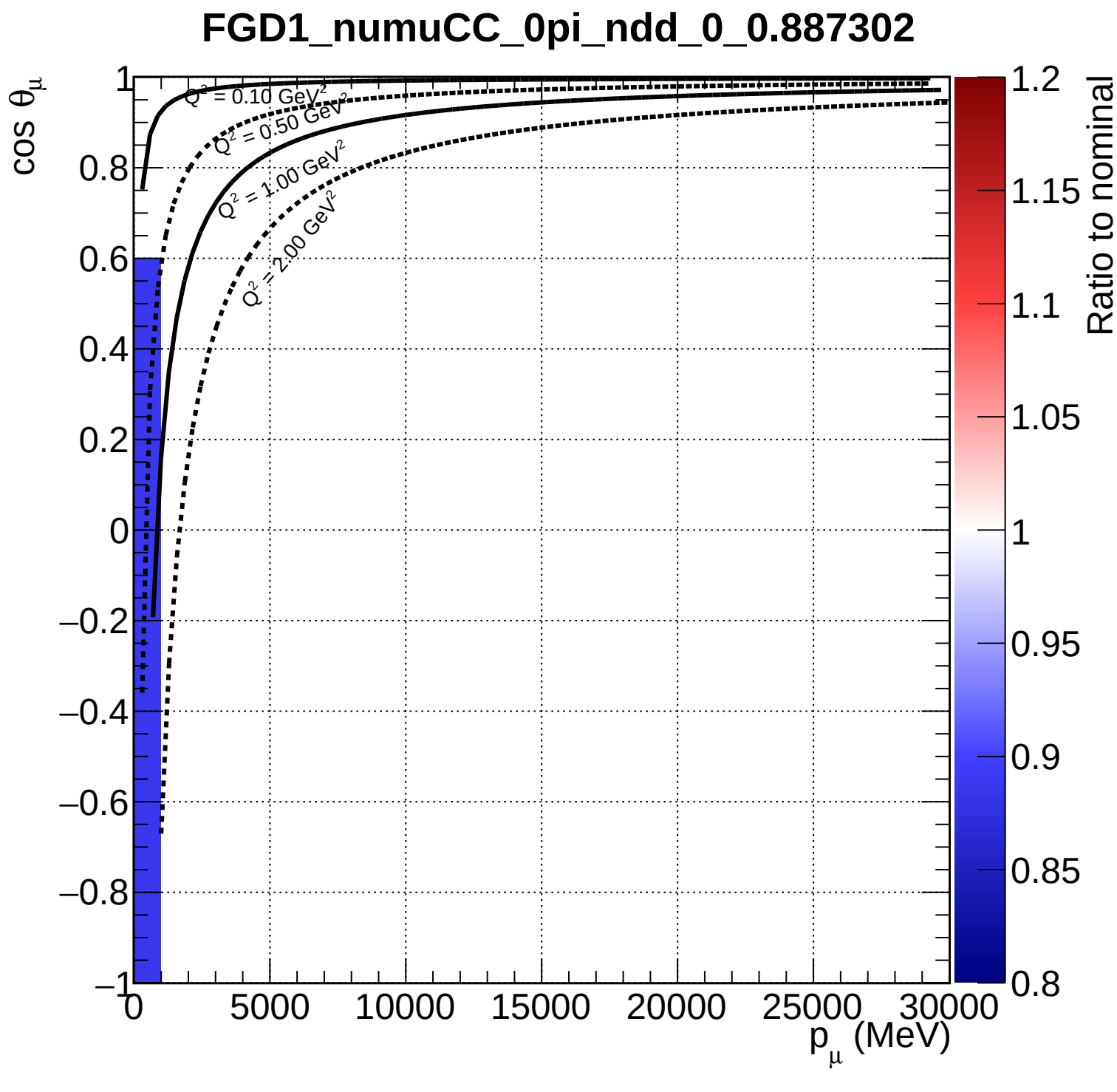
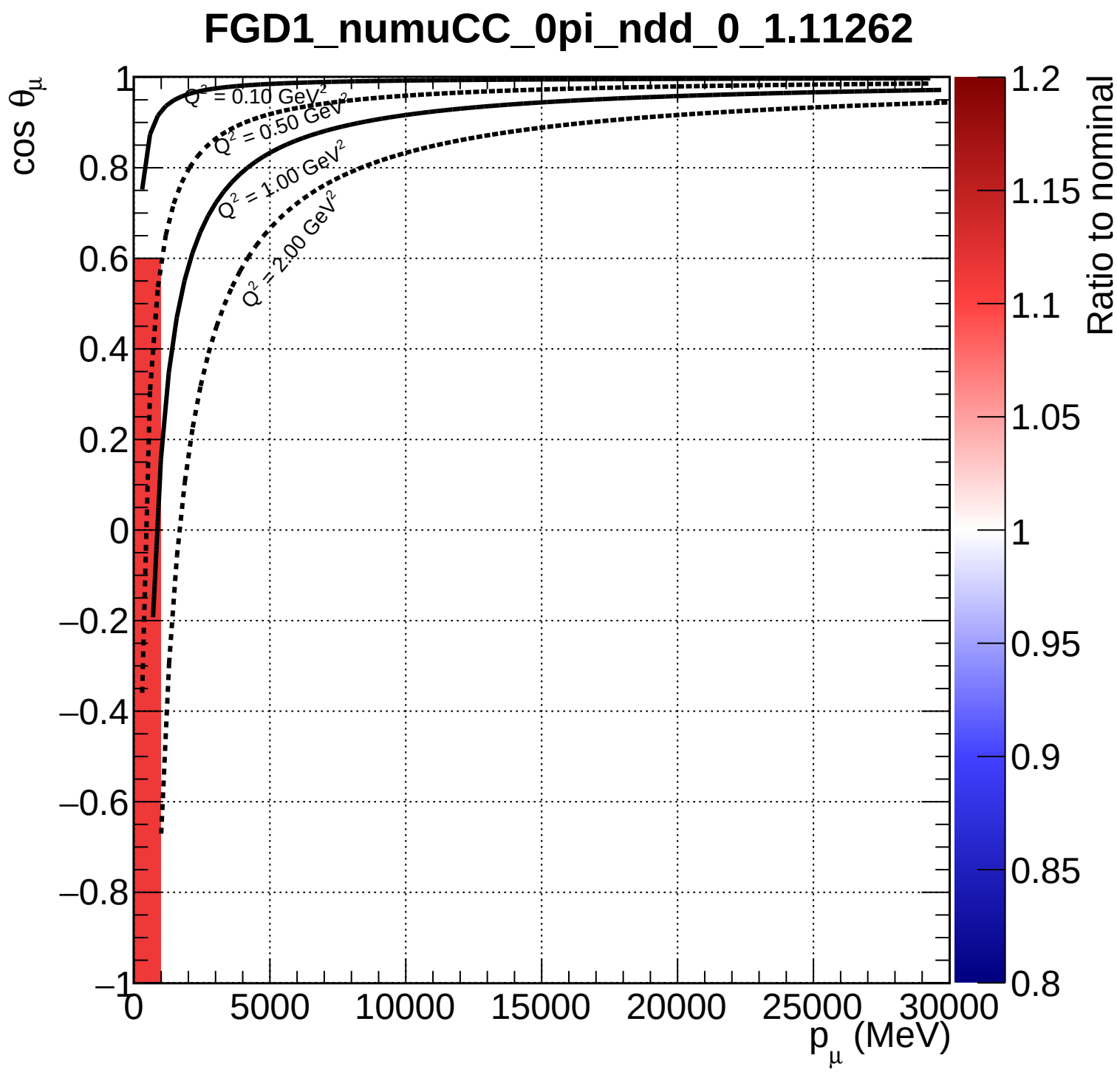
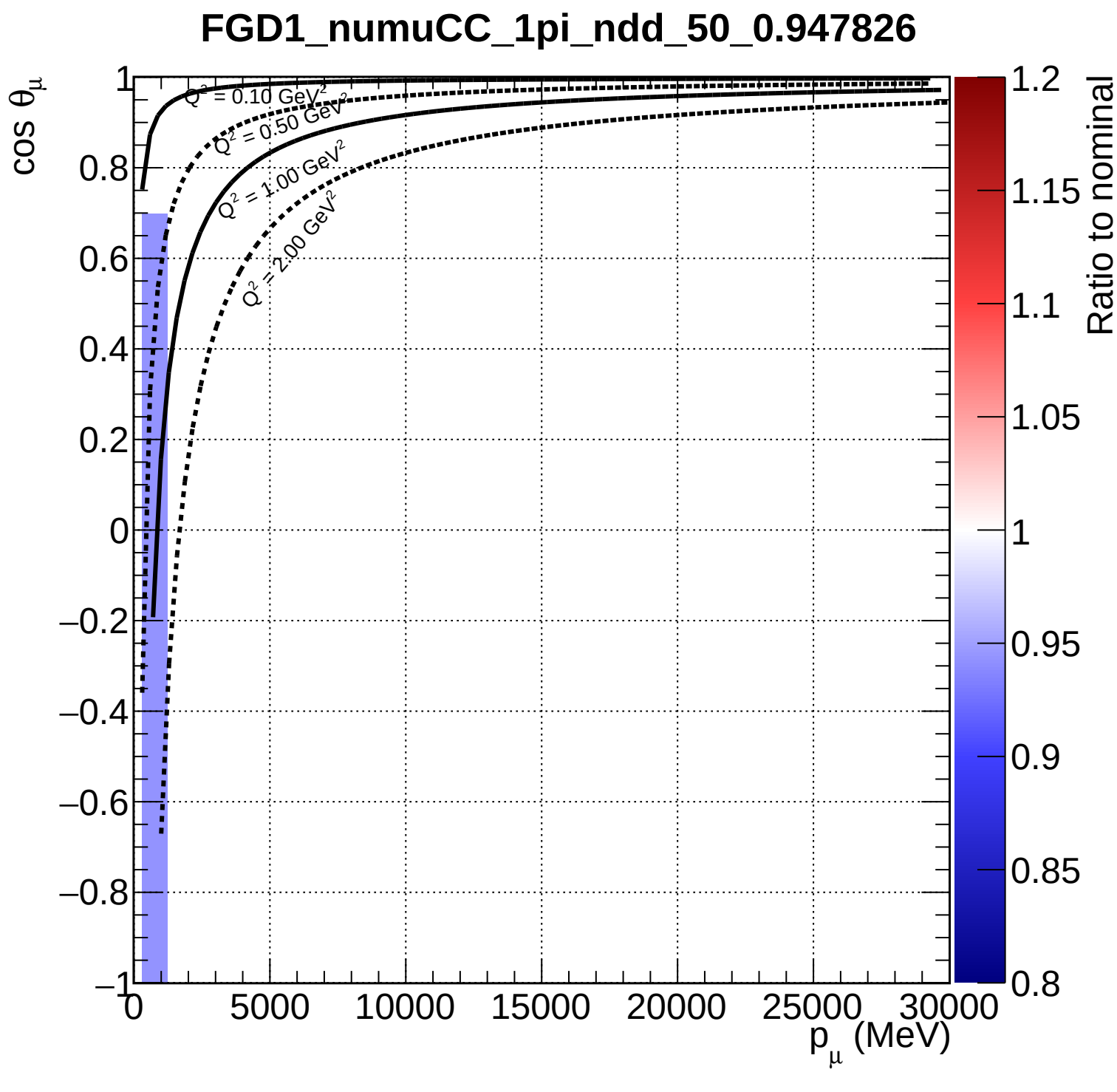
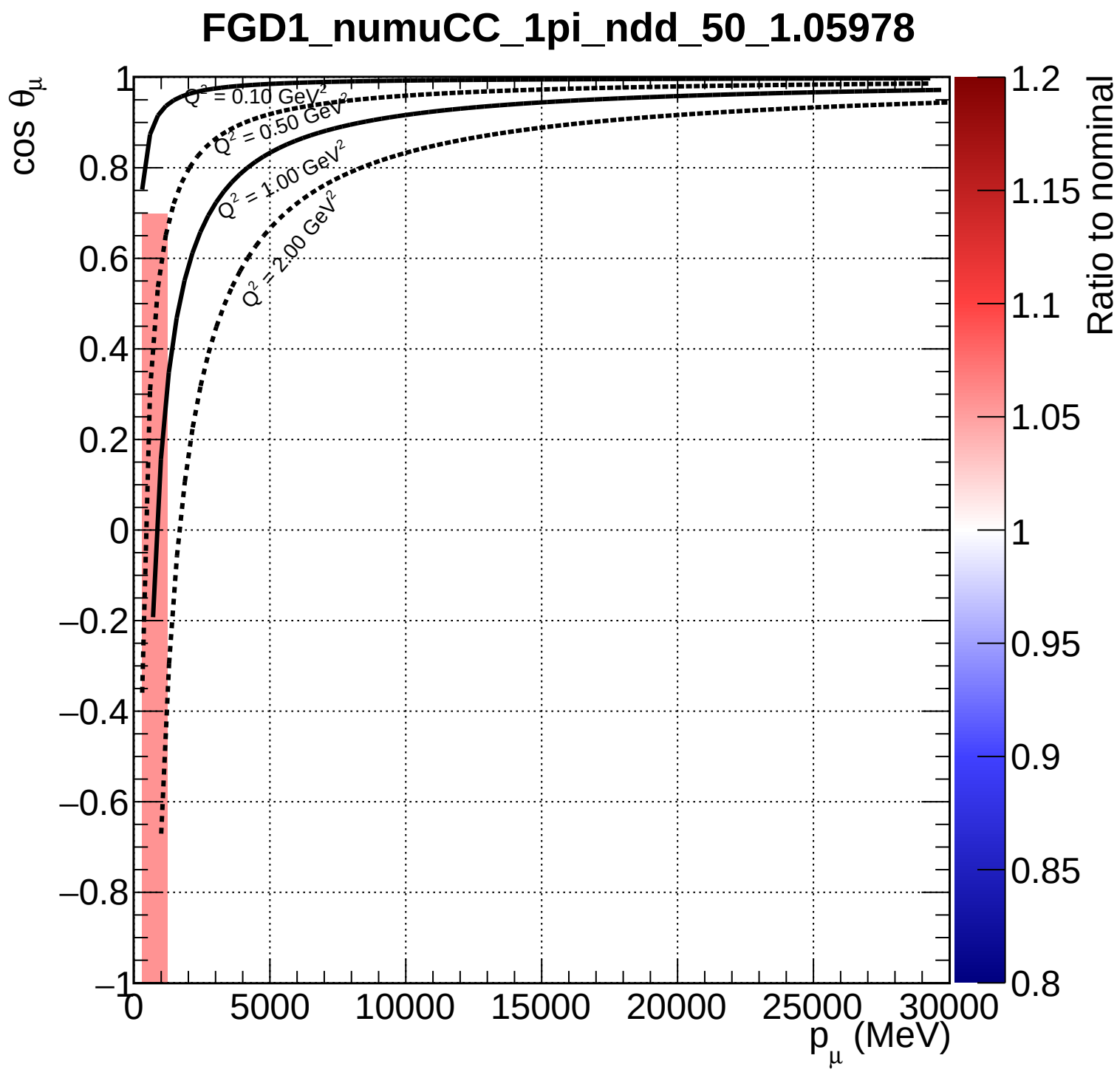
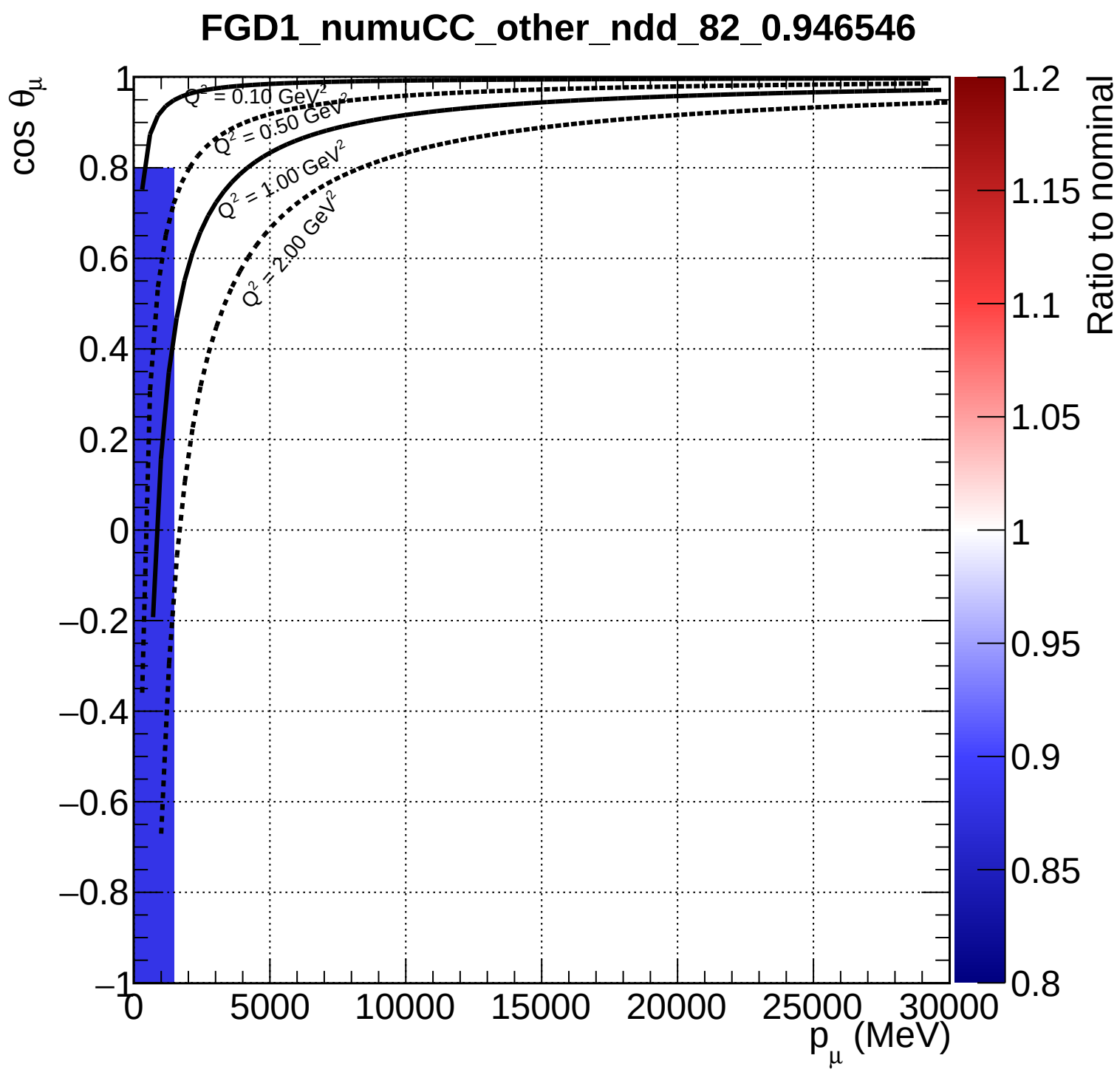
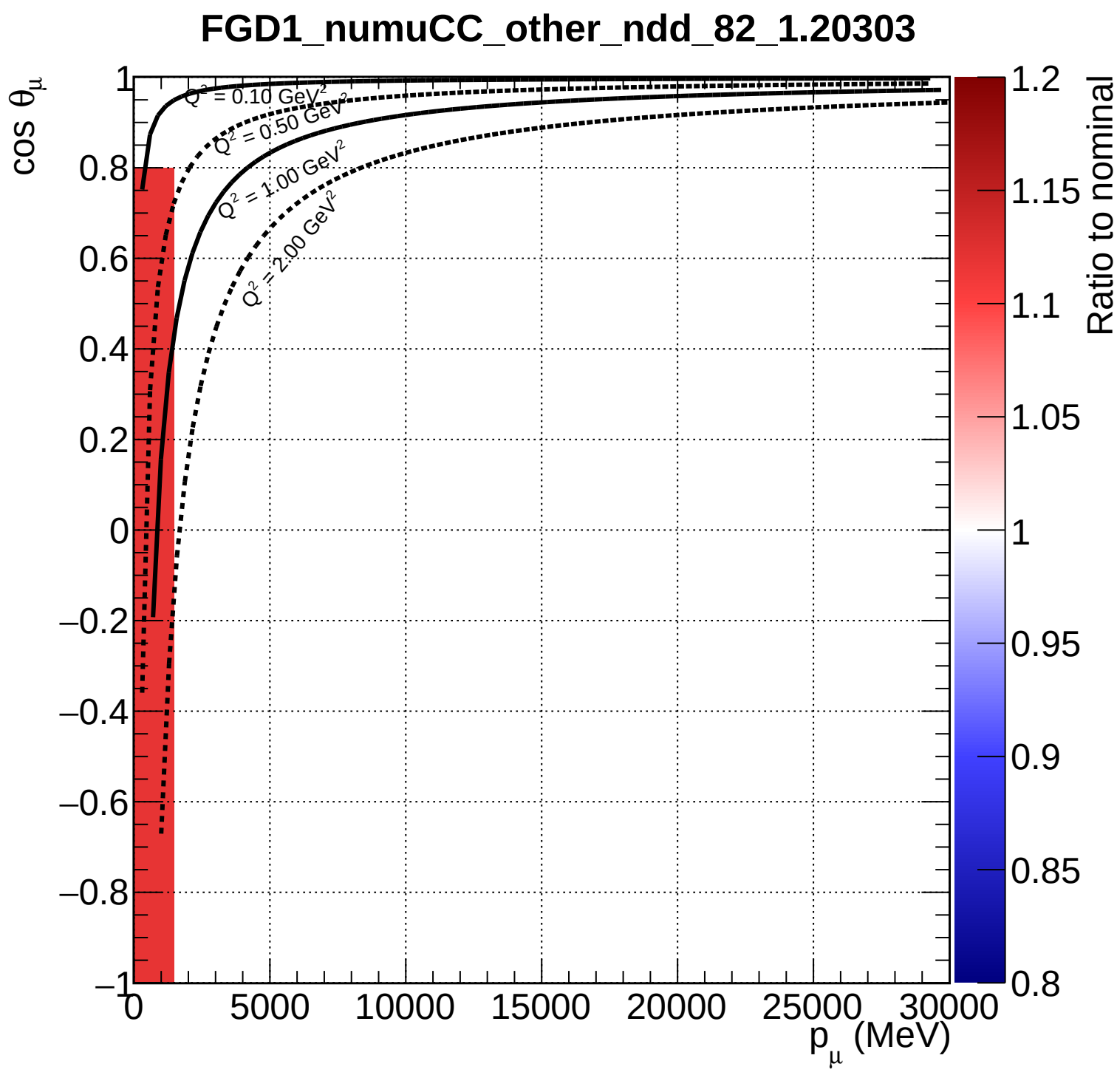

