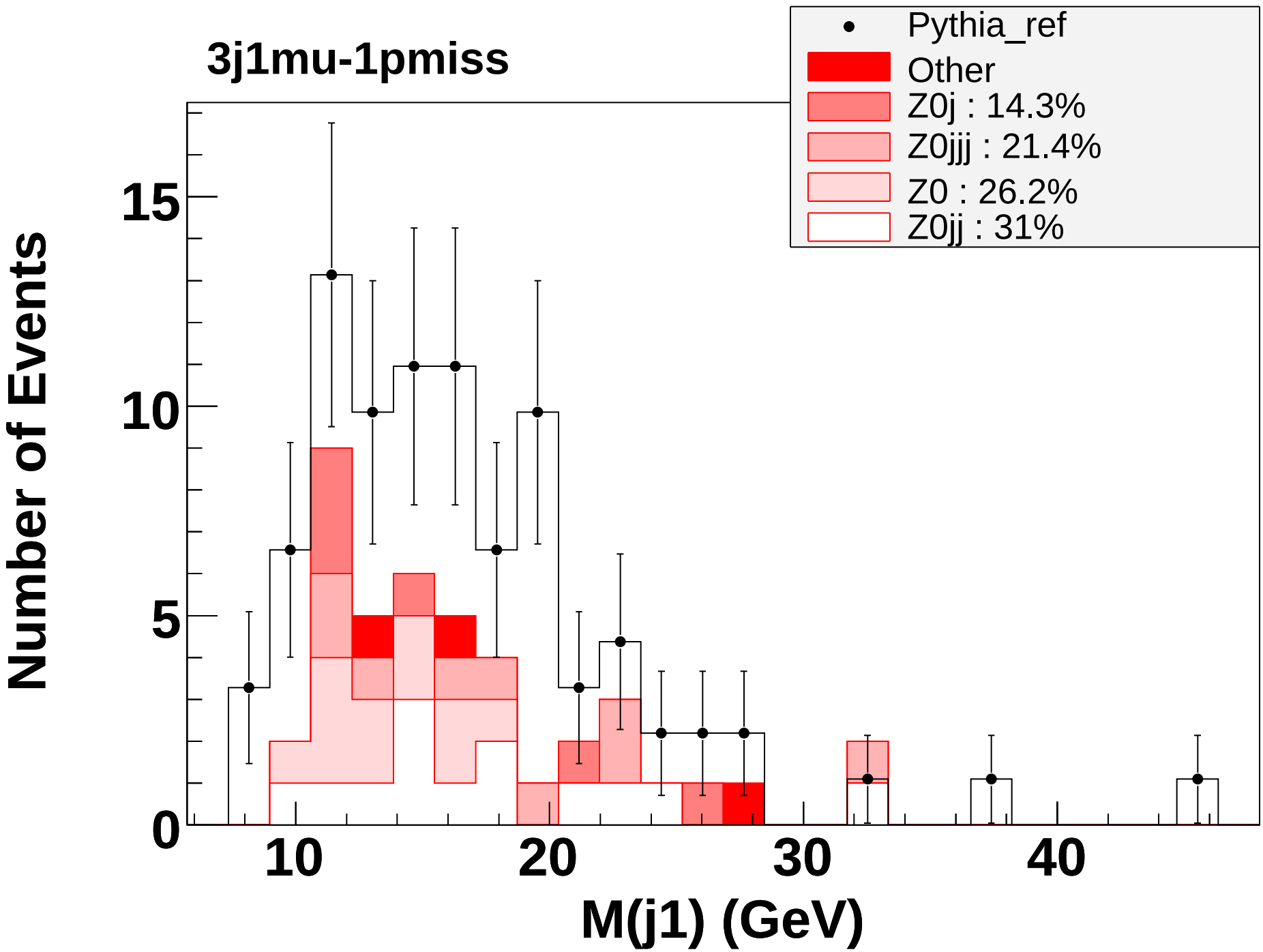

3j1mu-1pmiss
Pythia_ref
Other
Z0j : 14.3%
Z0jjj : 21.4%
Z0 : 26.2%
Z0jj : 31%
Number of Events
0
5
10
200
300
400
500
600
sumPt (GeV)

