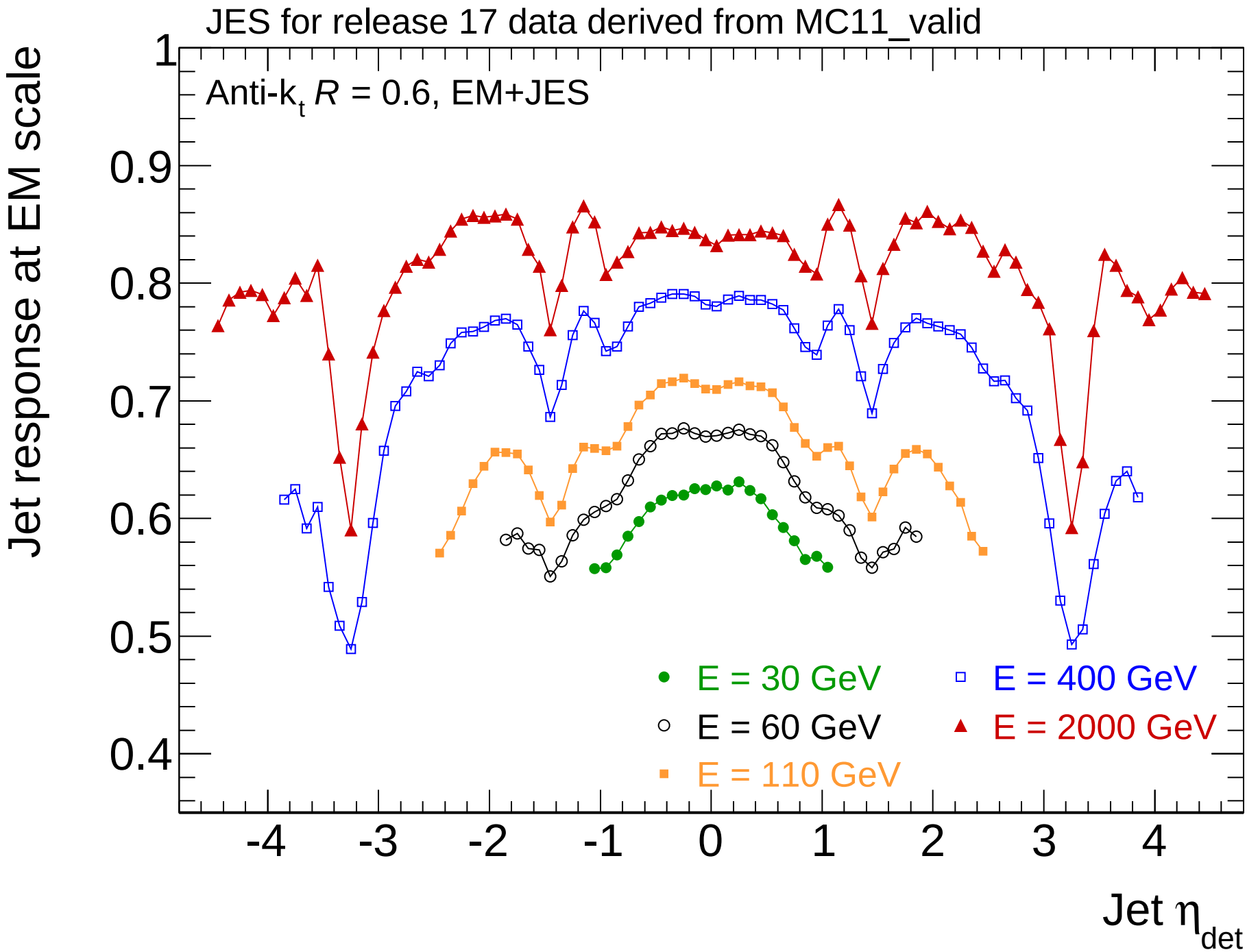
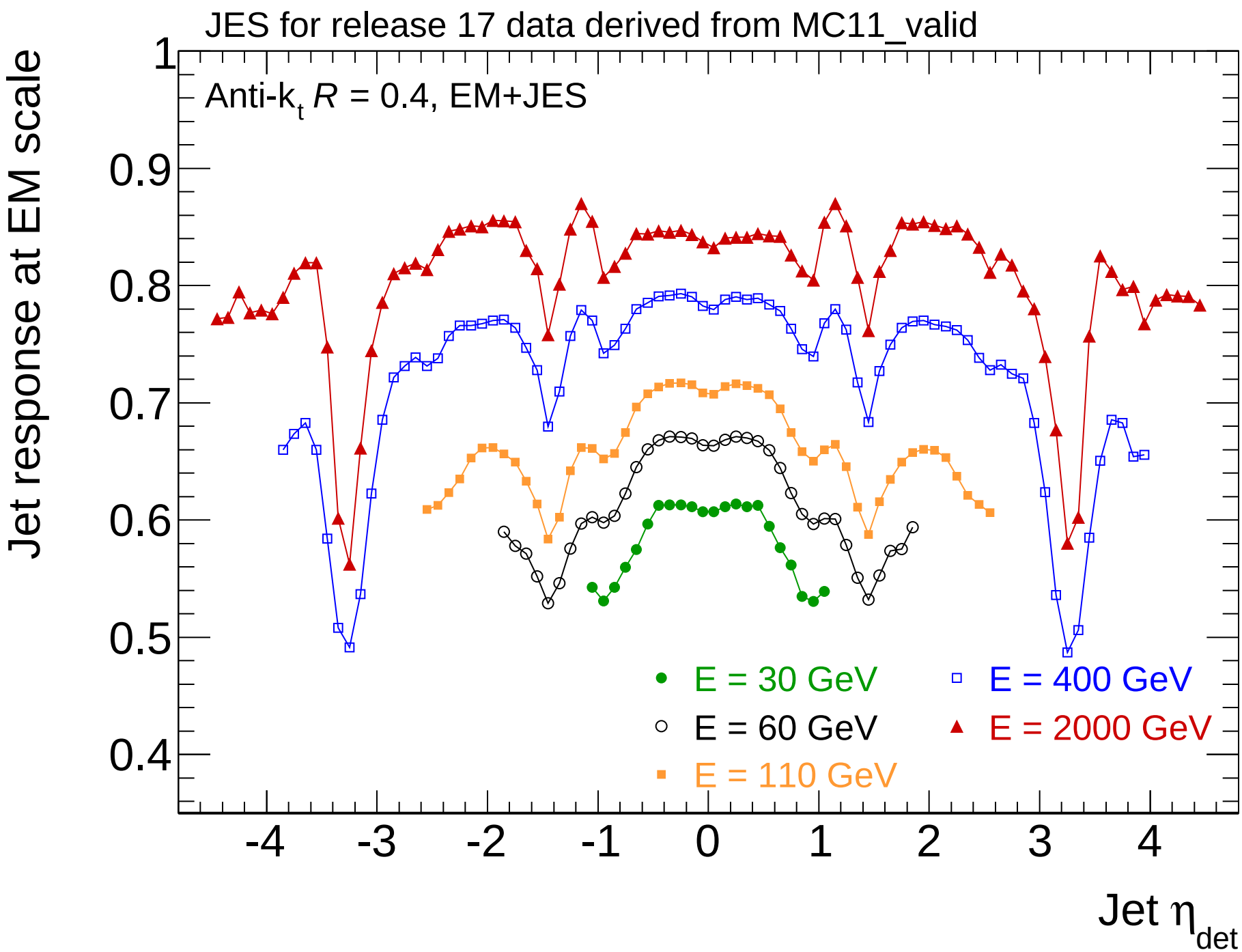