FGD1_numuCC_0pi_ndd_0_0.887302
cos θμ
pμ (MeV)
Ratio to nominal
Q² = 0.10 GeV²
Q² = 0.50 GeV²
Q² = 1.00 GeV²
Q² = 2.00 GeV²
1
0.8
0.6
0.4
0.2
0
–0.2
–0.4
–0.6
–0.8
–1
0
5000
10000
15000
20000
25000
30000
1.2
1.15
1.1
1.05
1
0.95
0.9
0.85
0.8

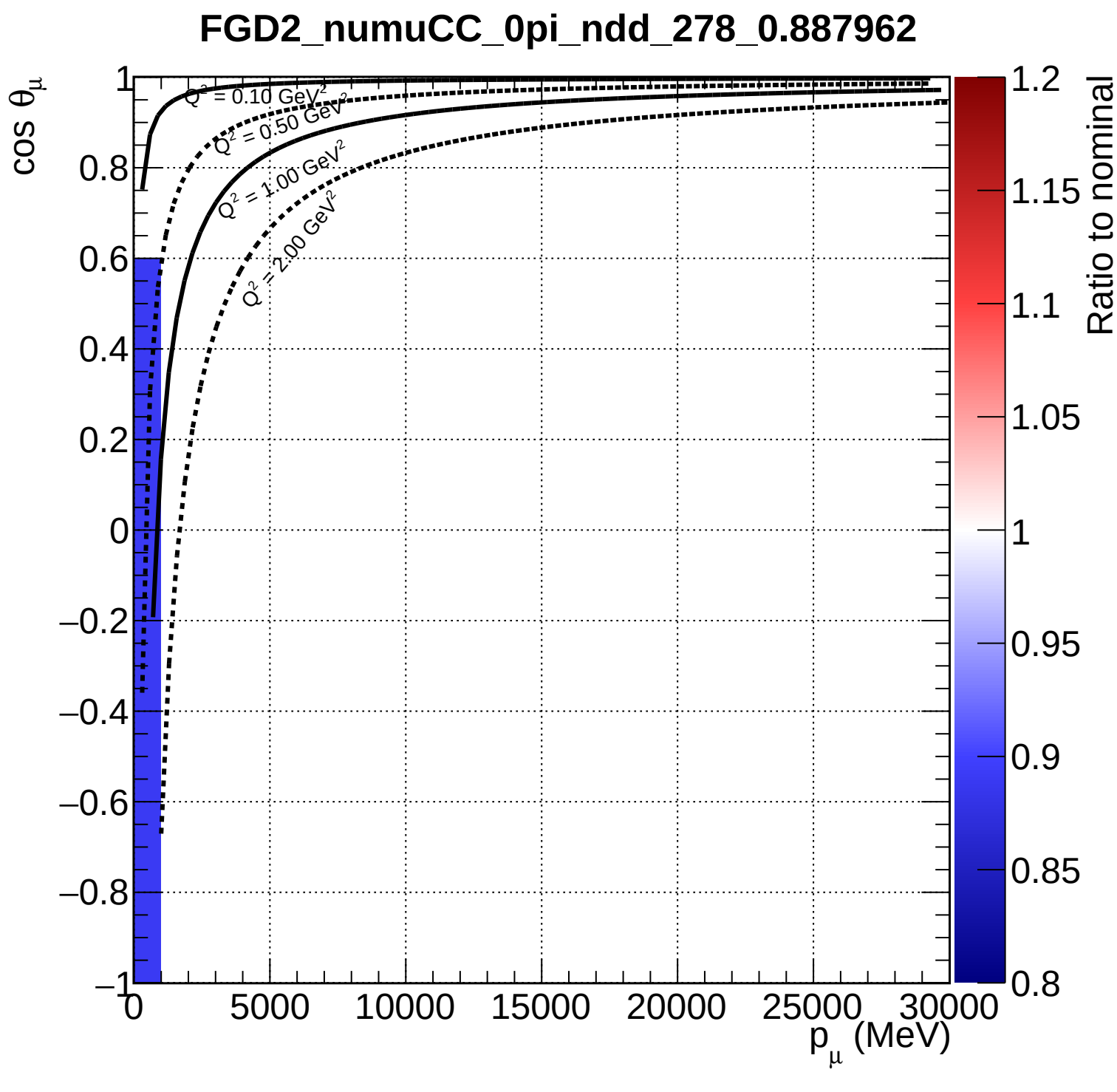

FGD1_numuCC_0pi_ndd_0_1.11262
cos θμ
1
0.8
0.6
0.4
0.2
0
–0.2
–0.4
–0.6
–0.8
–1
0
5000
10000
15000
20000
25000
30000
pμ (MeV)
Q² = 0.10 GeV²
Q² = 0.50 GeV²
Q² = 1.00 GeV²
Q² = 2.00 GeV²
Ratio to nominal
1.2
1.15
1.1
1.05
1
0.95
0.9
0.85
0.8

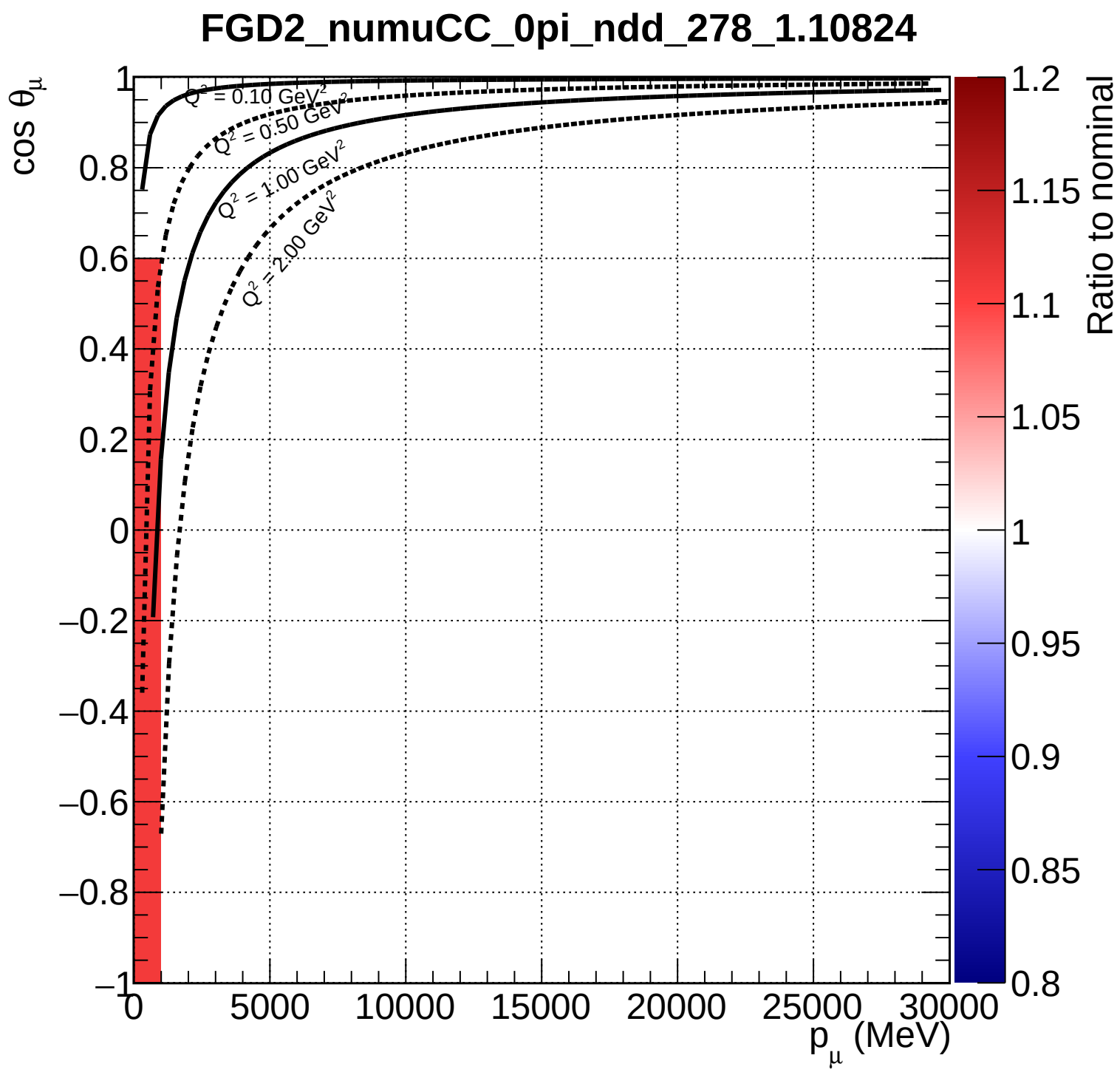

FGD1_numuCC_1pi_ndd_50_0.947826
cos θμ
pμ (MeV)
Ratio to nominal
Q² = 0.10 GeV²
Q² = 0.50 GeV²
Q² = 1.00 GeV²
Q² = 2.00 GeV²
1
0.8
0.6
0.4
0.2
0
–0.2
–0.4
–0.6
–0.8
–1
0
5000
10000
15000
20000
25000
30000
1.2
1.15
1.1
1.05
1
0.95
0.9
0.85
0.8