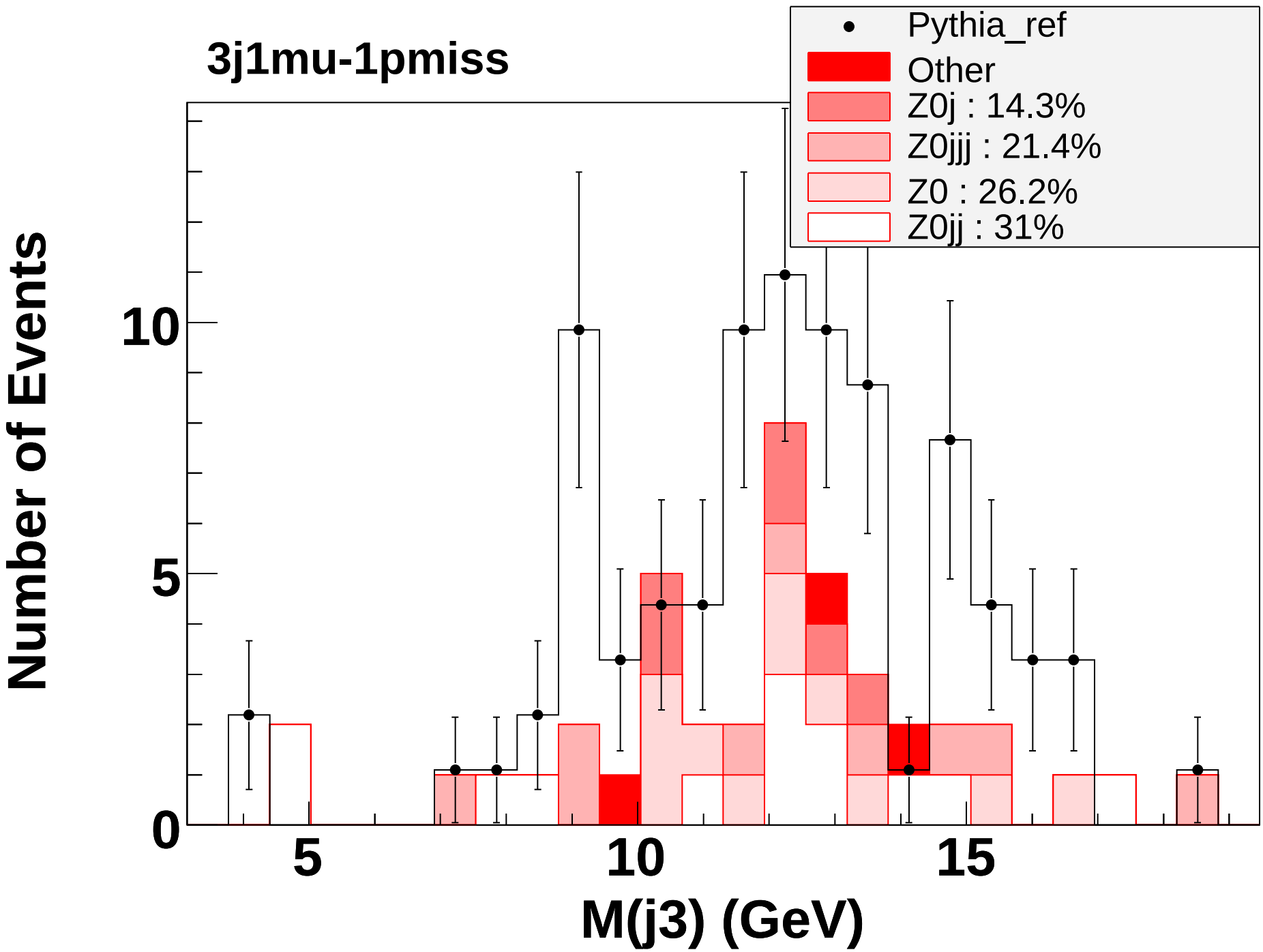

3j1mu-1pmiss
Pythia_ref
Other
Z0j : 14.3%
Z0jjj : 21.4%
Z0 : 26.2%
Z0jj : 31%
Number of Events
0
5
10
-4
-2
0
2
j2 eta