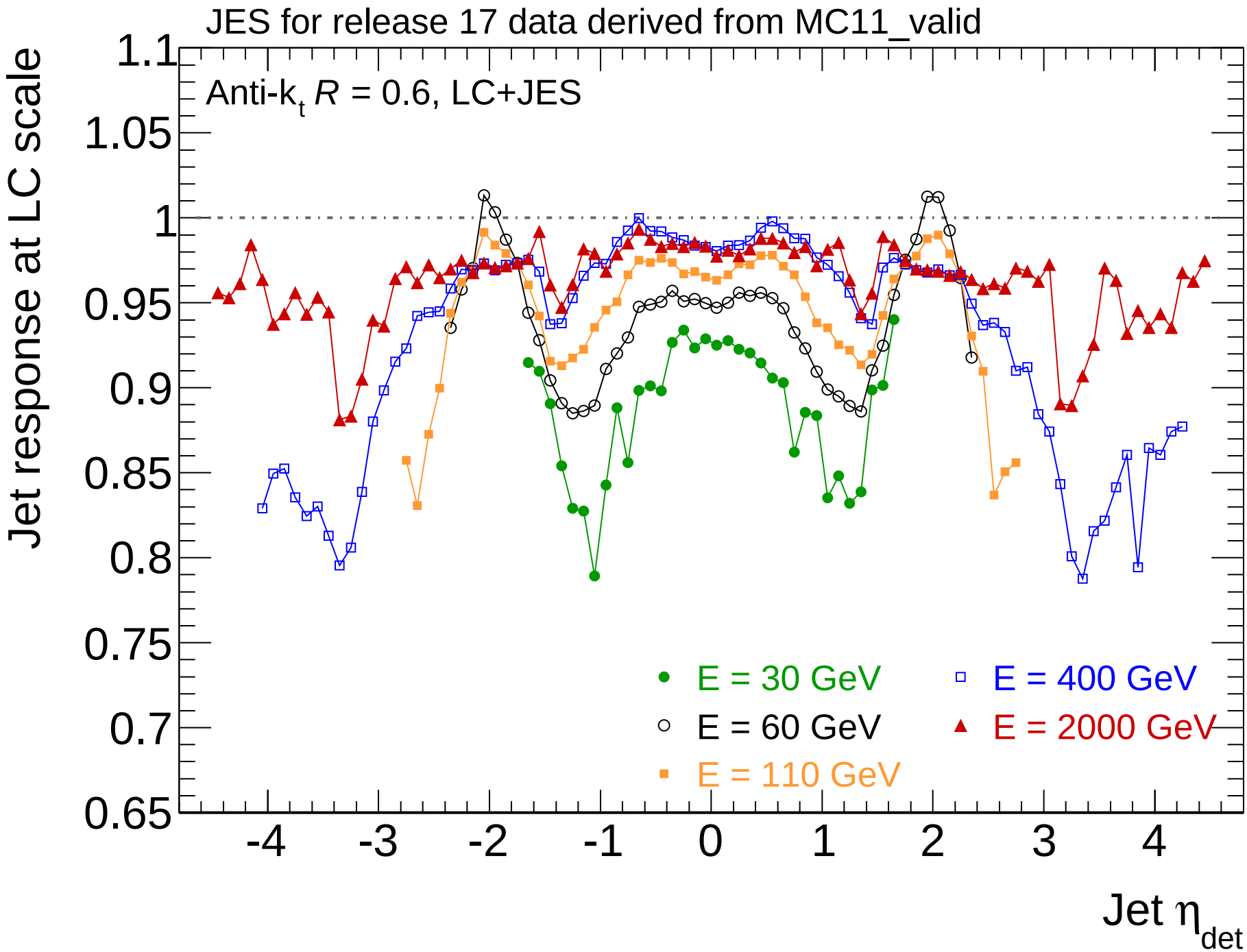
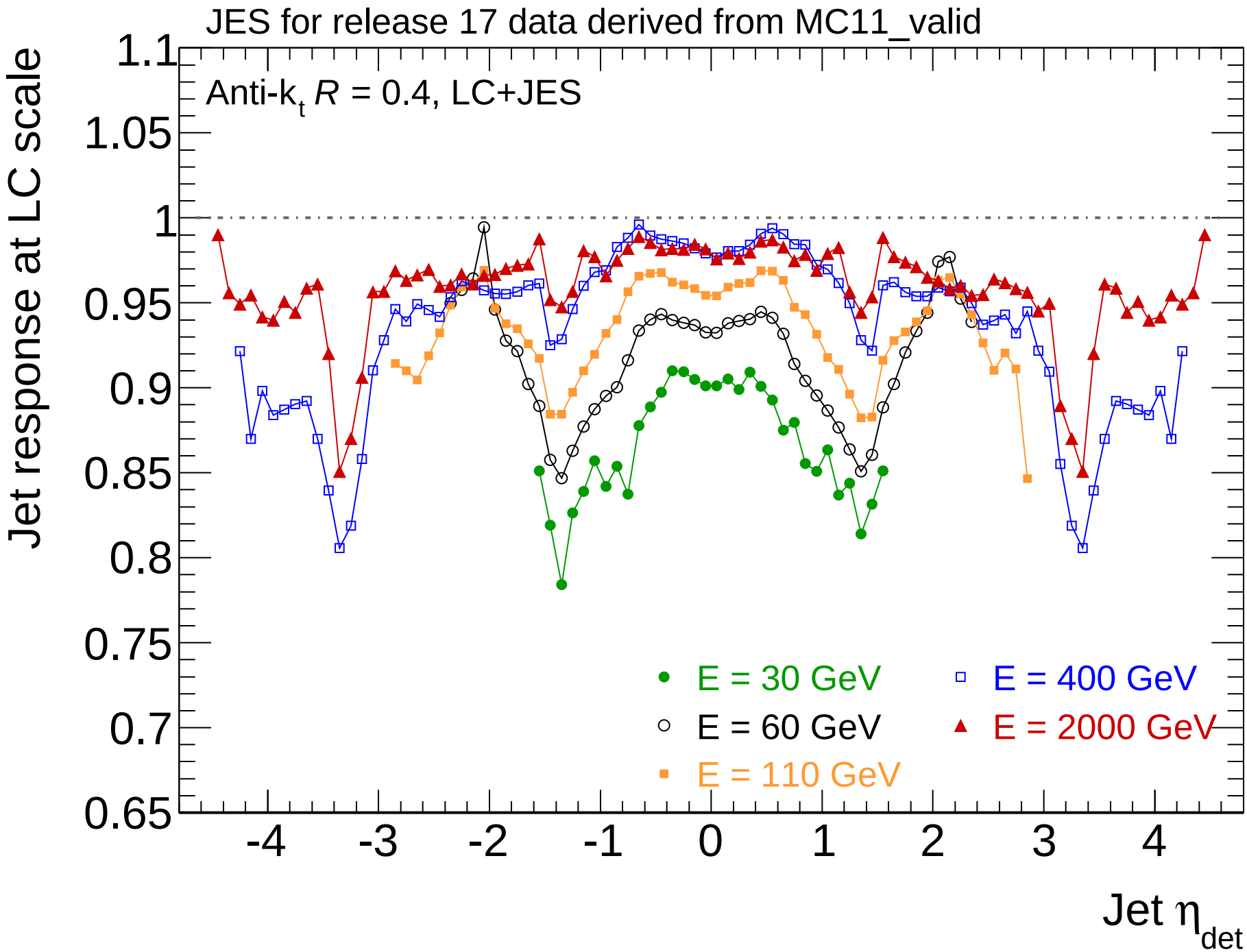