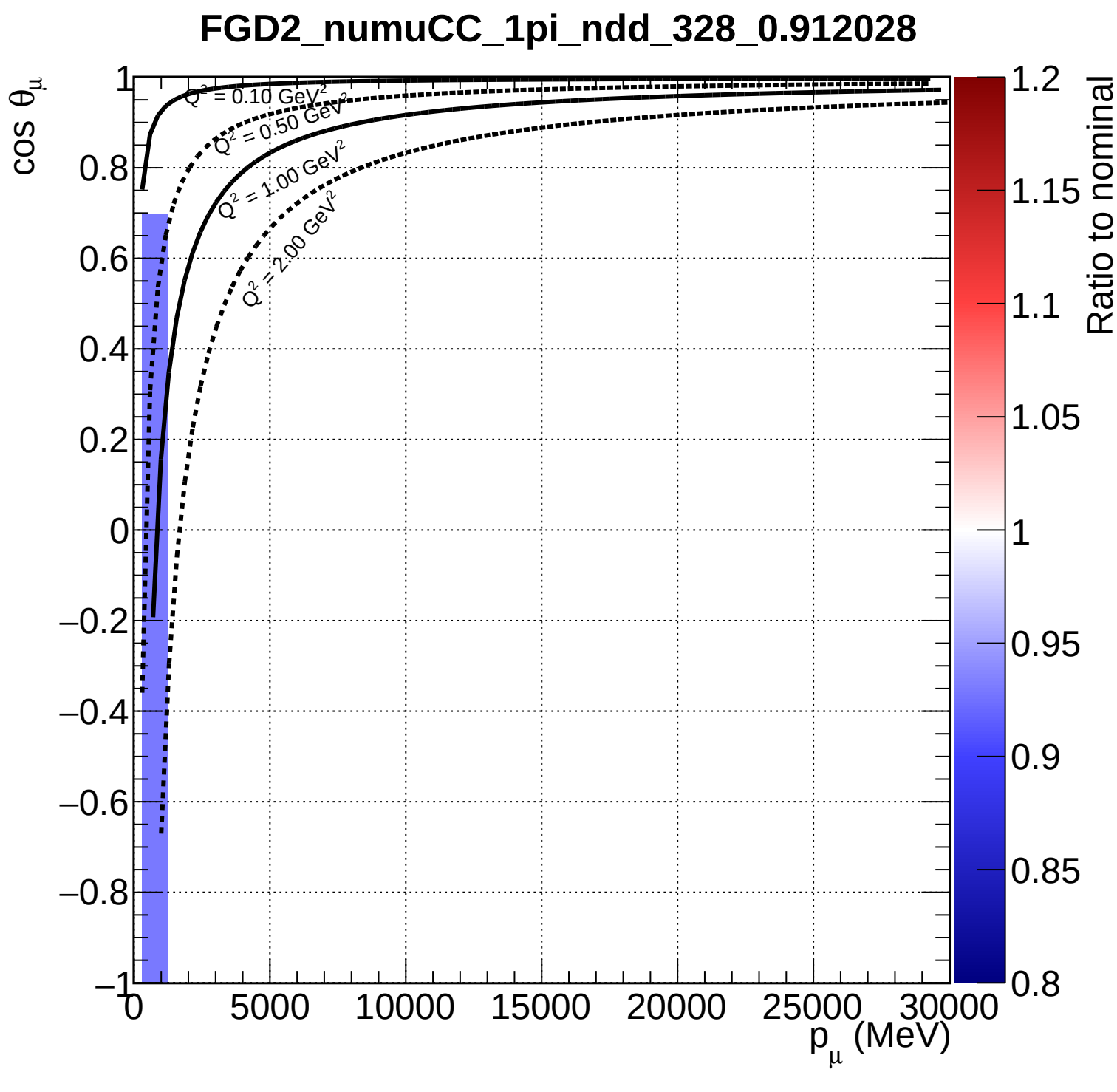

FGD1_numuCC_1pi_ndd_50_1.05978
cos θμ
pμ (MeV)
Ratio to nominal
Q² = 0.10 GeV²
Q² = 0.50 GeV²
Q² = 1.00 GeV²
Q² = 2.00 GeV²
1
0.8
0.6
0.4
0.2
0
−0.2
−0.4
−0.6
−0.8
−1
0
5000
10000
15000
20000
25000
30000
1.2
1.15
1.1
1.05
1
0.95
0.9
0.85
0.8

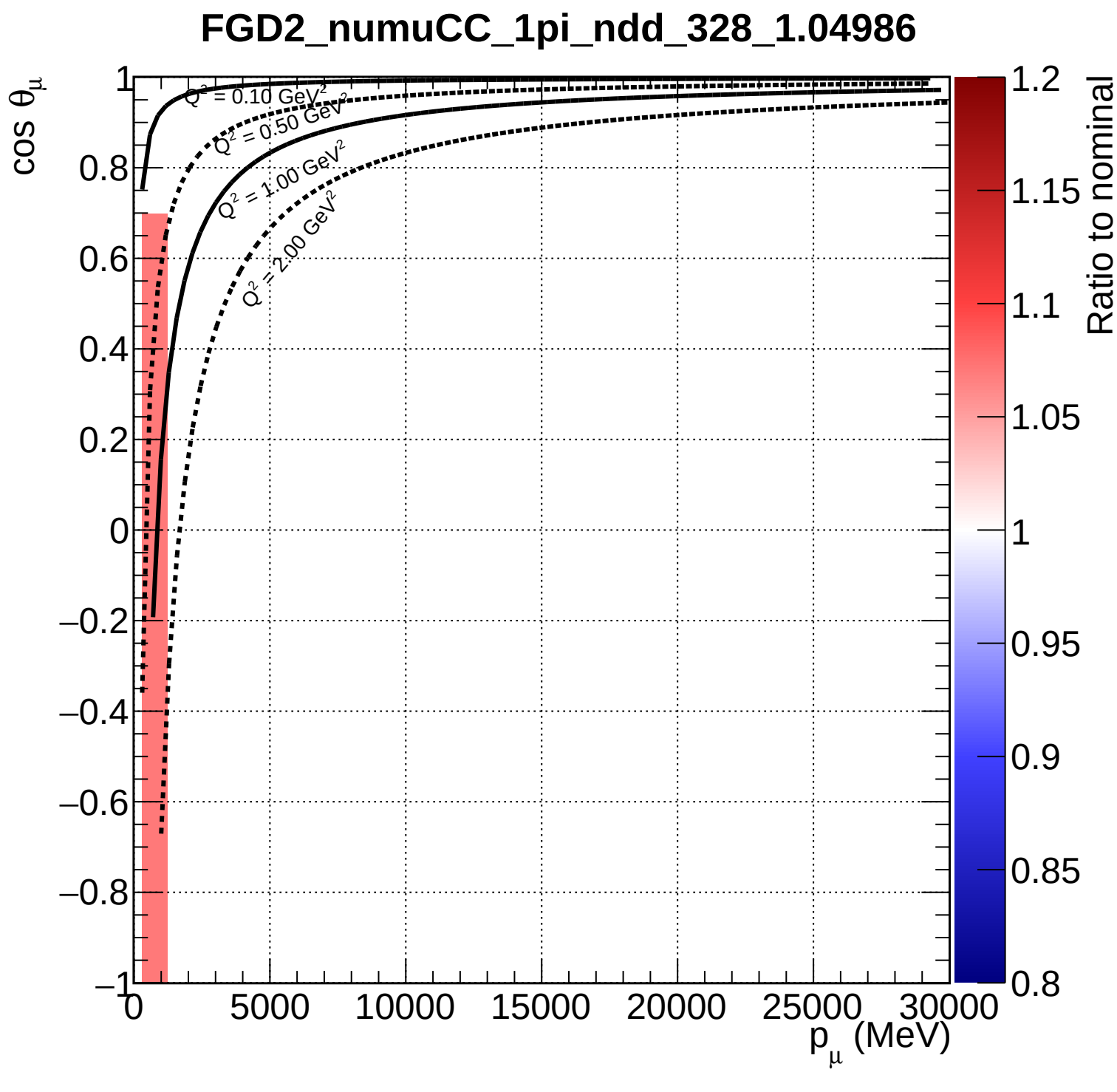

FGD1_numuCC_other_ndd_82_0.946546
cos θμ
pμ (MeV)
Ratio to nominal
Q² = 0.10 GeV²
Q² = 0.50 GeV²
Q² = 1.00 GeV²
Q² = 2.00 GeV²
1
0.8
0.6
0.4
0.2
0
–0.2
–0.4
–0.6
–0.8
–1
0
5000
10000
15000
20000
25000
30000
1.2
1.15
1.1
1.05
1
0.95
0.9
0.85
0.8

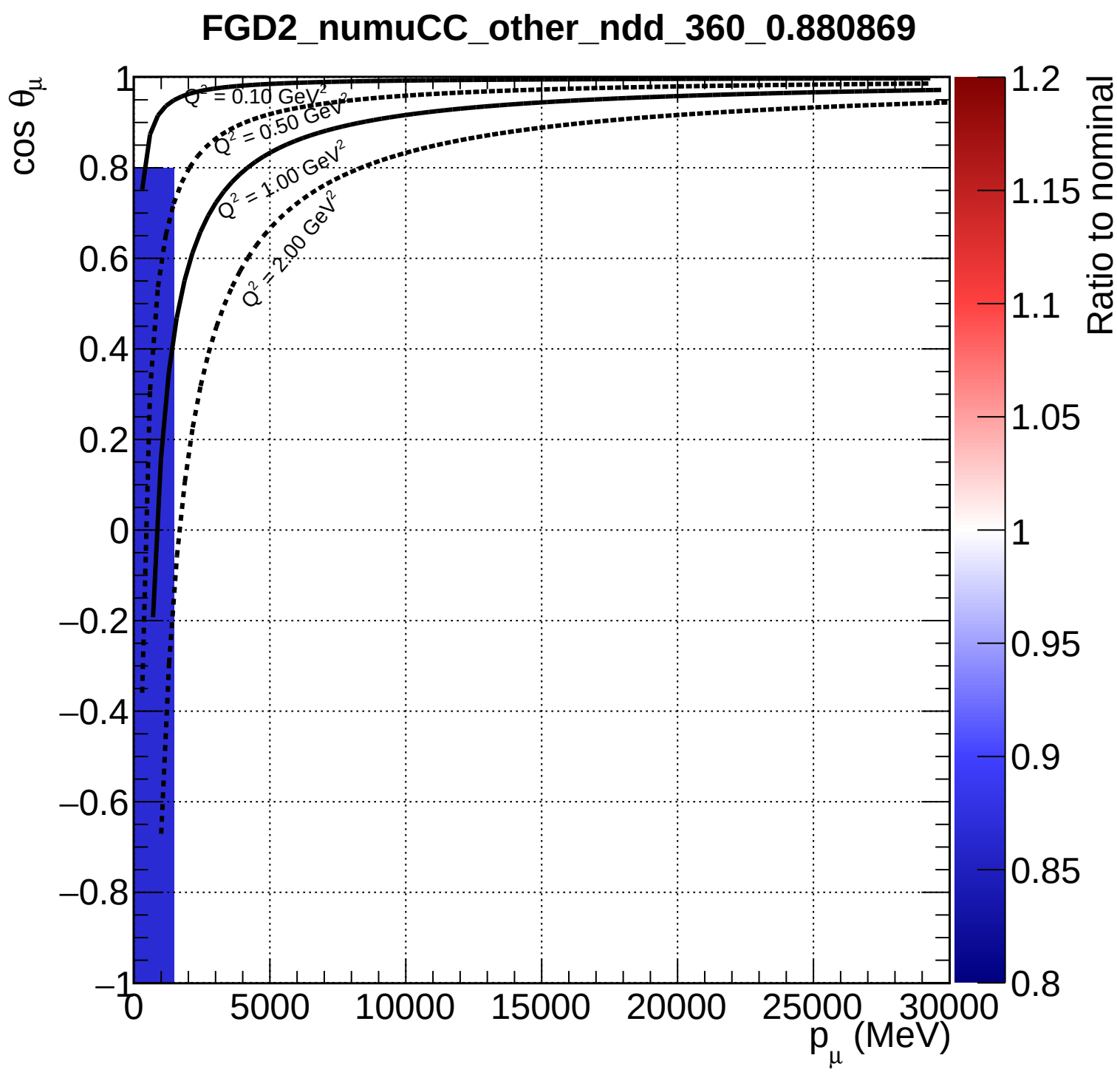

FGD1_numuCC_other_ndd_82_1.20303
cos θμ
pμ (MeV)
Ratio to nominal
Q² = 0.10 GeV²
Q² = 0.50 GeV²
Q² = 1.00 GeV²
Q² = 2.00 GeV²
1
0.8
0.6
0.4
0.2
0
–0.2
–0.4
–0.6
–0.8
–1
0
5000
10000
15000
20000
25000
30000
1.2
1.15
1.1
1.05
1
0.95
0.9
0.85
0.8