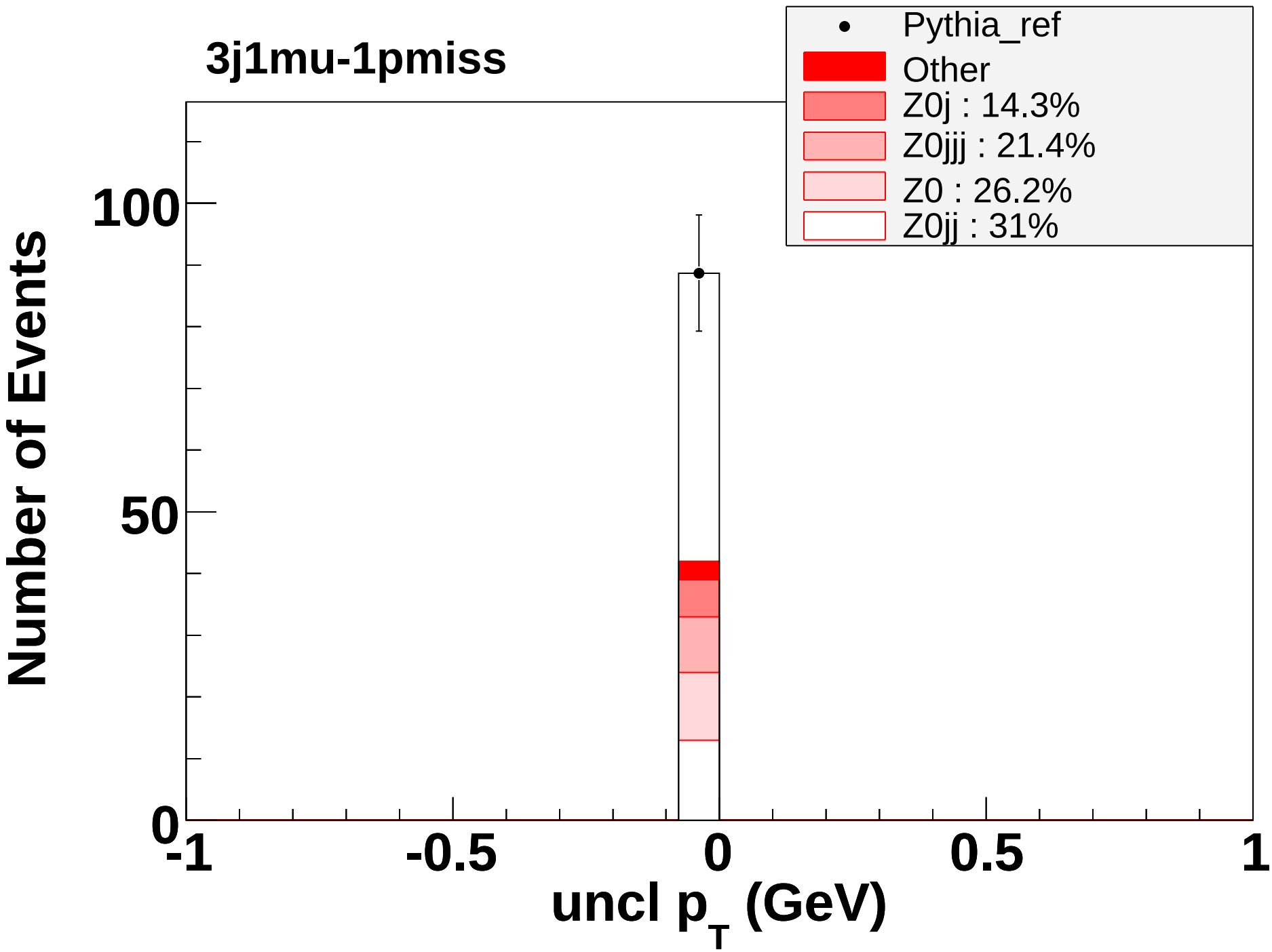

3j1mu-1pmiss
Pythia_ref
Other
Z0j : 14.3%
Z0jjj : 21.4%
Z0 : 26.2%
Z0jj : 31%
Number of Events
0
5
10
-4
-2
0
2
j2 detEta


3j1mu-1pmiss
Pythia_ref
Other
Z0j : 14.3%
Z0jjj : 21.4%
Z0 : 26.2%
Z0jj : 31%
Number of Events
0
5
10
15
0
1
2
3
atan2(ΔPhi(j2,j3),+-(j2 eta-j3 eta))


3j1mu-1pmiss
Pythia_ref
Other
Z0j : 14.3%
Z0jjj : 21.4%
Z0 : 26.2%
Z0jj : 31%
Number of Events
0
5
10
2
4
6
ΔR(μ⁻,j3)


3j1mu-1pmiss
Pythia_ref
Other
Z0j : 14.3%
Z0jjj : 21.4%
Z0 : 26.2%
Z0jj : 31%
Number of Events
0
5
10
15
10
20
30
40
M(j1) (GeV)


3j1mu-1pmiss
Pythia_ref
Other
Z0j : 14.3%
Z0jjj : 21.4%
Z0 : 26.2%
Z0jj : 31%
Number of Events
0
5
10
5
10
15
M(j3) (GeV)


3j1mu-1pmiss
Pythia_ref
Other
Z0j : 14.3%
Z0jjj : 21.4%
Z0 : 26.2%
Z0jj : 31%
Number of Events
100
50
0
-1
-0.5
0
0.5
1
uncl p_T (GeV)