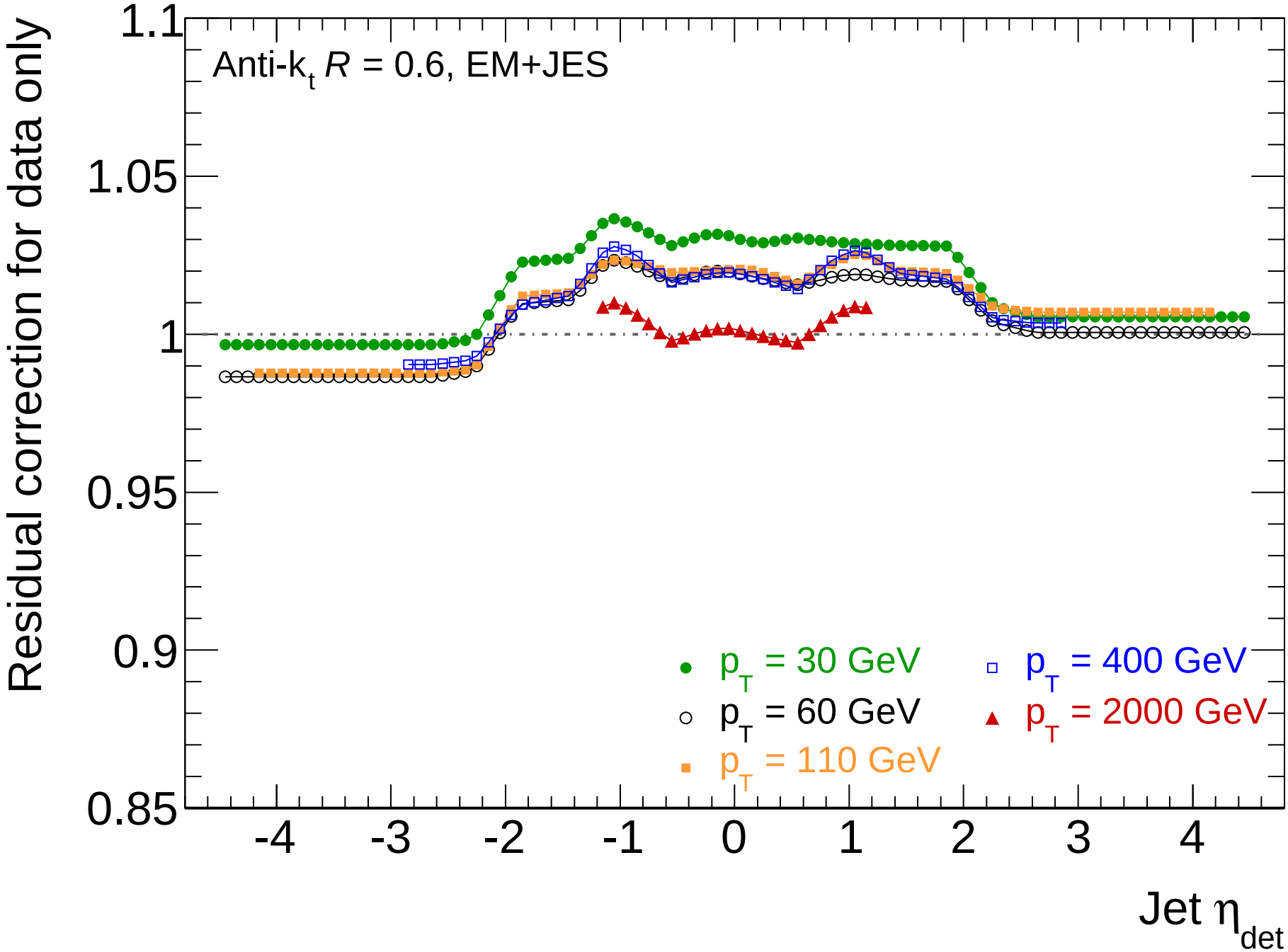
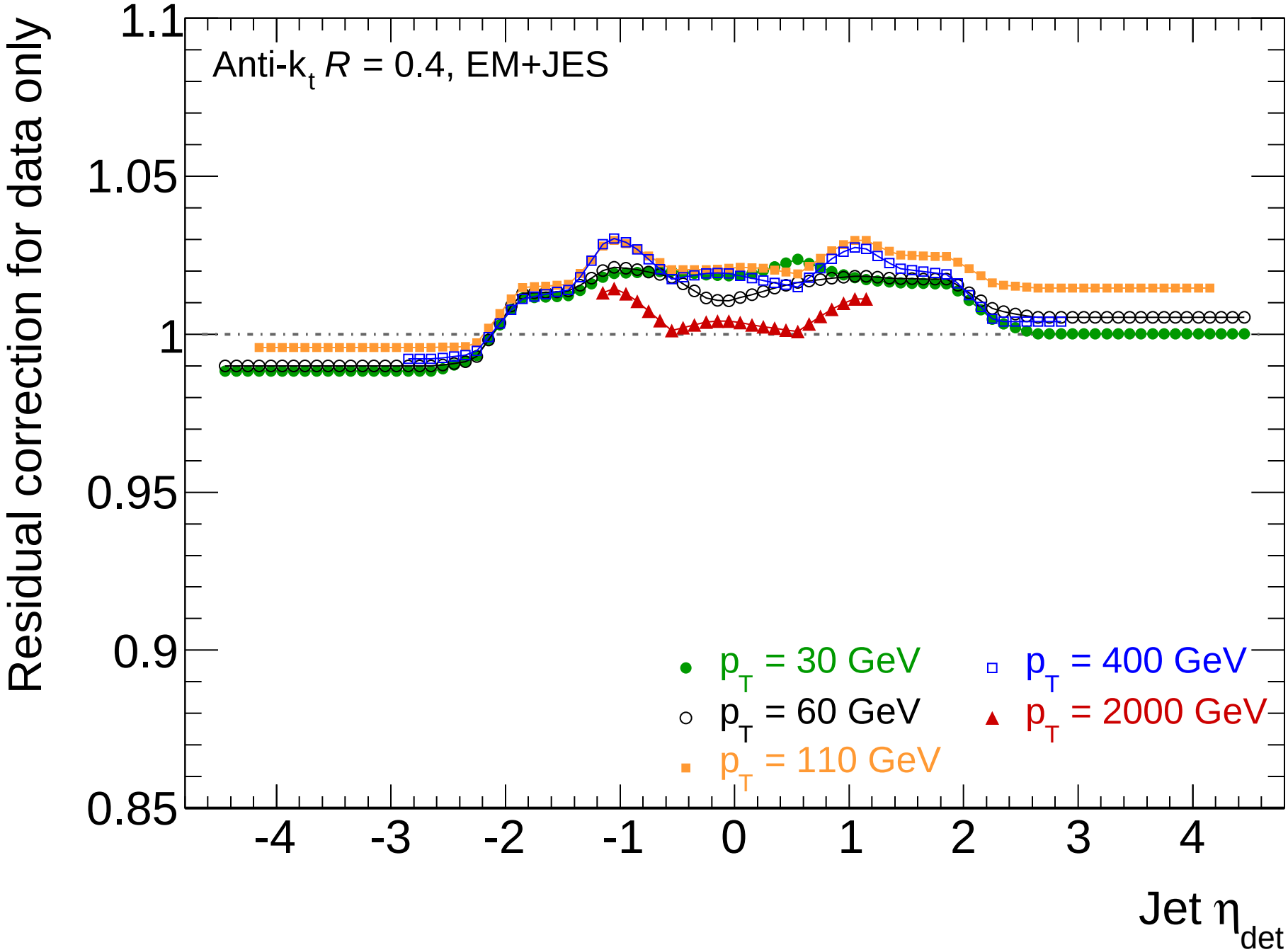