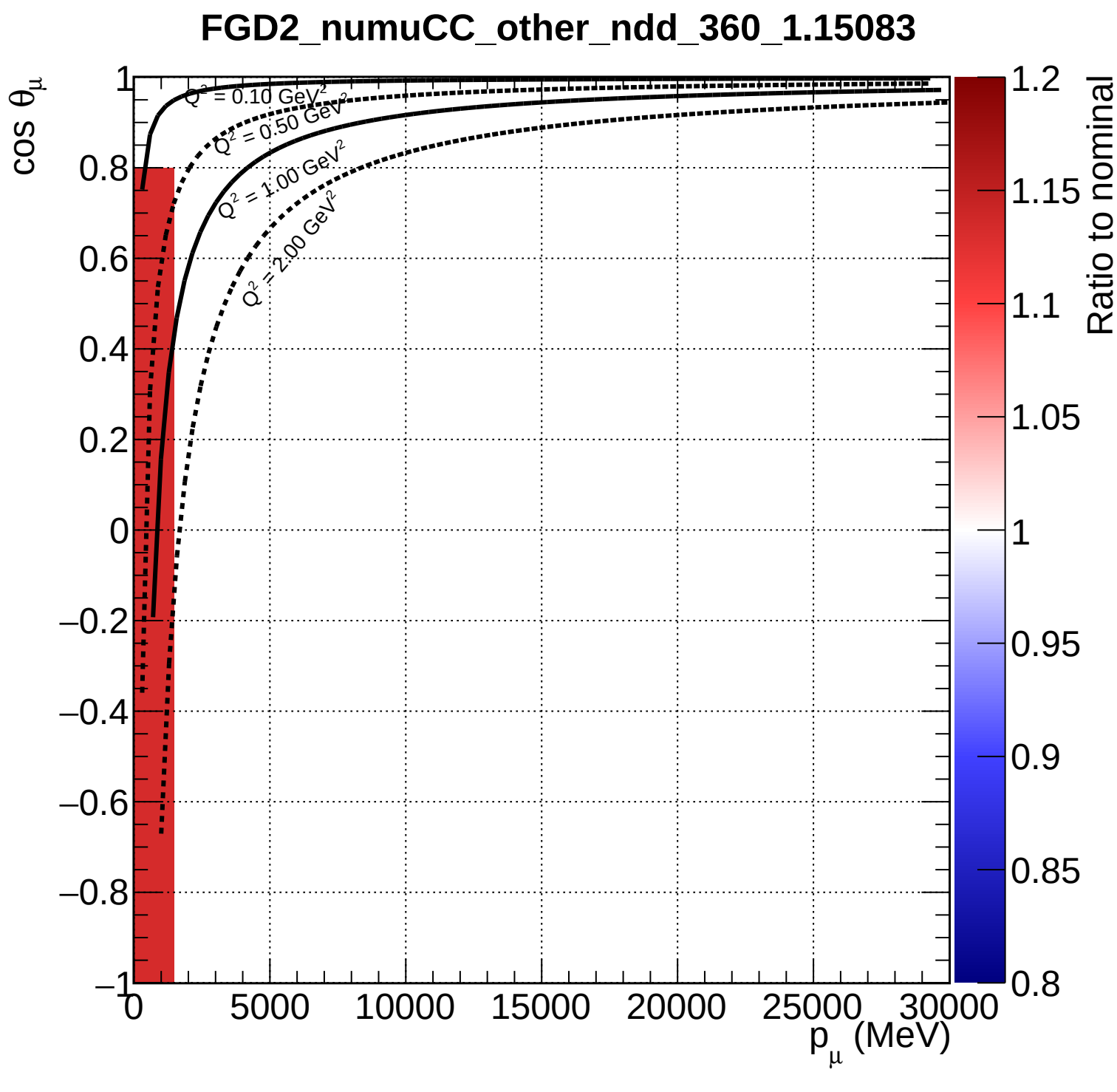

FGD2_numuCC_0pi_ndd_278_0.887962
cos θμ
pμ (MeV)
Ratio to nominal
Q² = 0.10 GeV²
Q² = 0.50 GeV²
Q² = 1.00 GeV²
Q² = 2.00 GeV²
1
0.8
0.6
0.4
0.2
0
–0.2
–0.4
–0.6
–0.8
–1
0
5000
10000
15000
20000
25000
30000
1.2
1.15
1.1
1.05
1
0.95
0.9
0.85
0.8

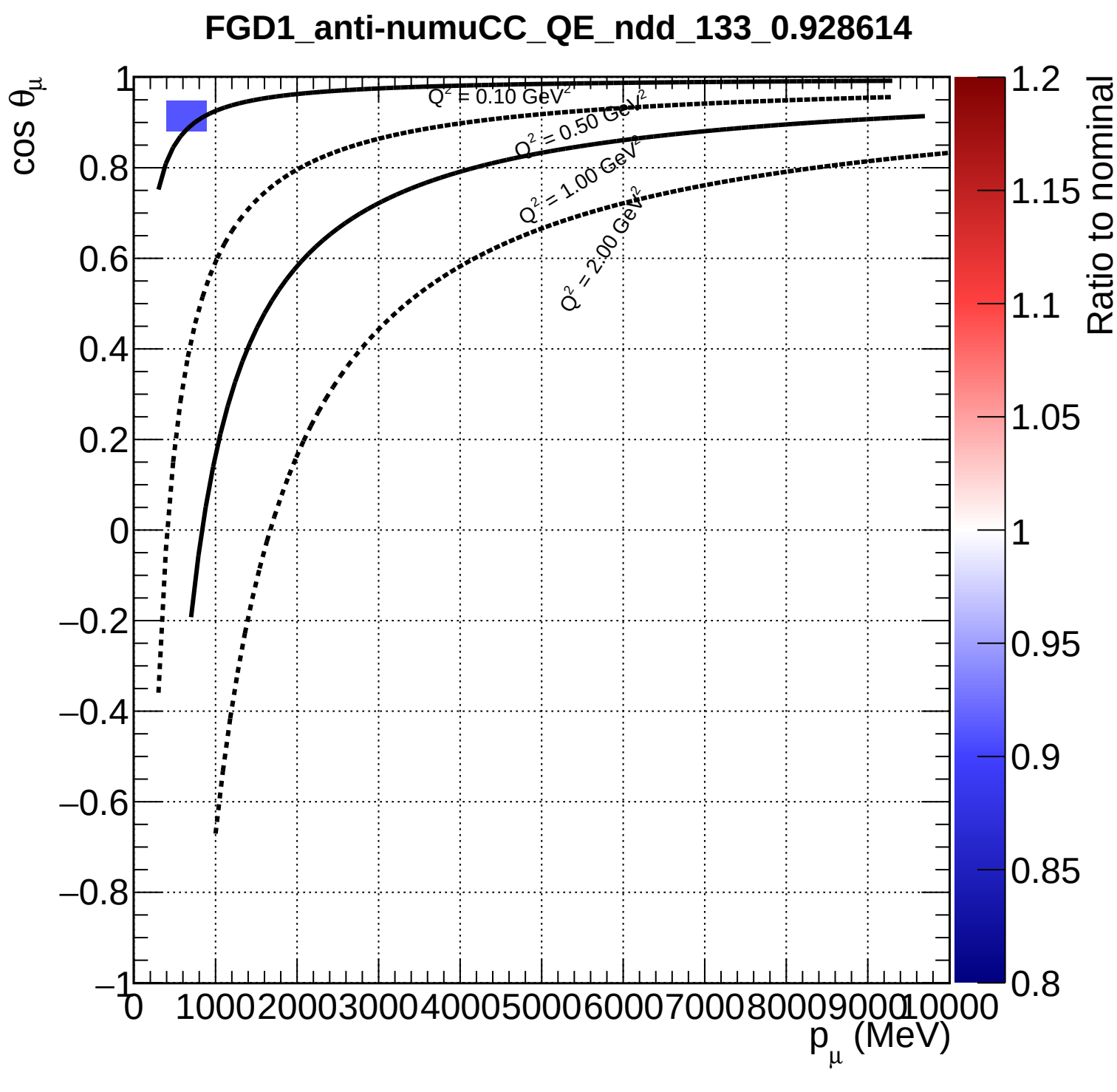

FGD2_numuCC_0pi_ndd_278_1.10824
cos θμ
pμ (MeV)
Ratio to nominal
Q² = 0.10 GeV²
Q² = 0.50 GeV²
Q² = 1.00 GeV²
Q² = 2.00 GeV²
1
0.8
0.6
0.4
0.2
0
–0.2
–0.4
–0.6
–0.8
–1
0
5000
10000
15000
20000
25000
30000
1.2
1.15
1.1
1.05
1
0.95
0.9
0.85
0.8

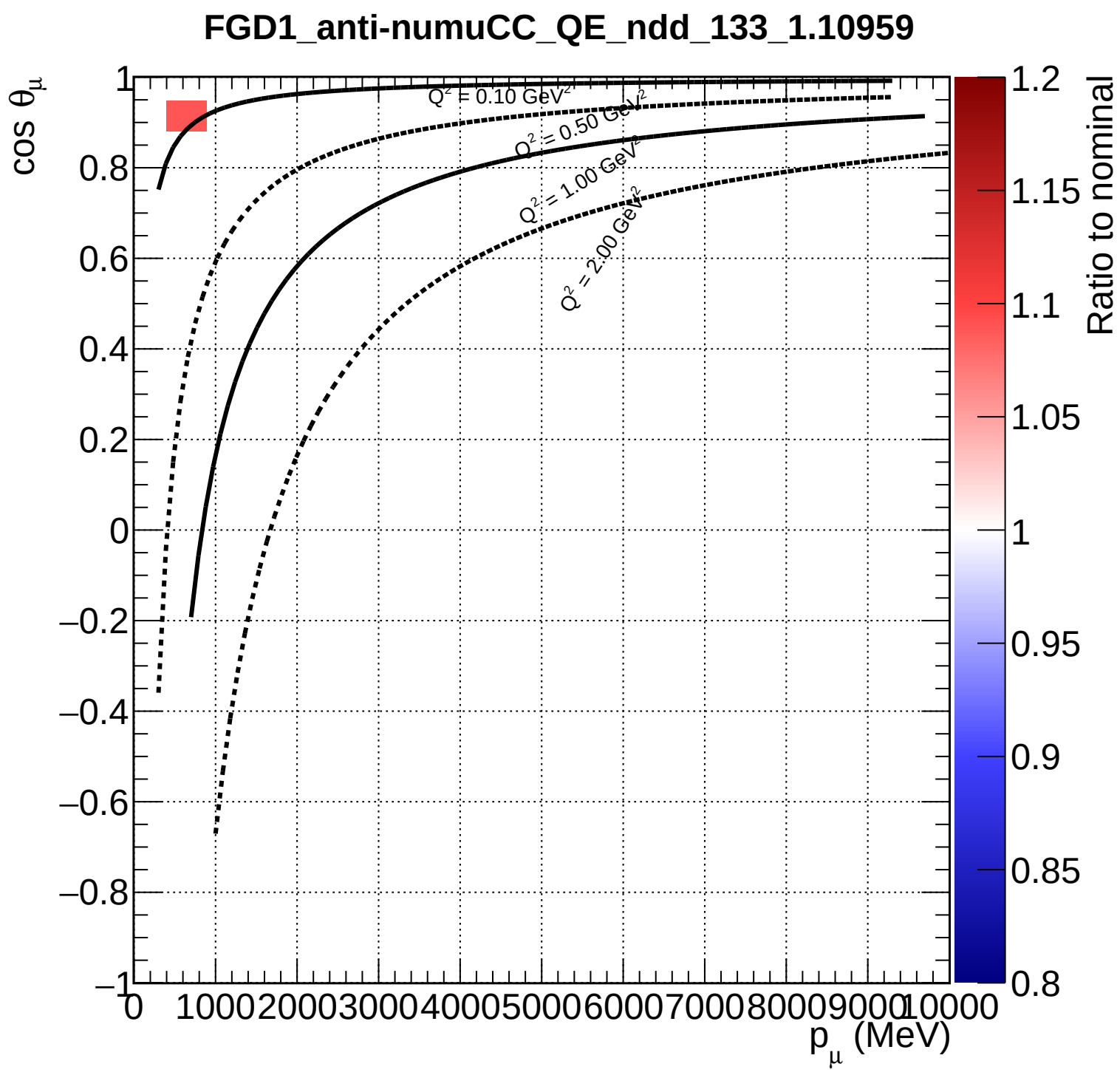

FGD2_numuCC_1pi_ndd_328_0.912028
cos θμ
pμ (MeV)
Ratio to nominal
Q² = 0.10 GeV²
Q² = 0.50 GeV²
Q² = 1.00 GeV²
Q² = 2.00 GeV²
1
0.8
0.6
0.4
0.2
0
–0.2
–0.4
–0.6
–0.8
–1
0
5000
10000
15000
20000
25000
30000
1.2
1.15
1.1
1.05
1
0.95
0.9
0.85
0.8

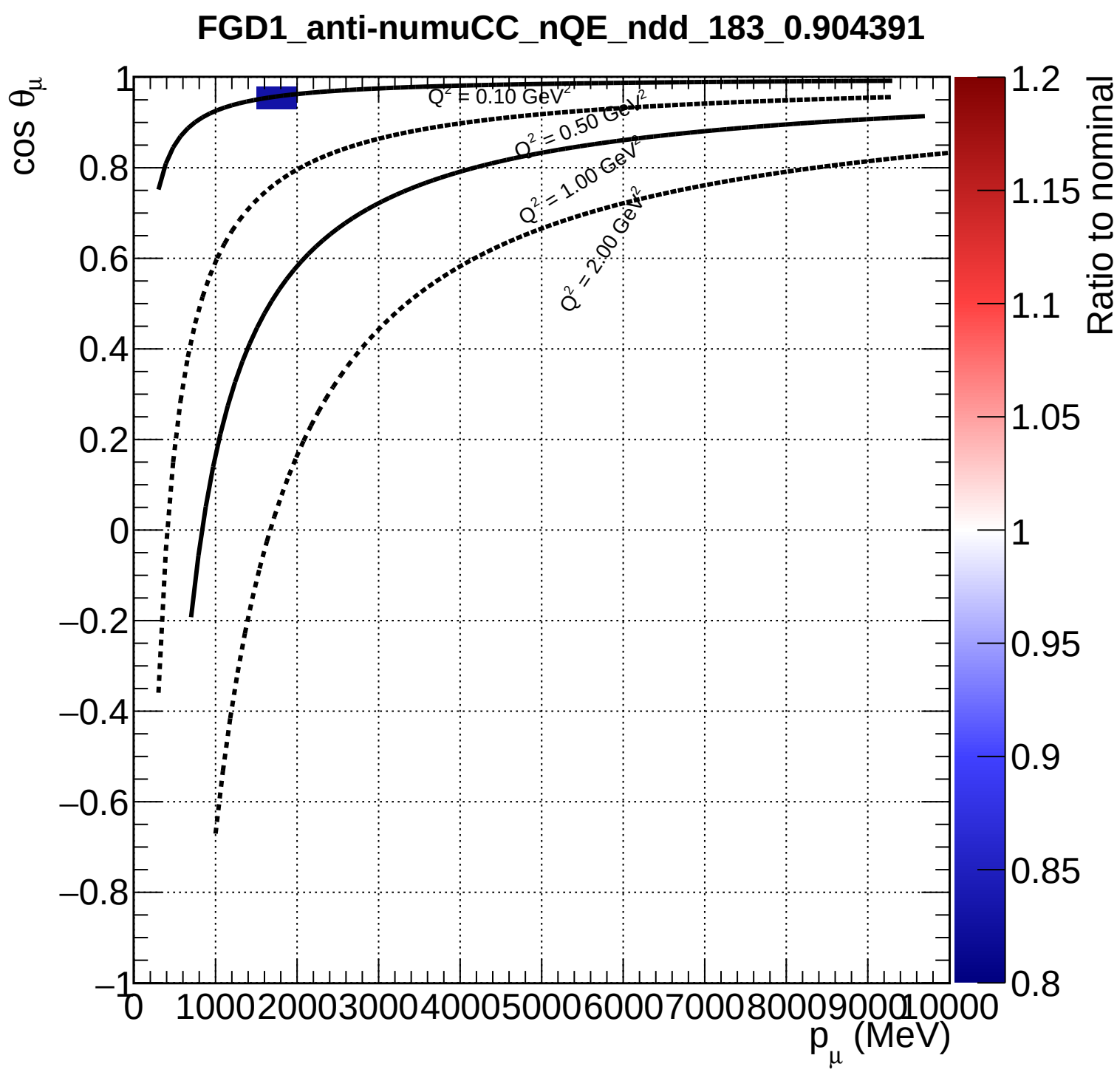

FGD2_numuCC_1pi_ndd_328_1.04986
cos θμ
pμ (MeV)
Ratio to nominal
Q² = 0.10 GeV²
Q² = 0.50 GeV²
Q² = 1.00 GeV²
Q² = 2.00 GeV²
1
0.8
0.6
0.4
0.2
0
−0.2
−0.4
−0.6
−0.8
−1
0
5000
10000
15000
20000
25000
30000
1.2
1.15
1.1
1.05
1
0.95
0.9
0.85
0.8