JES for release 17 data derived from MC11_valid
Anti-k$_t$ R = 0.6, EM+JES
Jet response at EM scale
Jet η_{det}
E = 30 GeV
E = 60 GeV
E = 110 GeV
E = 400 GeV
E = 2000 GeV
1
0.9
0.8
0.7
0.6
0.5
0.4
-4
-3
-2
-1
0
1
2
3
4

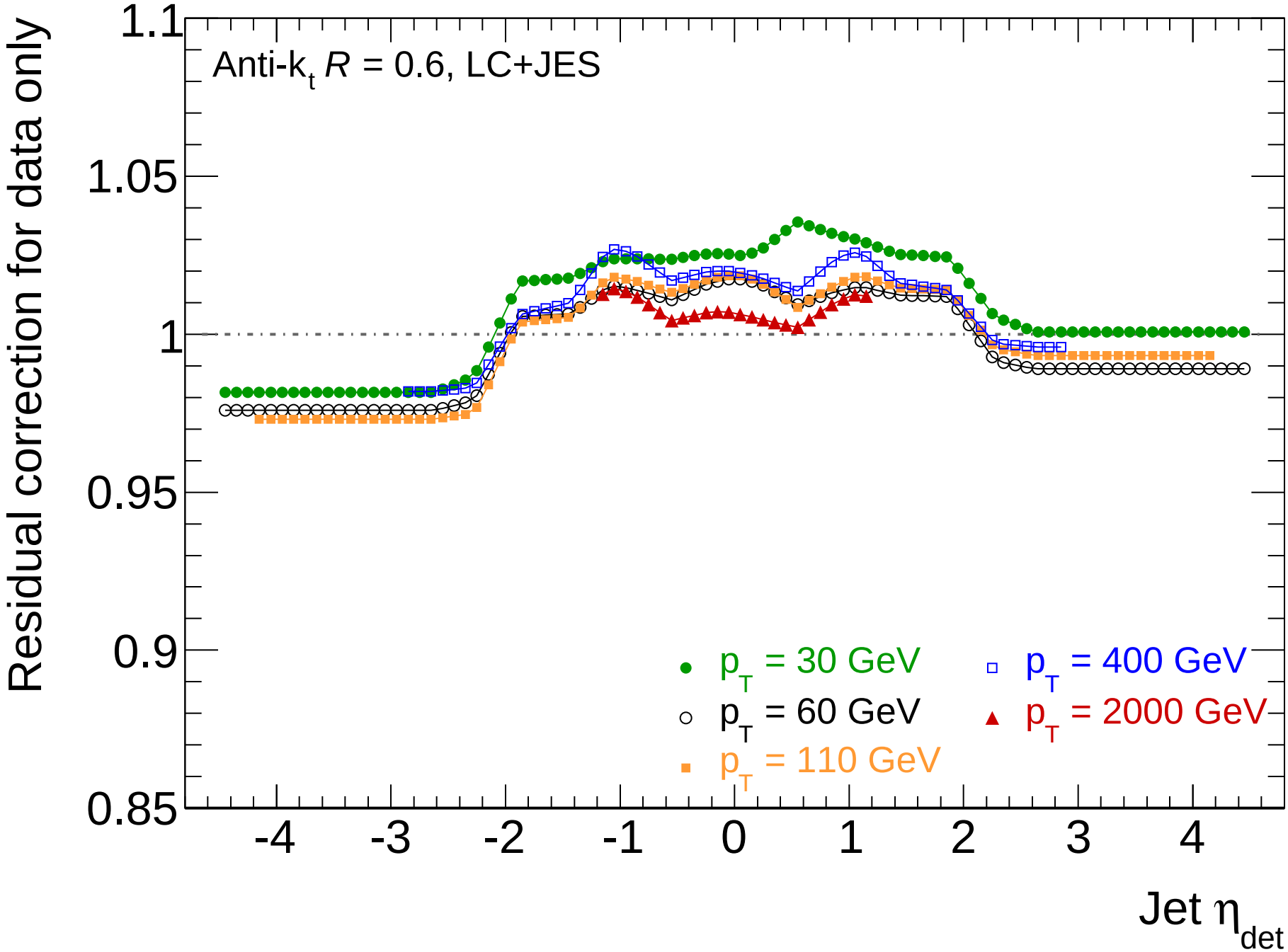

JES for release 17 data derived from MC11_valid
Anti-k$_t$ R = 0.4, EM+JES
Jet response at EM scale
Jet η_{det}
E = 30 GeV
E = 60 GeV
E = 110 GeV
E = 400 GeV
E = 2000 GeV
1
0.9
0.8
0.7
0.6
0.5
0.4
-4
-3
-2
-1
0
1
2
3
4

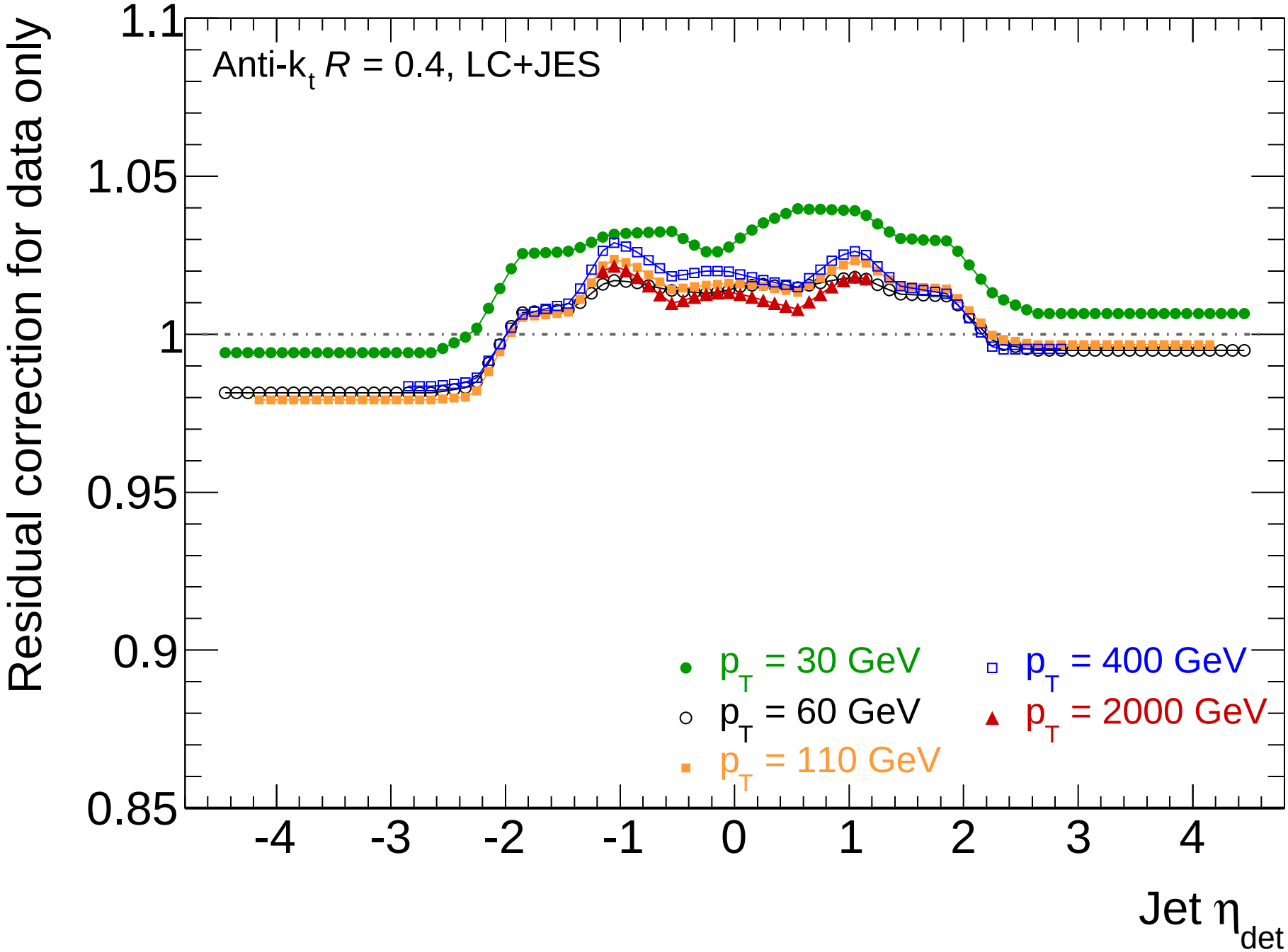

JES for release 17 data derived from MC11_valid
Anti-k$_t$ R = 0.6, LC+JES
Jet response at LC scale
Jet η_{det}
E = 30 GeV
E = 60 GeV
E = 110 GeV
E = 400 GeV
E = 2000 GeV
1.1
1.05
1
0.95
0.9
0.85
0.8
0.75
0.7
0.65
-4
-3
-2
-1
0
1
2
3
4

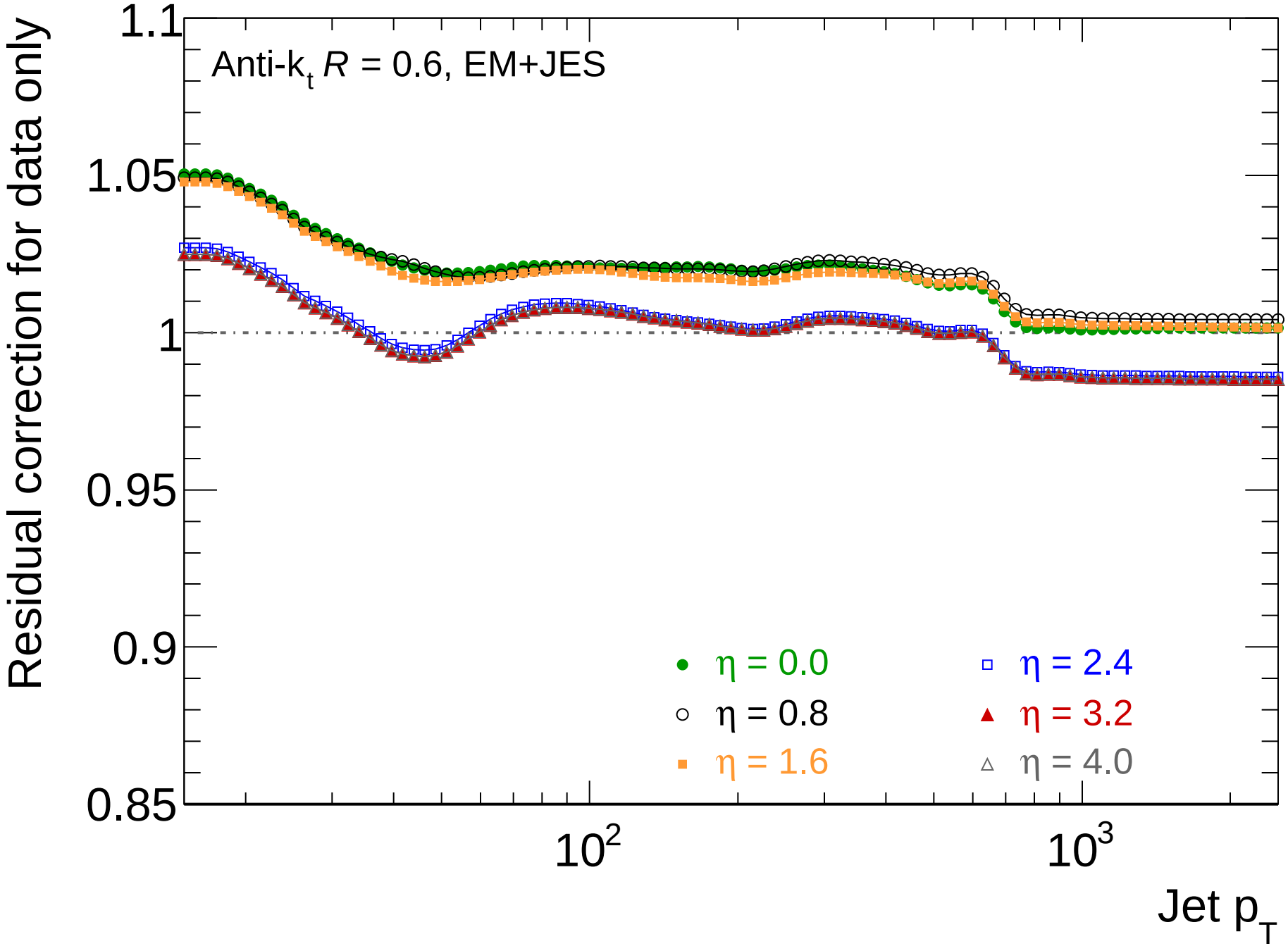

JES for release 17 data derived from MC11_valid
Anti-k$_t$ R = 0.4, LC+JES
Jet response at LC scale
Jet η_{det}
1.1
1.05
1
0.95
0.9
0.85
0.8
0.75
0.7
0.65
-4
-3
-2
-1
0
1
2
3
4
E = 30 GeV
E = 60 GeV
E = 110 GeV
E = 400 GeV
E = 2000 GeV

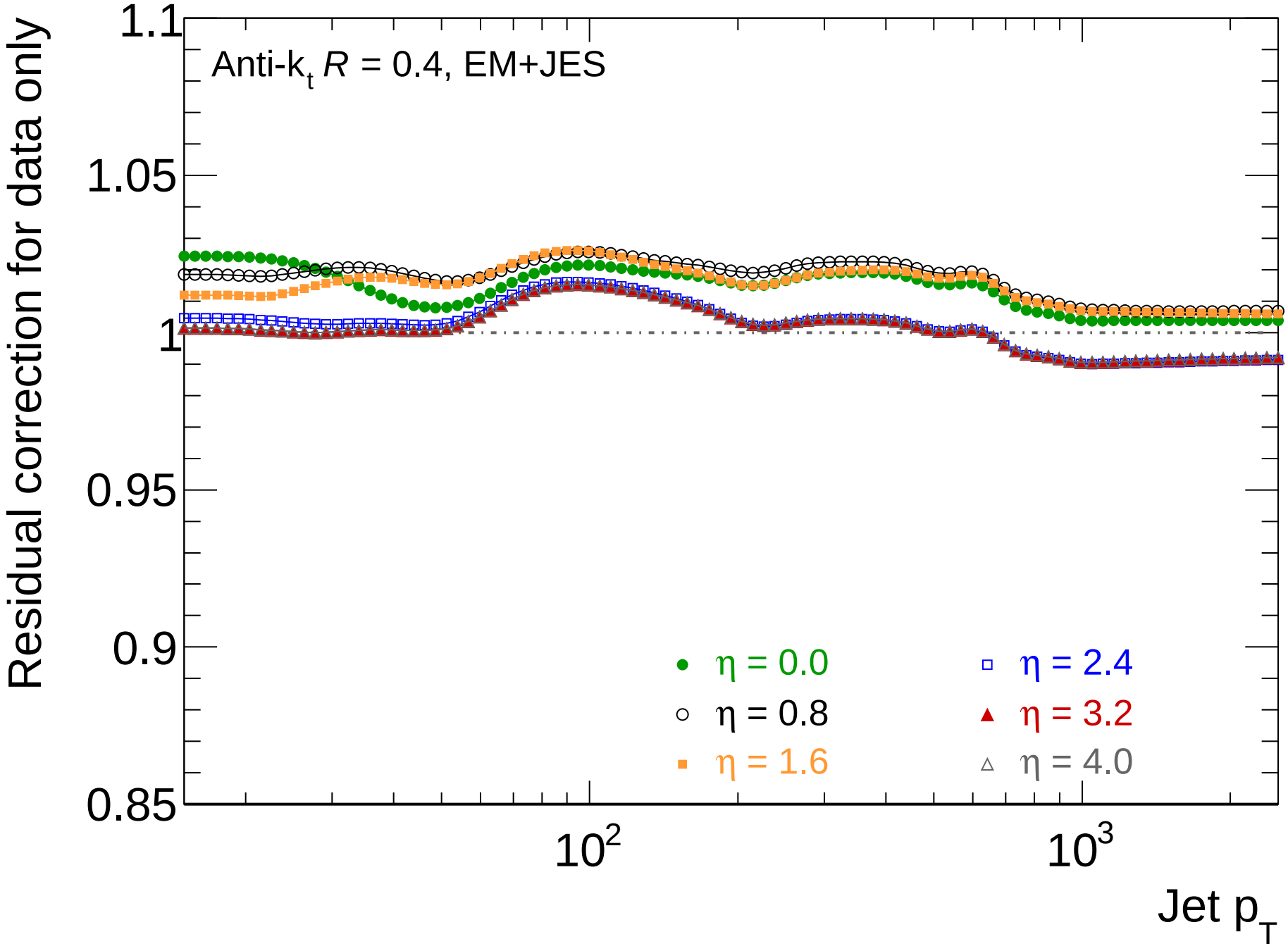

Anti-k$_t$ R = 0.6, EM+JES
Residual correction for data only
Jet η_{det}
1.1
1.05
1
0.95
0.9
0.85
-4
-3
-2
-1
0
1
2
3
4
p_T = 30 GeV
p_T = 60 GeV
p_T = 110 GeV
p_T = 400 GeV
p_T = 2000 GeV