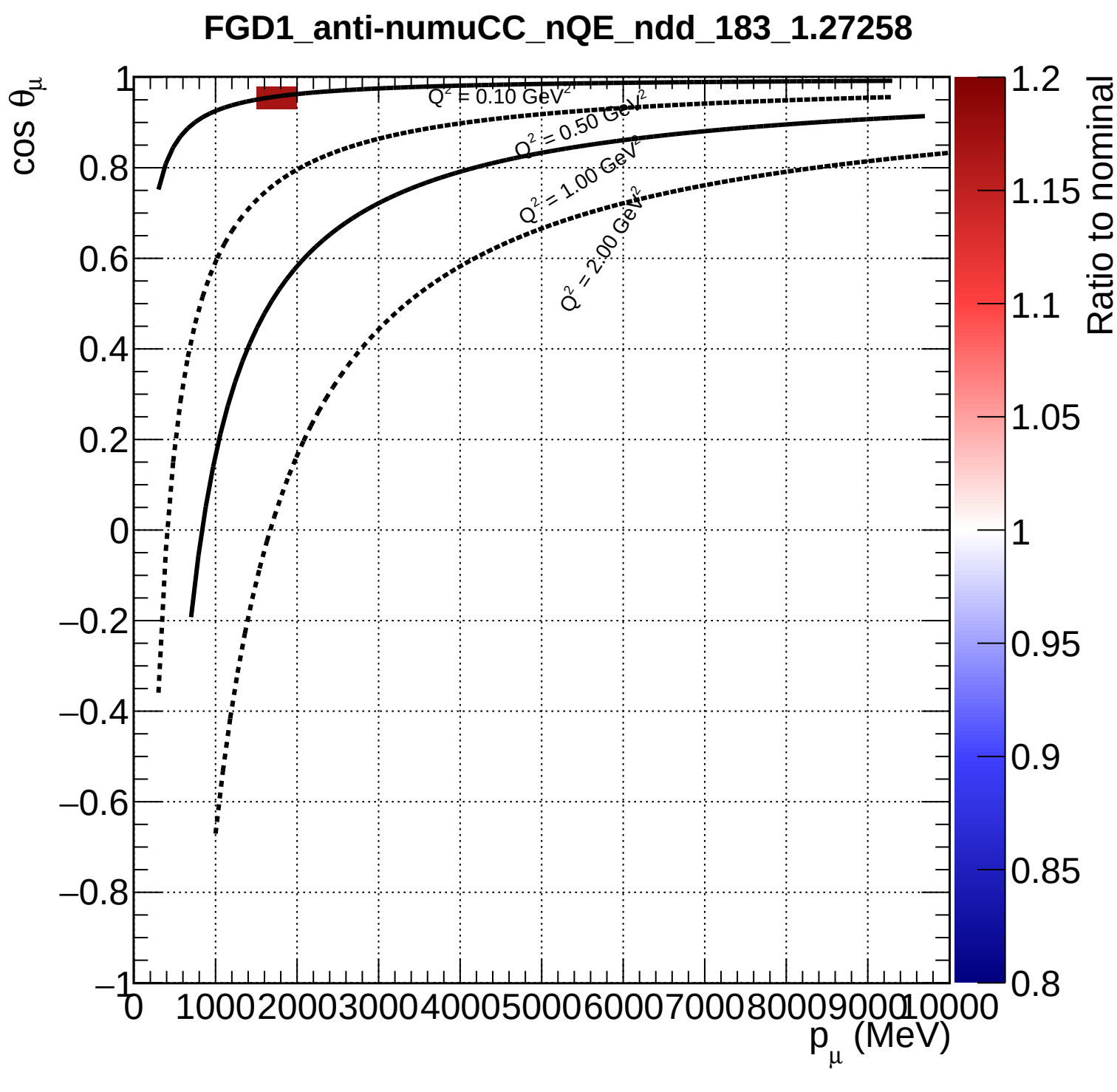

FGD2_numuCC_other_ndd_360_0.880869
cos θμ
pμ (MeV)
Ratio to nominal
Q² = 0.10 GeV²
Q² = 0.50 GeV²
Q² = 1.00 GeV²
Q² = 2.00 GeV²
1
0.8
0.6
0.4
0.2
0
–0.2
–0.4
–0.6
–0.8
–1
0
5000
10000
15000
20000
25000
30000
1.2
1.15
1.1
1.05
1
0.95
0.9
0.85
0.8

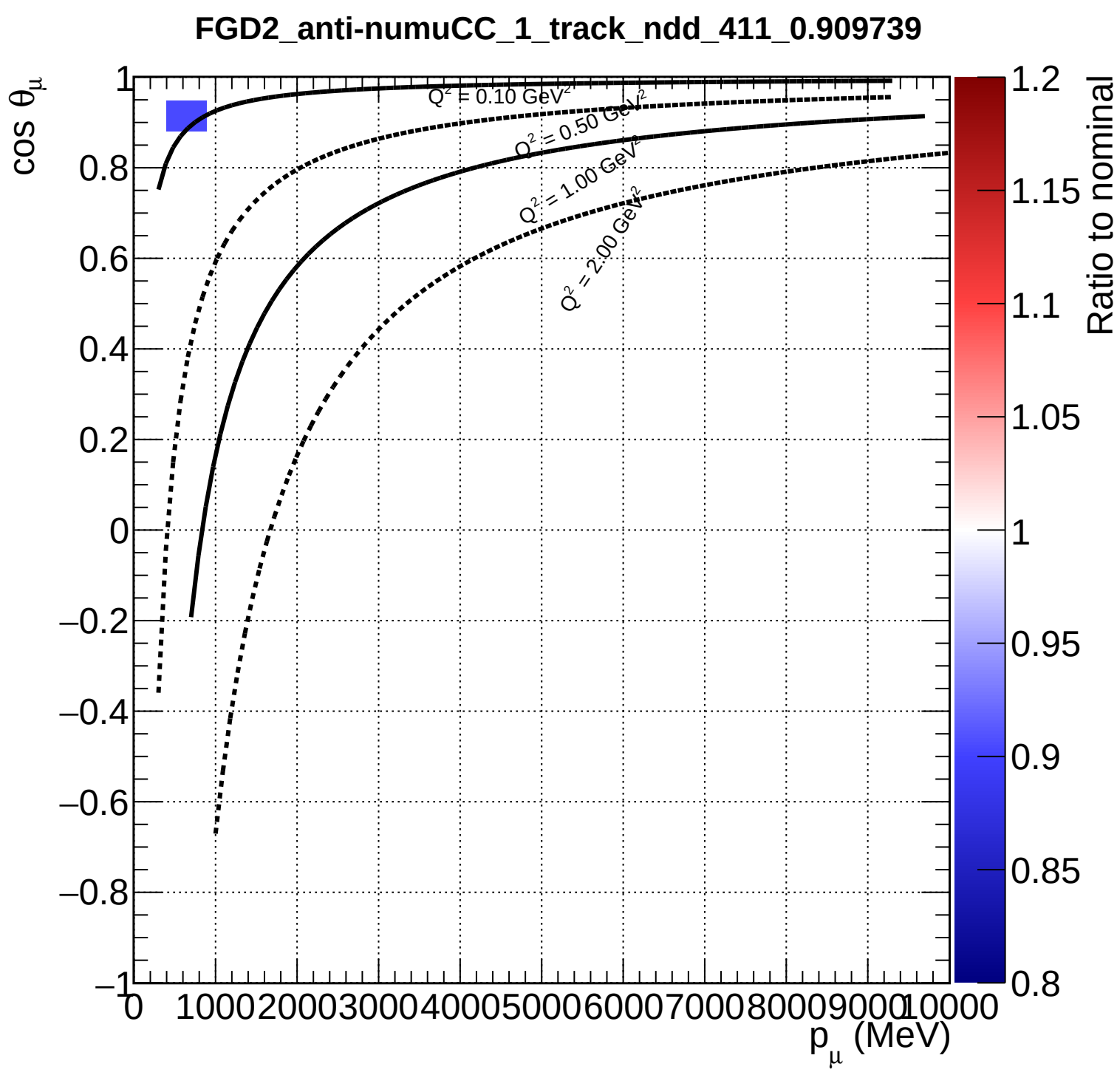

FGD2_numuCC_other_ndd_360_1.15083
cos θμ
pμ (MeV)
Ratio to nominal
Q² = 0.10 GeV²
Q² = 0.50 GeV²
Q² = 1.00 GeV²
Q² = 2.00 GeV²
1
0.8
0.6
0.4
0.2
0
–0.2
–0.4
–0.6
–0.8
–1
0
5000
10000
15000
20000
25000
30000
1.2
1.15
1.1
1.05
1
0.95
0.9
0.85
0.8

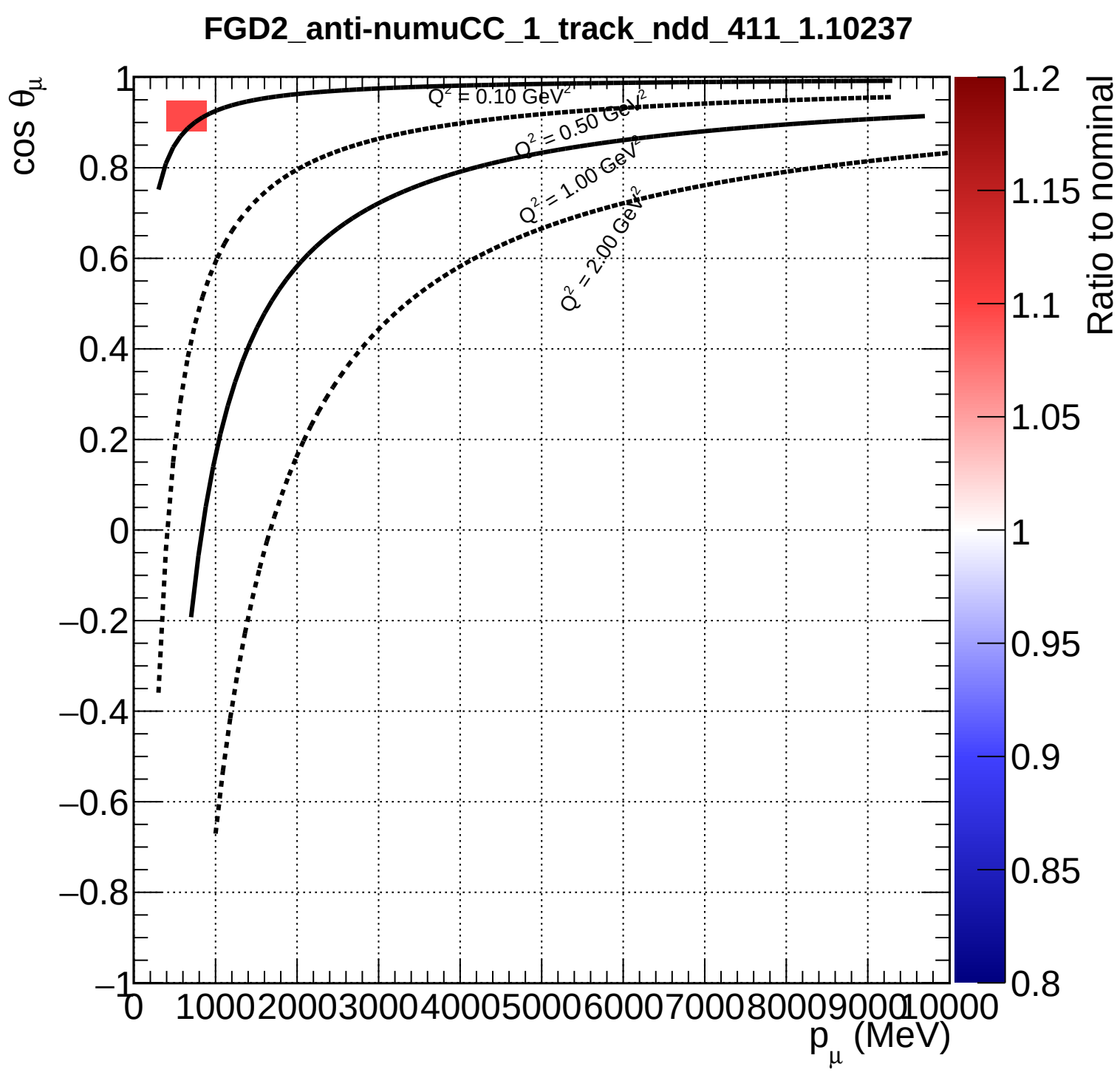

FGD1_anti-numuCC_QE_ndd_133_0.928614
cos θμ
pμ (MeV)
Ratio to nominal
Q² = 0.10 GeV²
Q² = 0.50 GeV²
Q² = 1.00 GeV²
Q² = 2.00 GeV²
1
0.8
0.6
0.4
0.2
0
–0.2
–0.4
–0.6
–0.8
–1
0
1000
2000
3000
4000
5000
6000
7000
8000
9000
10000
1.2
1.15
1.1
1.05
1
0.95
0.9
0.85
0.8