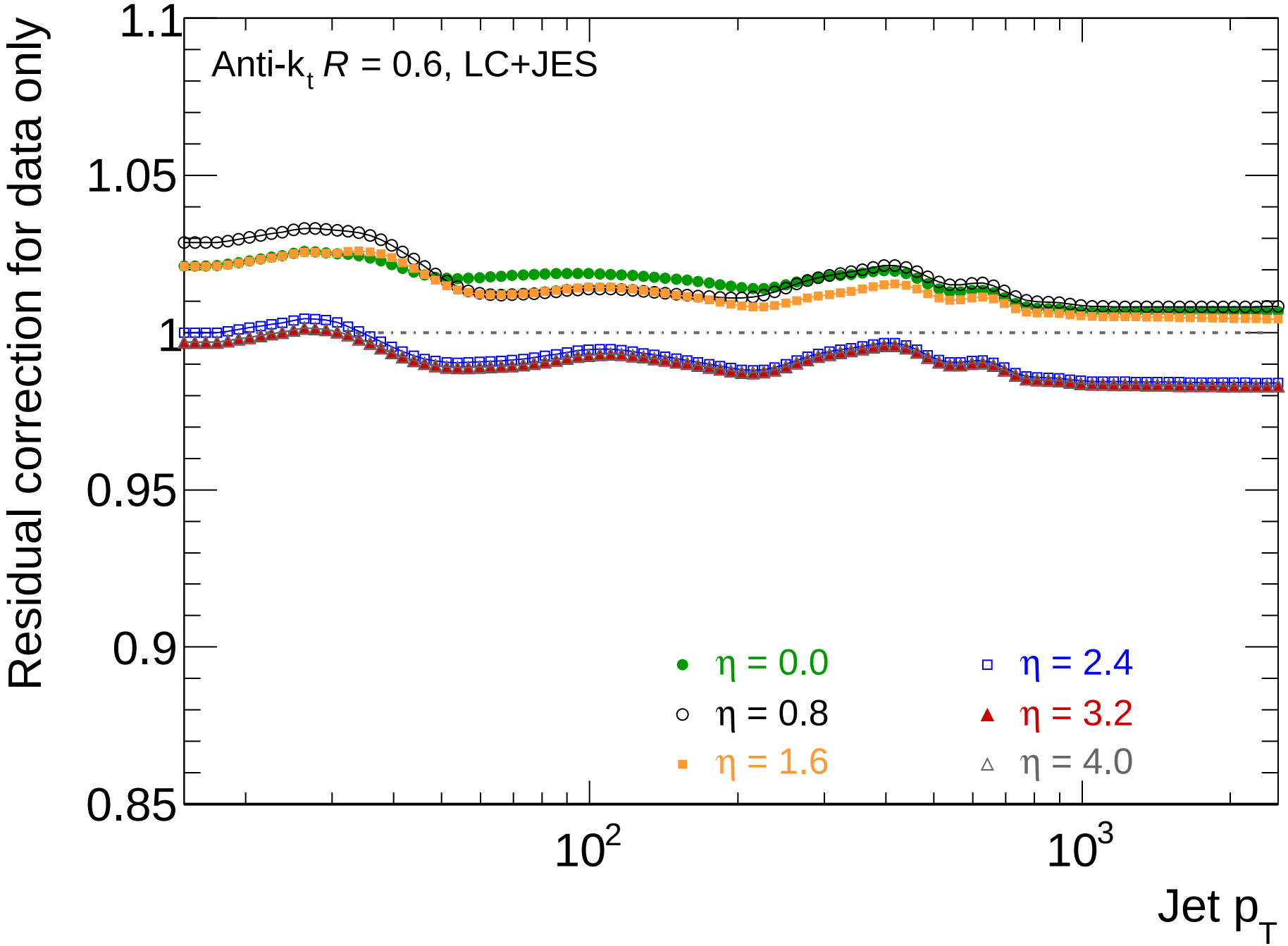

Anti-k$_t$ R = 0.4, EM+JES
Residual correction for data only
Jet η_{det}
1.1
1.05
1
0.95
0.9
0.85
-4
-3
-2
-1
0
1
2
3
4
p_T = 30 GeV
p_T = 60 GeV
p_T = 110 GeV
p_T = 400 GeV
p_T = 2000 GeV

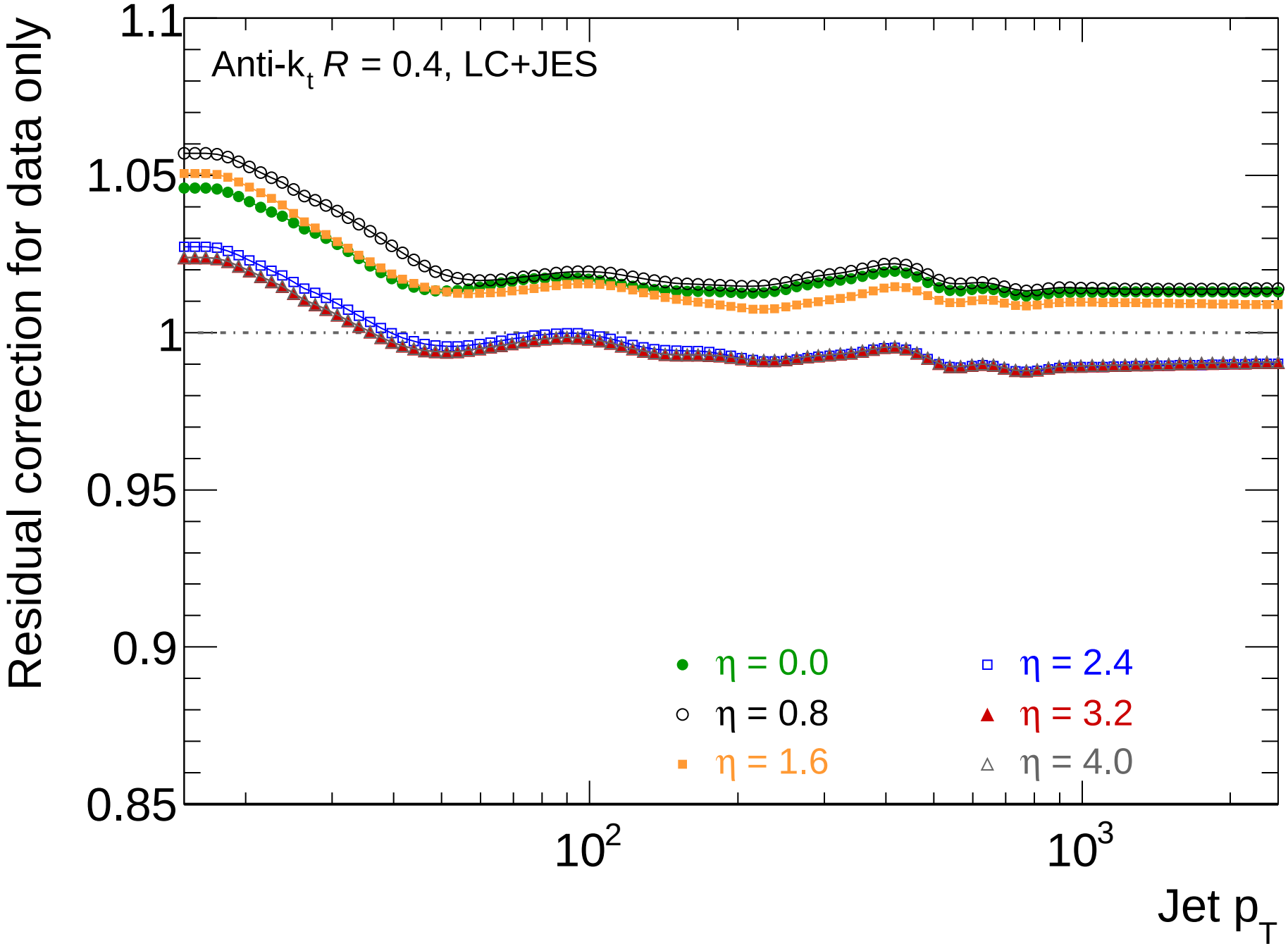

Anti-k$_t$ R = 0.6, LC+JES
Residual correction for data only
Jet η_{det}
1.1
1.05
1
0.95
0.9
0.85
-4
-3
-2
-1
0
1
2
3
4
p_T = 30 GeV
p_T = 60 GeV
p_T = 110 GeV
p_T = 400 GeV
p_T = 2000 GeV

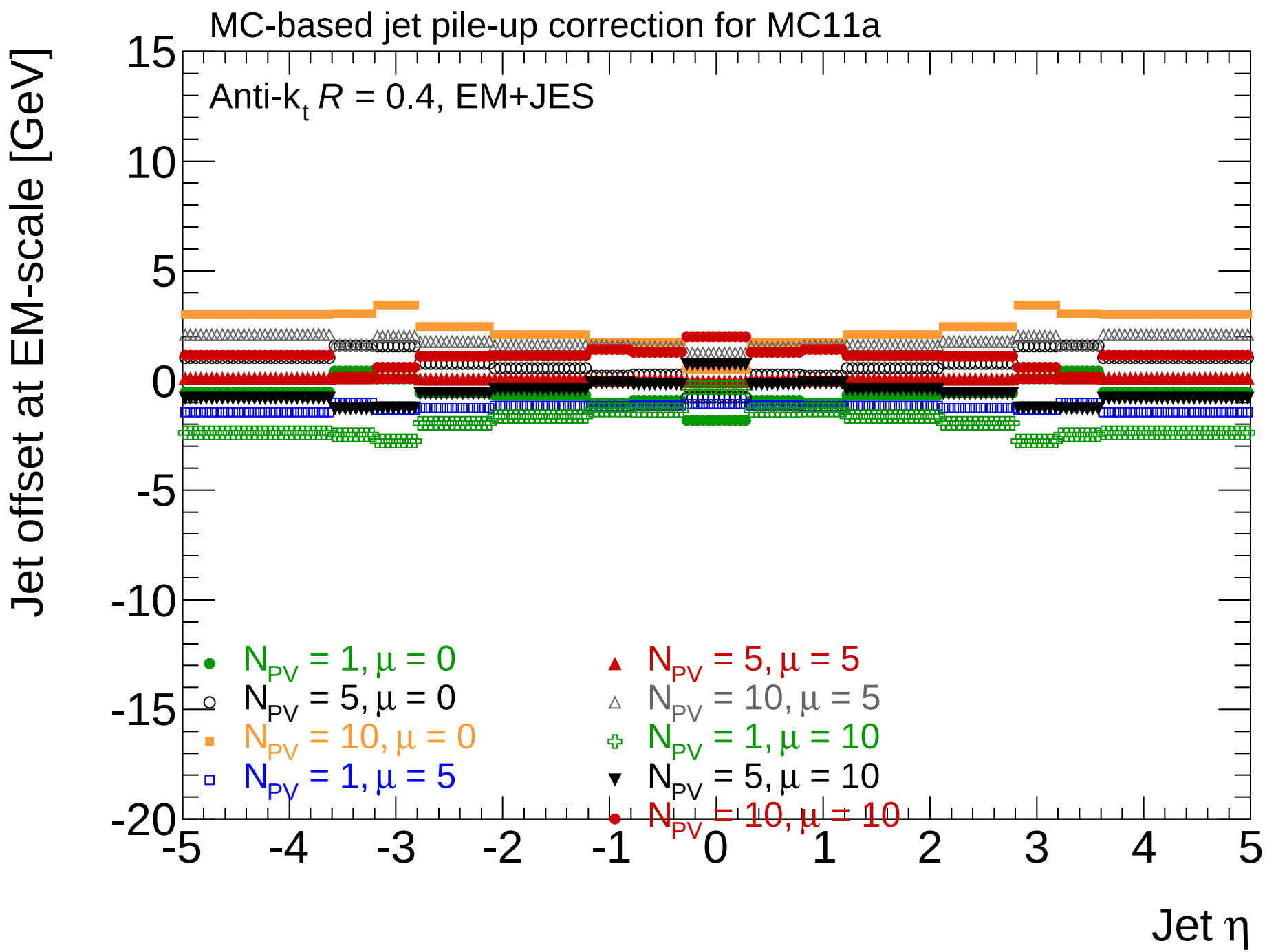

Anti-k$_t$ R = 0.4, LC+JES
Residual correction for data only
Jet η_{det}
1.1
1.05
1
0.95
0.9
0.85
-4
-3
-2
-1
0
1
2
3
4
p_T = 30 GeV
p_T = 60 GeV
p_T = 110 GeV
p_T = 400 GeV
p_T = 2000 GeV

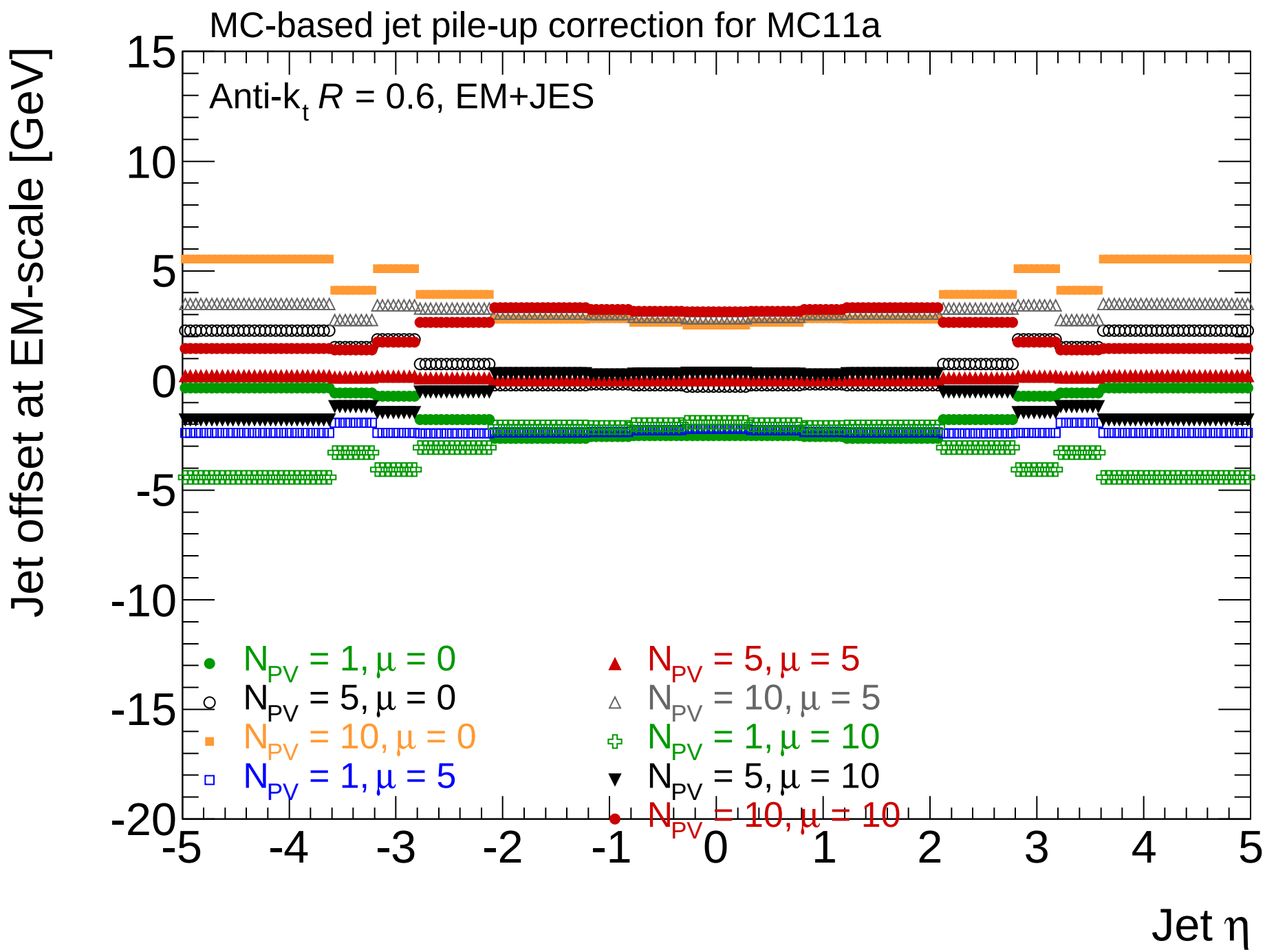

Anti-k$_t$ R = 0.6, EM+JES
Residual correction for data only
Jet p$_T$
1.1
1.05
1
0.95
0.9
0.85
10^2
10^3
η = 0.0
η = 0.8
η = 1.6
η = 2.4
η = 3.2
η = 4.0