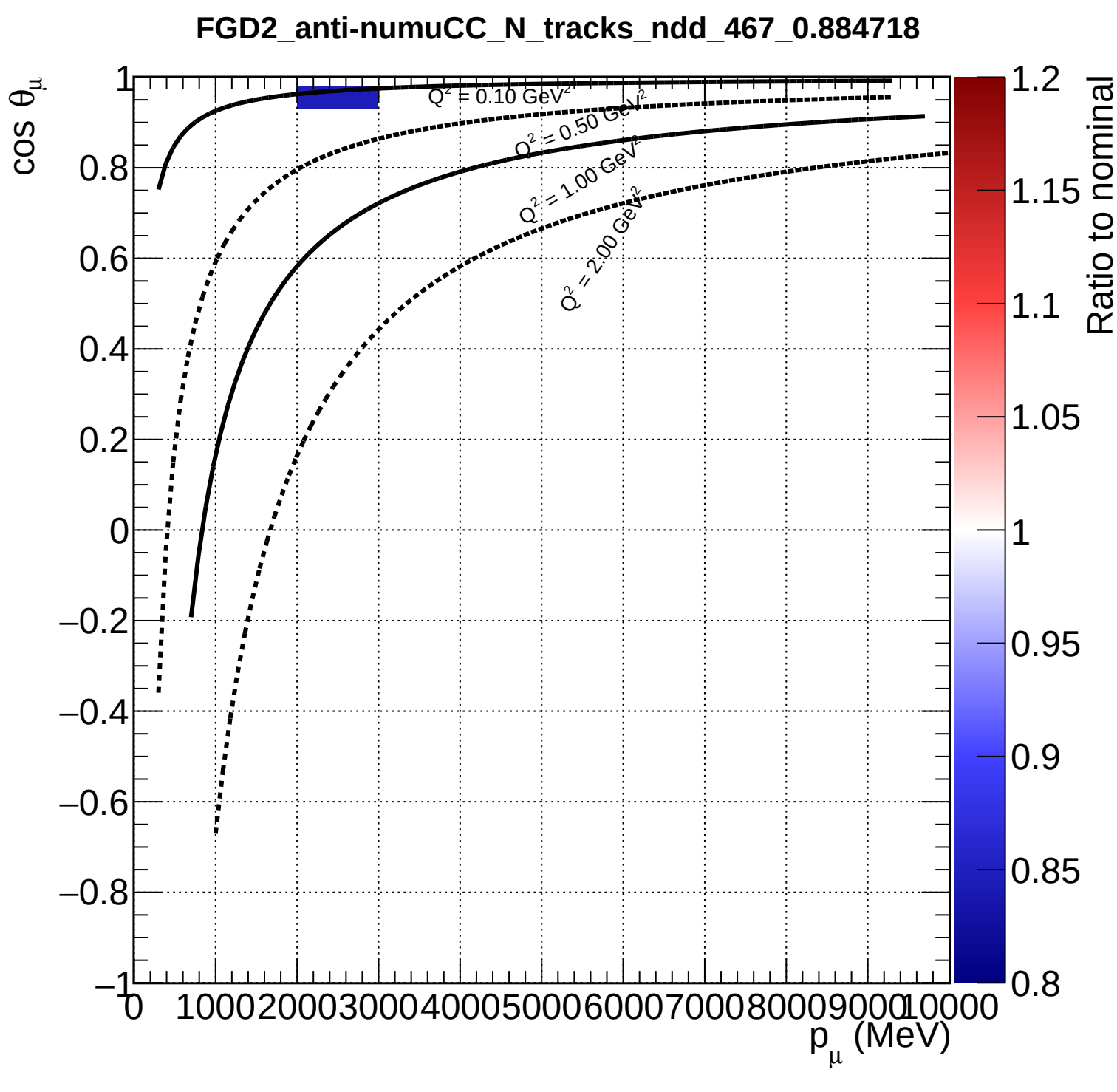

FGD1_anti-numuCC_QE_ndd_133_1.10959
cos θμ
1
0.8
0.6
0.4
0.2
0
–0.2
–0.4
–0.6
–0.8
–1
0
1000
2000
3000
4000
5000
6000
7000
8000
9000
10000
pμ (MeV)
Q² = 0.10 GeV²
Q² = 0.50 GeV²
Q² = 1.00 GeV²
Q² = 2.00 GeV²
Ratio to nominal
1.2
1.15
1.1
1.05
1
0.95
0.9
0.85
0.8

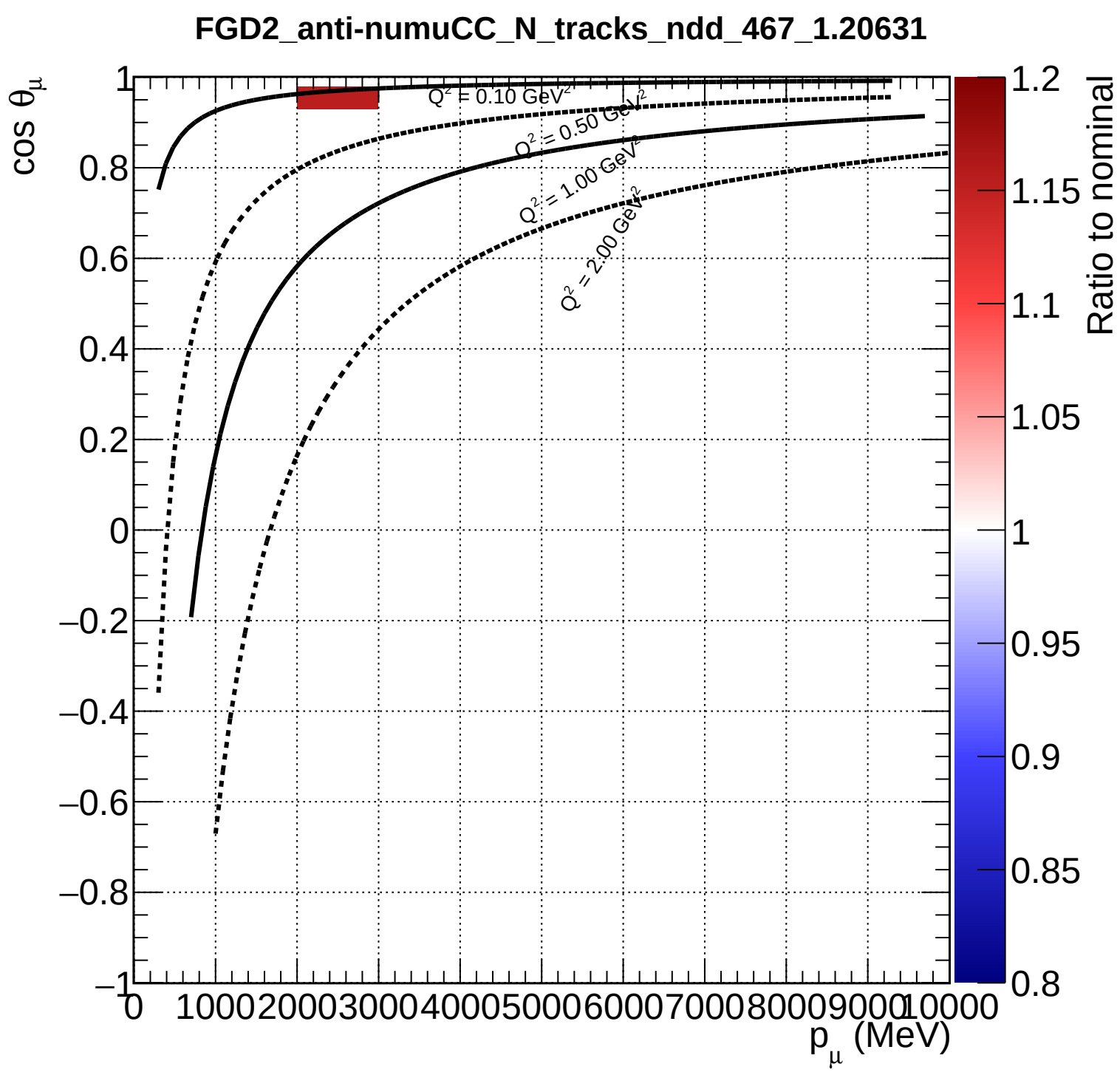

FGD1_anti-numuCC_nQE_ndd_183_0.904391
cos θμ
pμ (MeV)
Ratio to nominal
Q² = 0.10 GeV²
Q² = 0.50 GeV²
Q² = 1.00 GeV²
Q² = 2.00 GeV²
1
0.8
0.6
0.4
0.2
0
–0.2
–0.4
–0.6
–0.8
–1
0
1000
2000
3000
4000
5000
6000
7000
8000
9000
10000
1.2
1.15
1.1
1.05
1
0.95
0.9
0.85
0.8

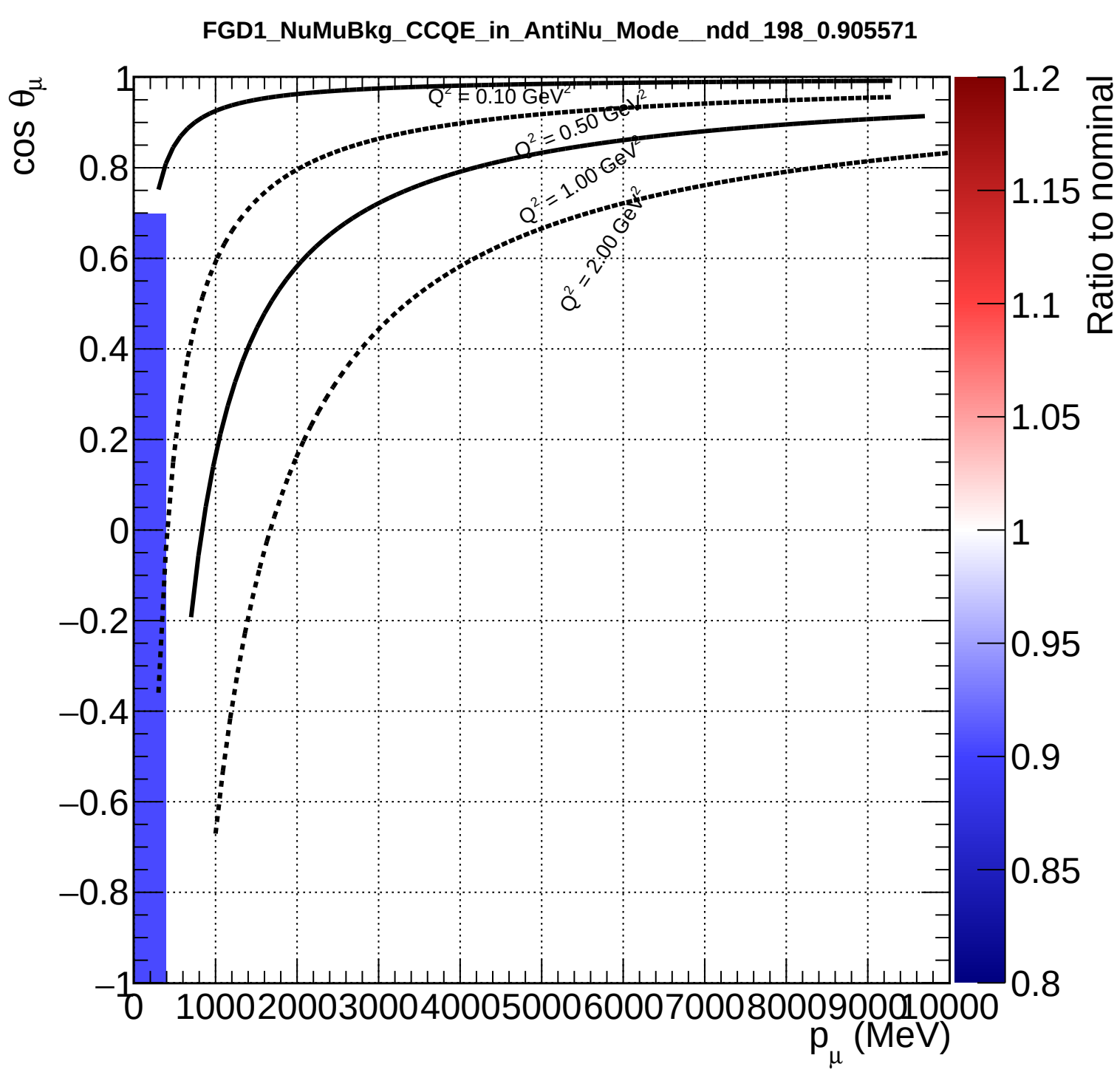

FGD1_anti-numuCC_nQE_ndd_183_1.27258
cos θμ
pμ (MeV)
Ratio to nominal
Q² = 0.10 GeV²
Q² = 0.50 GeV²
Q² = 1.00 GeV²
Q² = 2.00 GeV²
1
0.8
0.6
0.4
0.2
0
–0.2
–0.4
–0.6
–0.8
–1
0
1000
2000
3000
4000
5000
6000
7000
8000
9000
10000
1.2
1.15
1.1
1.05
1
0.95
0.9
0.85
0.8

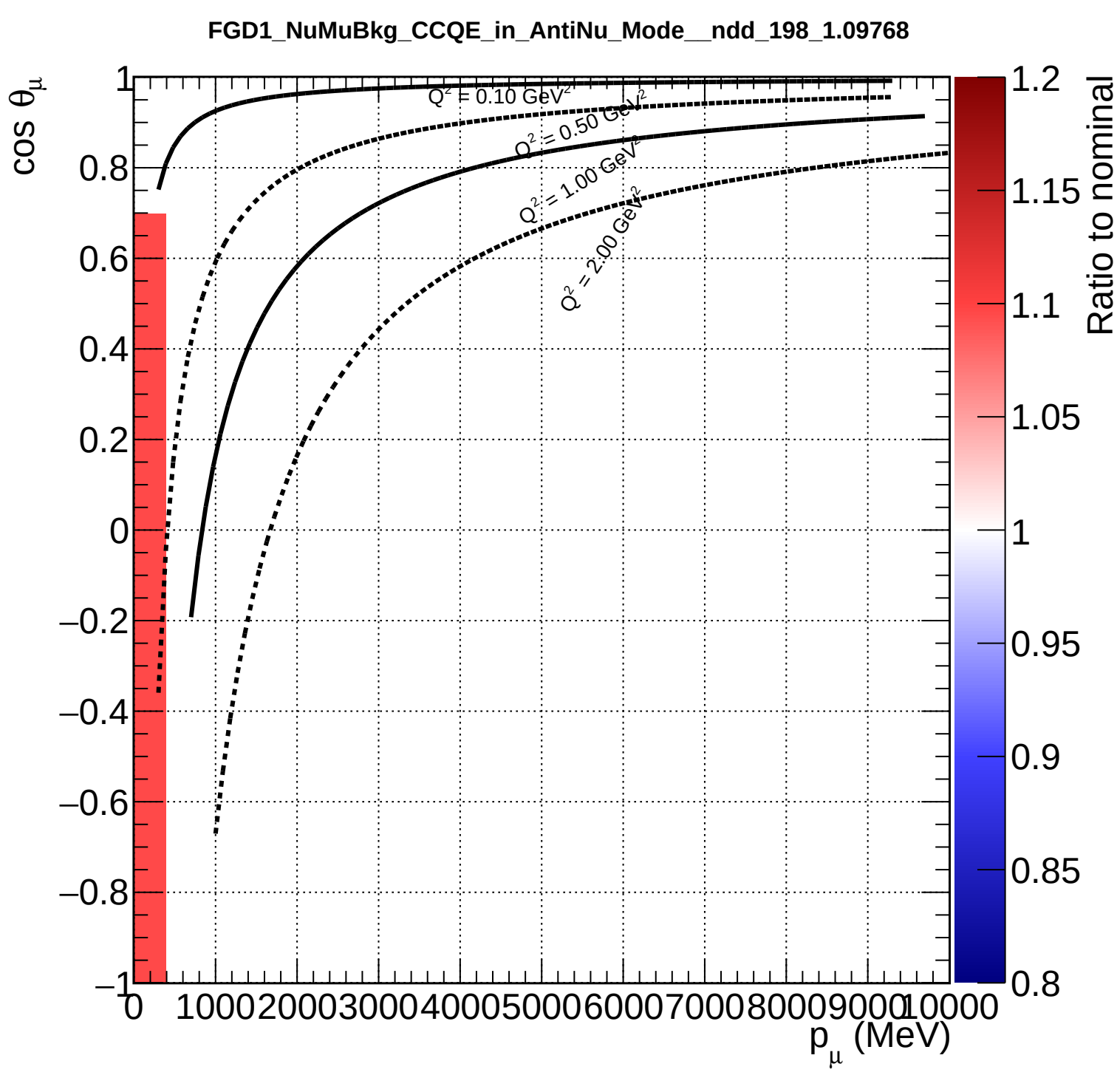

FGD2_anti-numuCC_1_track_ndd_411_0.909739
cos θμ
1
0.8
0.6
0.4
0.2
0
–0.2
–0.4
–0.6
–0.8
–1
0
1000
2000
3000
4000
5000
6000
7000
8000
9000
10000
pμ (MeV)
Q² = 0.10 GeV²
Q² = 0.50 GeV²
Q² = 1.00 GeV²
Q² = 2.00 GeV²
Ratio to nominal
1.2
1.15
1.1
1.05
1
0.95
0.9
0.85
0.8

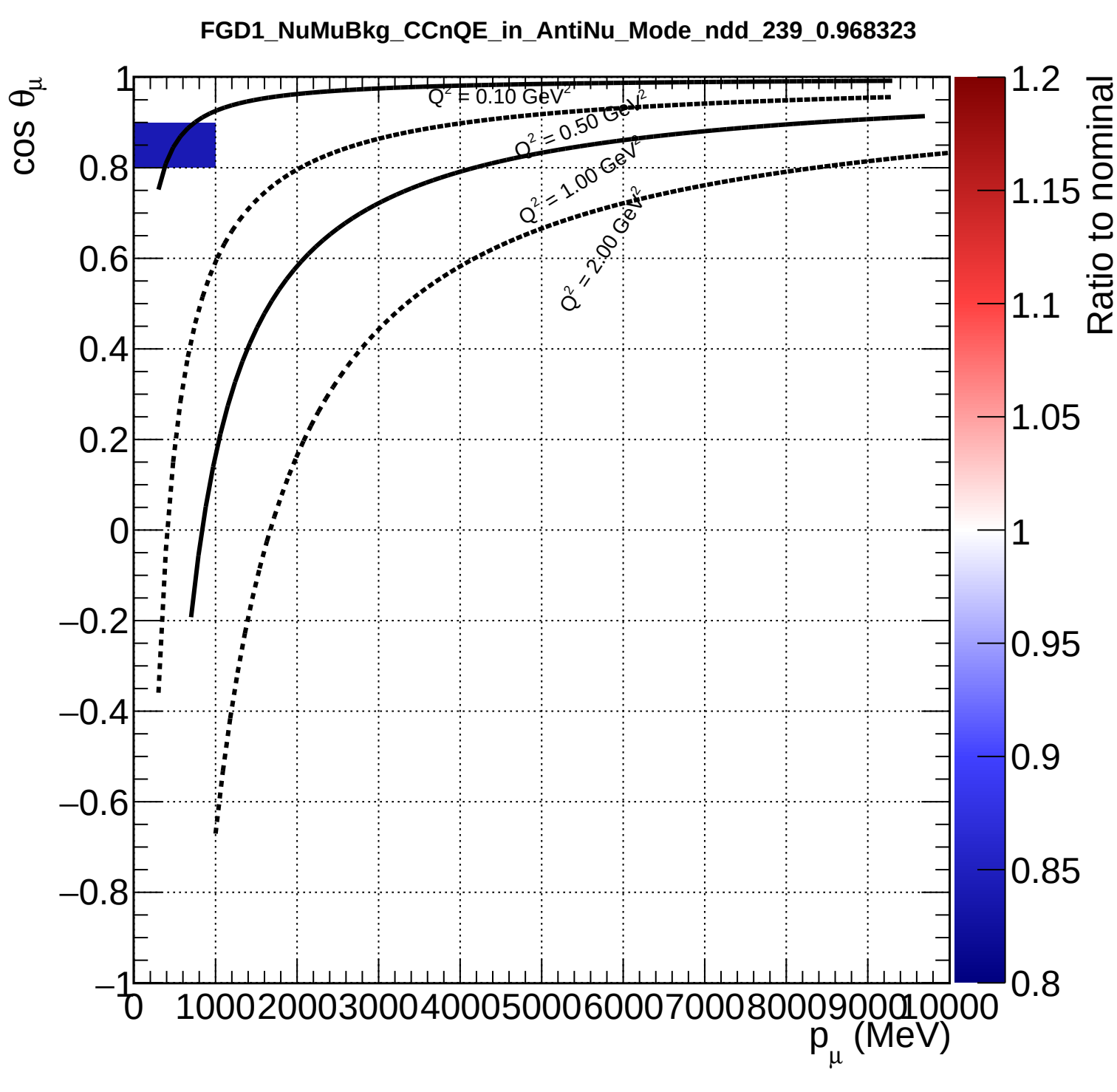

FGD2_anti-numuCC_1_track_ndd_411_1.10237
cos θμ
1
0.8
0.6
0.4
0.2
0
–0.2
–0.4
–0.6
–0.8
–1
0
1000
2000
3000
4000
5000
6000
7000
8000
9000
10000
pμ (MeV)
Q² = 0.10 GeV²
Q² = 0.50 GeV²
Q² = 1.00 GeV²
Q² = 2.00 GeV²
Ratio to nominal
1.2
1.15
1.1
1.05
1
0.95
0.9
0.85
0.8

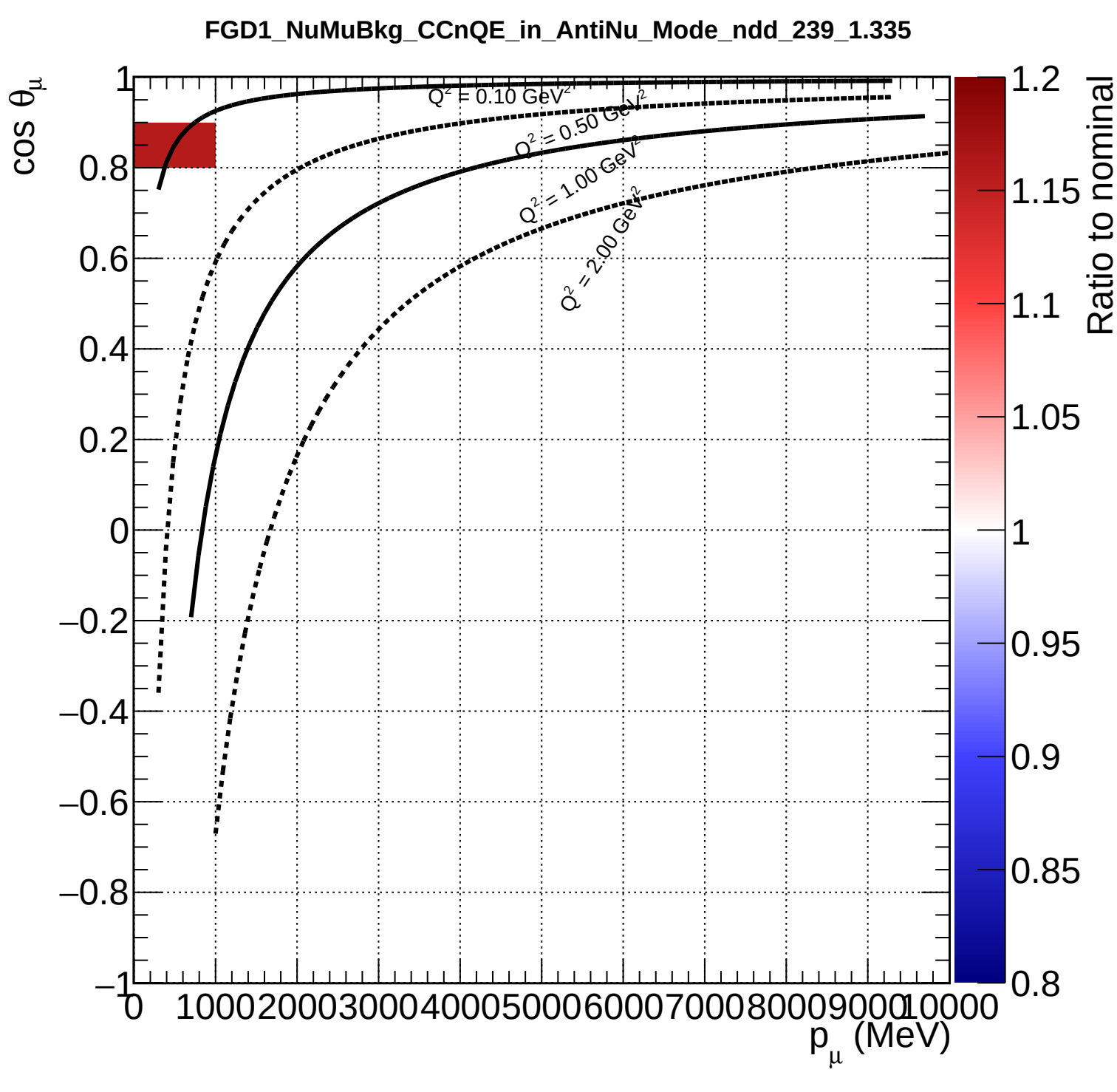

FGD2_anti-numuCC_N_tracks_ndd_467_0.884718
cos θμ
pμ (MeV)
Ratio to nominal
Q² = 0.10 GeV²
Q² = 0.50 GeV²
Q² = 1.00 GeV²
Q² = 2.00 GeV²
1
0.8
0.6
0.4
0.2
0
–0.2
–0.4
–0.6
–0.8
–1
0
1000
2000
3000
4000
5000
6000
7000
8000
9000
10000
1.2
1.15
1.1
1.05
1
0.95
0.9
0.85
0.8

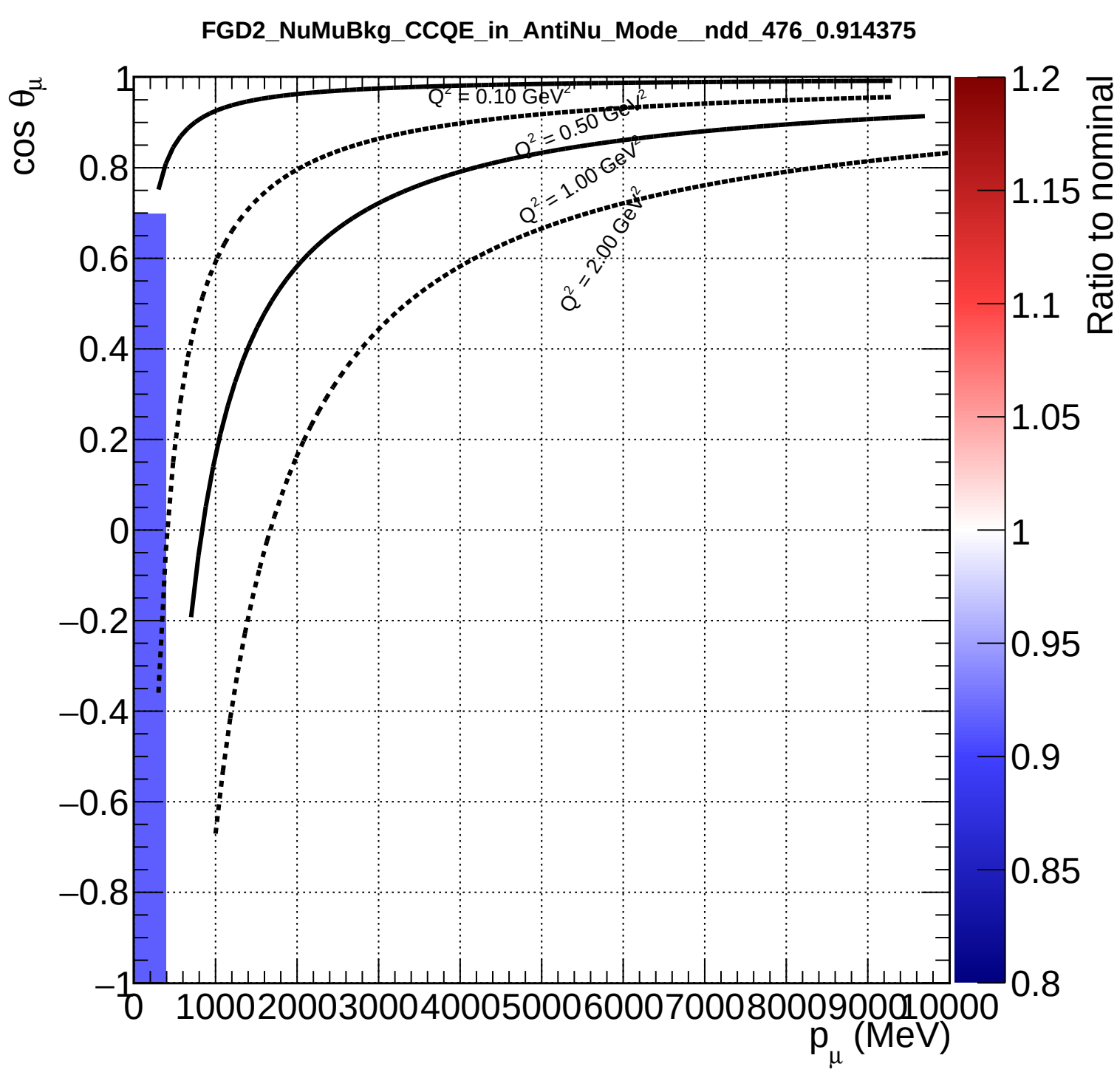

FGD2_anti-numuCC_N_tracks_ndd_467_1.20631
cos θμ
1
0.8
0.6
0.4
0.2
0
–0.2
–0.4
–0.6
–0.8
–1
0
1000
2000
3000
4000
5000
6000
7000
8000
9000
10000
pμ (MeV)
Q² = 0.10 GeV²
Q² = 0.50 GeV²
Q² = 1.00 GeV²
Q² = 2.00 GeV²
Ratio to nominal
1.2
1.15
1.1
1.05
1
0.95
0.9
0.85
0.8