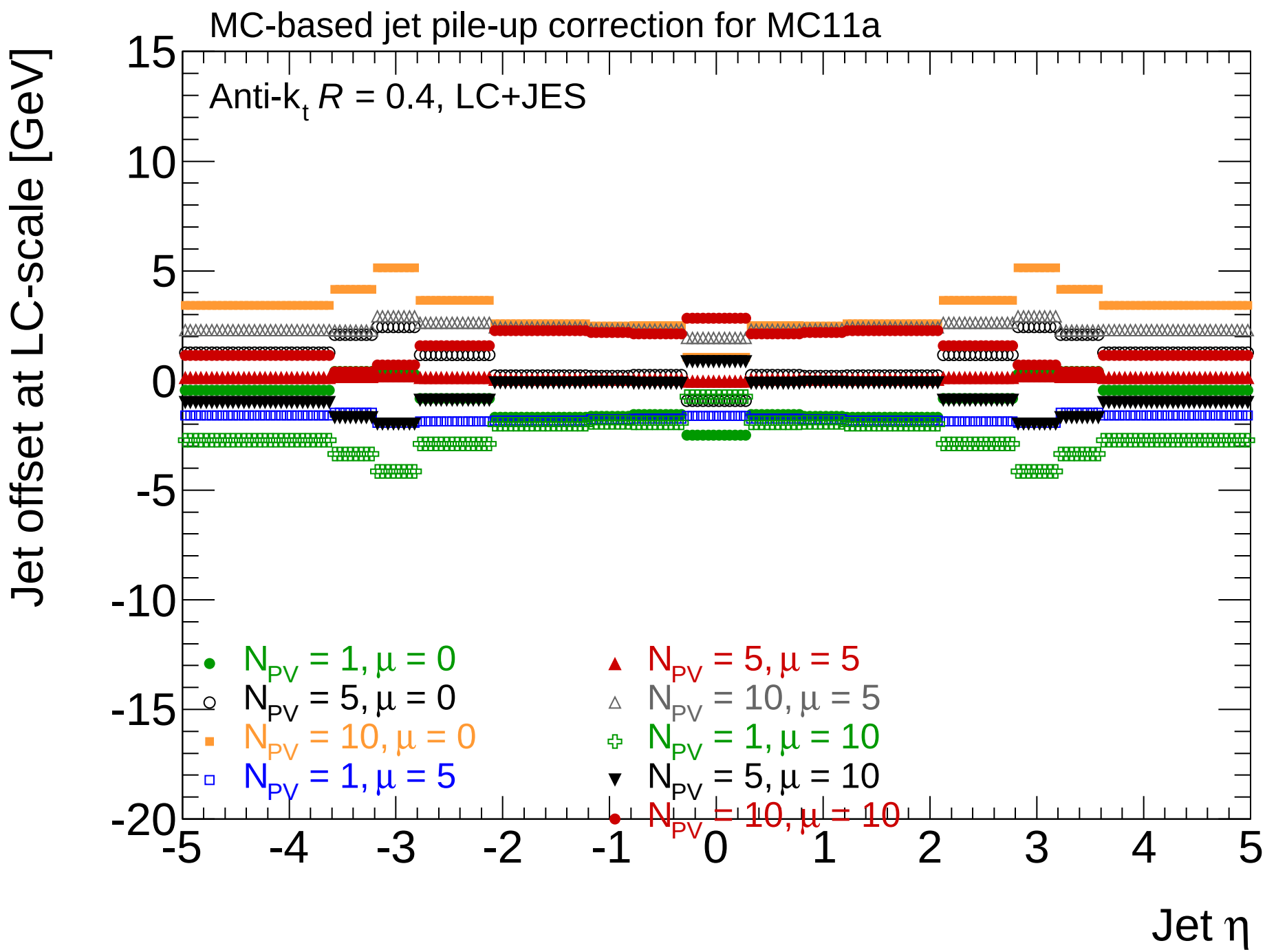

Anti-k$_t$ R = 0.4, EM+JES
Residual correction for data only
1.1
1.05
1
0.95
0.9
0.85
10^2
10^3
Jet p_T
η = 0.0
η = 0.8
η = 1.6
η = 2.4
η = 3.2
η = 4.0

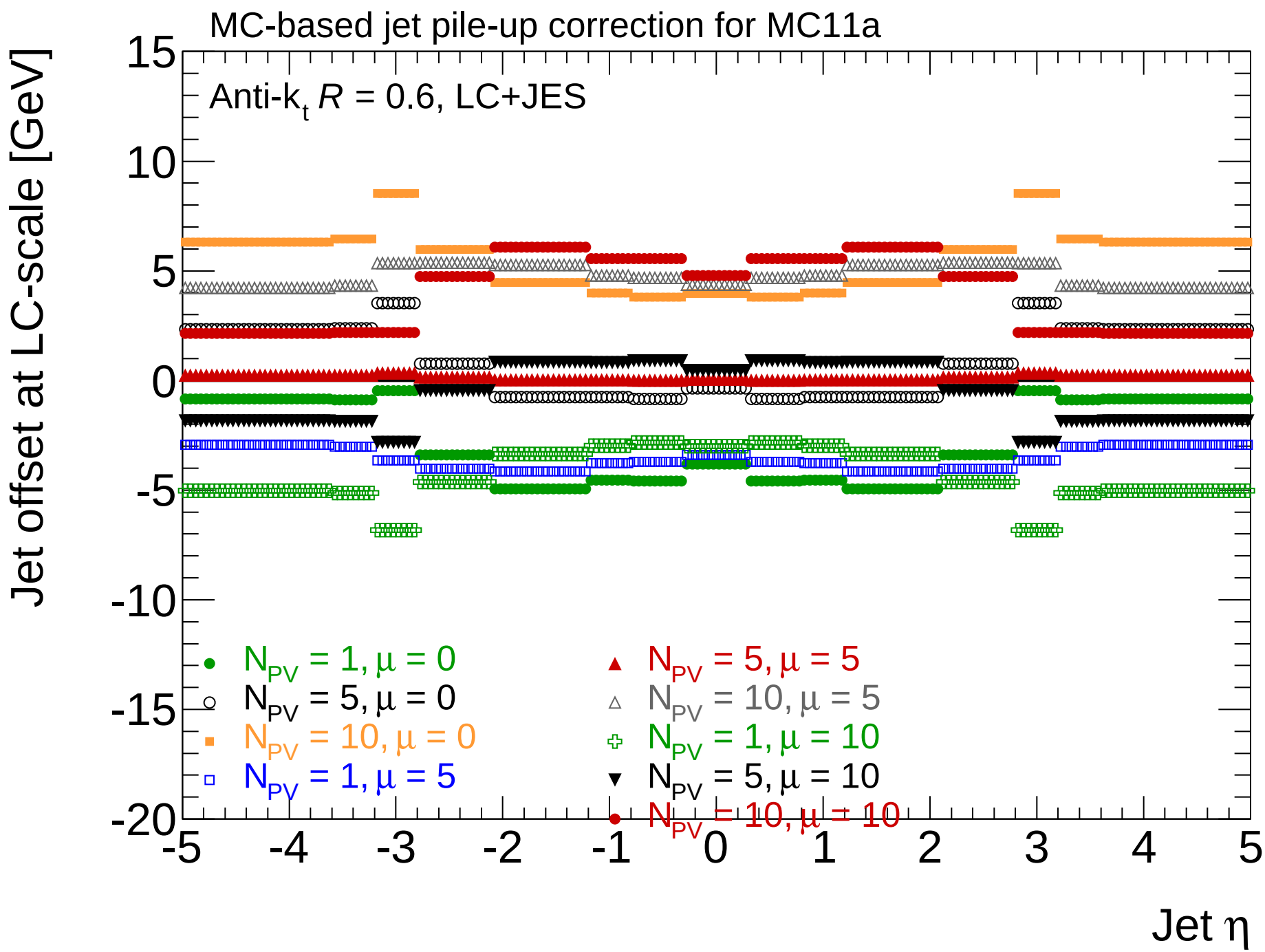

Anti-k$_t$ R = 0.6, LC+JES
Residual correction for data only
Jet p$_T$
1.1
1.05
1
0.95
0.9
0.85
10^2
10^3
η = 0.0
η = 0.8
η = 1.6
η = 2.4
η = 3.2
η = 4.0


Anti-k$_t$ R = 0.4, LC+JES
Residual correction for data only
Jet p$_T$
1.1
1.05
1
0.95
0.9
0.85
10^2
10^3
η = 0.0
η = 0.8
η = 1.6
η = 2.4
η = 3.2
η = 4.0


MC-based jet pile-up correction for MC11a
Anti-k$_t$ R = 0.4, EM+JES
Jet offset at EM-scale [GeV]
Jet η
15
10
5
0
-5
-10
-15
-20
-5
-4
-3
-2
-1
0
1
2
3
4
5
N_{PV} = 1, μ = 0
N_{PV} = 5, μ = 0
N_{PV} = 10, μ = 0
N_{PV} = 1, μ = 5
N_{PV} = 5, μ = 5
N_{PV} = 10, μ = 5
N_{PV} = 1, μ = 10
N_{PV} = 5, μ = 10
N_{PV} = 10, μ = 10


MC-based jet pile-up correction for MC11a
Anti-k$_t$ R = 0.6, EM+JES
Jet offset at EM-scale [GeV]
Jet η
15
10
5
0
-5
-10
-15
-20
-5
-4
-3
-2
-1
0
1
2
3
4
5
N_{PV} = 1, μ = 0
N_{PV} = 5, μ = 0
N_{PV} = 10, μ = 0
N_{PV} = 1, μ = 5
N_{PV} = 5, μ = 5
N_{PV} = 10, μ = 5
N_{PV} = 1, μ = 10
N_{PV} = 5, μ = 10
N_{PV} = 10, μ = 10


MC-based jet pile-up correction for MC11a
Anti-k$_t$ R = 0.4, LC+JES
Jet offset at LC-scale [GeV]
Jet η
15
10
5
0
-5
-10
-15
-20
-5
-4
-3
-2
-1
0
1
2
3
4
5
N_{PV} = 1, μ = 0
N_{PV} = 5, μ = 0
N_{PV} = 10, μ = 0
N_{PV} = 1, μ = 5
N_{PV} = 5, μ = 5
N_{PV} = 10, μ = 5
N_{PV} = 1, μ = 10
N_{PV} = 5, μ = 10
N_{PV} = 10, μ = 10


MC-based jet pile-up correction for MC11a
Anti-k$_t$ R = 0.6, LC+JES
Jet offset at LC-scale [GeV]
Jet η
15
10
5
0
-5
-10
-15
-20
-5
-4
-3
-2
-1
0
1
2
3
4
5
N_{PV} = 1, μ = 0
N_{PV} = 5, μ = 0
N_{PV} = 10, μ = 0
N_{PV} = 1, μ = 5
N_{PV} = 5, μ = 5
N_{PV} = 10, μ = 5
N_{PV} = 1, μ = 10
N_{PV} = 5, μ = 10
N_{PV} = 10, μ = 10