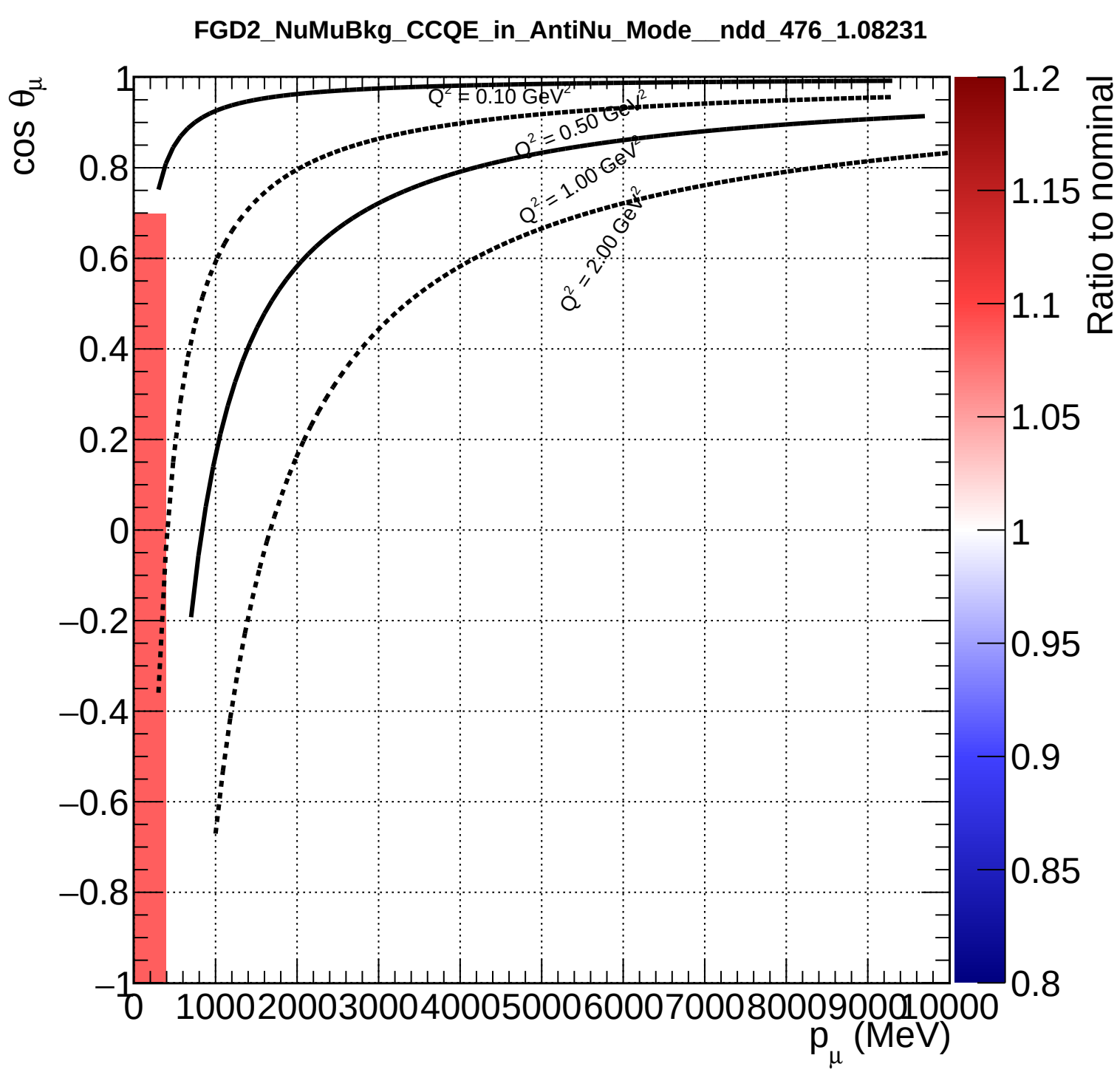

FGD1_NuMuBkg_CCQE_in_AntiNu_Mode__ndd_198_0.905571
cos θμ
pμ (MeV)
Ratio to nominal
Q² = 0.10 GeV²
Q² = 0.50 GeV²
Q² = 1.00 GeV²
Q² = 2.00 GeV²
1
0.8
0.6
0.4
0.2
0
–0.2
–0.4
–0.6
–0.8
–1
0
1000
2000
3000
4000
5000
6000
7000
8000
9000
10000
1.2
1.15
1.1
1.05
1
0.95
0.9
0.85
0.8

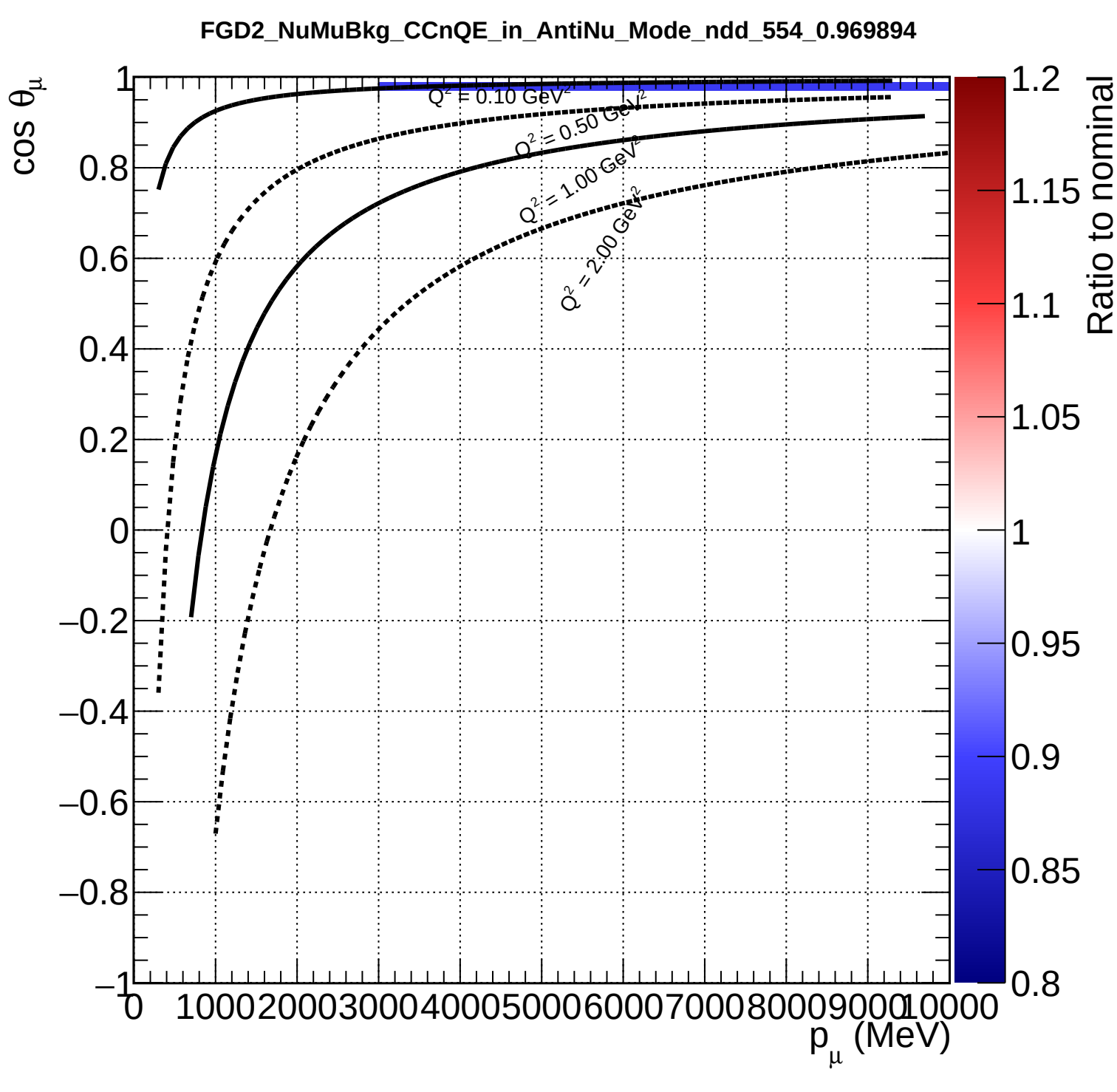

FGD1_NuMuBkg_CCQE_in_AntiNu_Mode__ndd_198_1.09768
cos θμ
pμ (MeV)
Ratio to nominal
Q² = 0.10 GeV²
Q² = 0.50 GeV²
Q² = 1.00 GeV²
Q² = 2.00 GeV²
1
0.8
0.6
0.4
0.2
0
–0.2
–0.4
–0.6
–0.8
–1
0
1000
2000
3000
4000
5000
6000
7000
8000
9000
10000
1.2
1.15
1.1
1.05
1
0.95
0.9
0.85
0.8

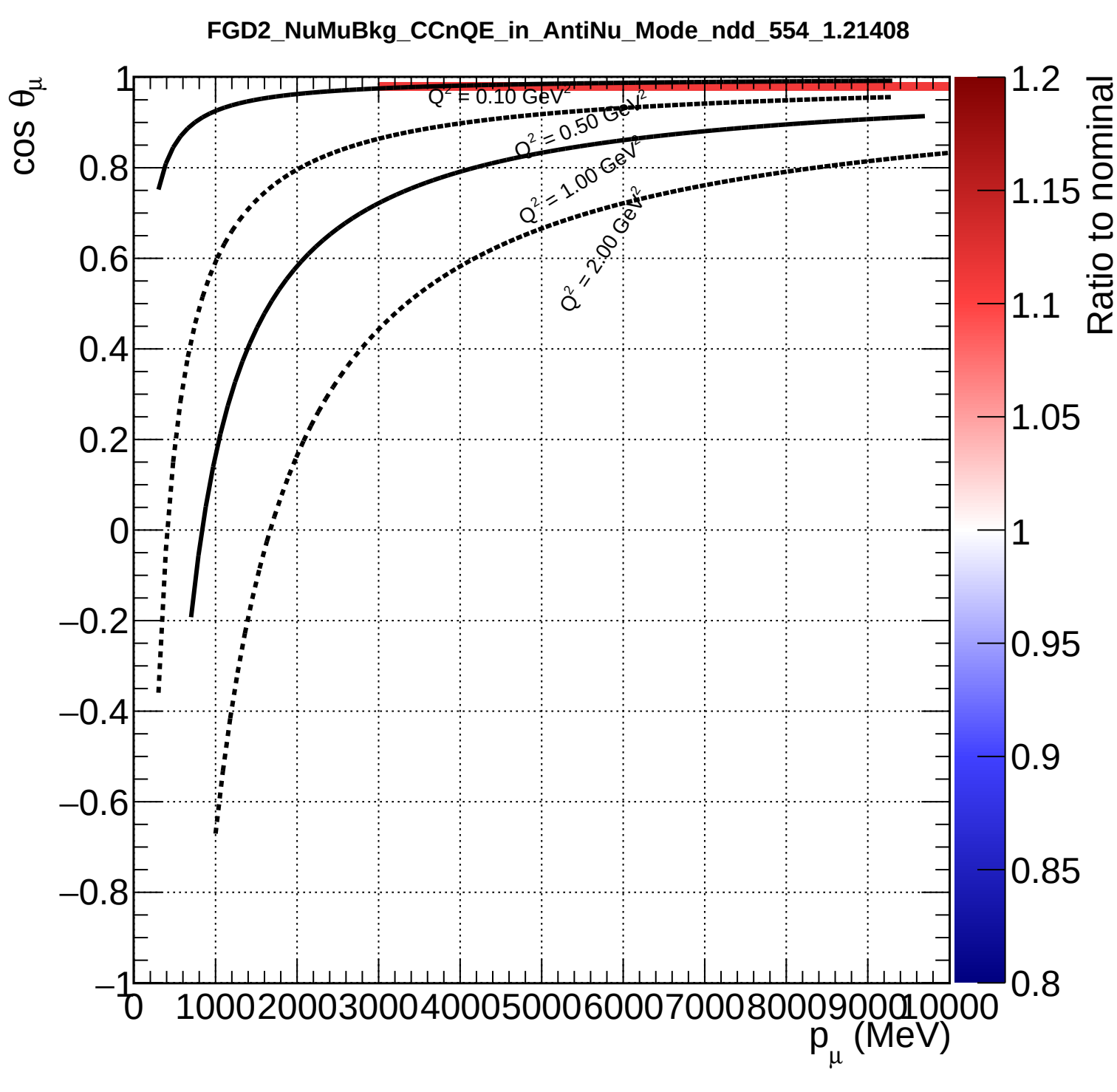

FGD1_NuMuBkg_CCnQE_in_AntiNu_Mode_ndd_239_0.968323
cos θμ
pμ (MeV)
Ratio to nominal
Q² = 0.10 GeV²
Q² = 0.50 GeV²
Q² = 1.00 GeV²
Q² = 2.00 GeV²
1
0.8
0.6
0.4
0.2
0
–0.2
–0.4
–0.6
–0.8
–1
0
1000
2000
3000
4000
5000
6000
7000
8000
9000
10000
1.2
1.15
1.1
1.05
1
0.95
0.9
0.85
0.8


FGD1_NuMuBkg_CCnQE_in_AntiNu_Mode_ndd_239_1.335
cos θμ
pμ (MeV)
Ratio to nominal
Q² = 0.10 GeV²
Q² = 0.50 GeV²
Q² = 1.00 GeV²
Q² = 2.00 GeV²
1
0.8
0.6
0.4
0.2
0
–0.2
–0.4
–0.6
–0.8
–1
0
1000
2000
3000
4000
5000
6000
7000
8000
9000
10000
1.2
1.15
1.1
1.05
1
0.95
0.9
0.85
0.8


FGD2_NuMuBkg_CCQE_in_AntiNu_Mode__ndd_476_0.914375
cos θμ
pμ (MeV)
Ratio to nominal
Q² = 0.10 GeV²
Q² = 0.50 GeV²
Q² = 1.00 GeV²
Q² = 2.00 GeV²
1
0.8
0.6
0.4
0.2
0
–0.2
–0.4
–0.6
–0.8
–1
0
1000
2000
3000
4000
5000
6000
7000
8000
9000
10000
1.2
1.15
1.1
1.05
1
0.95
0.9
0.85
0.8


FGD2_NuMuBkg_CCQE_in_AntiNu_Mode__ndd_476_1.08231
cos θμ
pμ (MeV)
Ratio to nominal
Q² = 0.10 GeV²
Q² = 0.50 GeV²
Q² = 1.00 GeV²
Q² = 2.00 GeV²
1
0.8
0.6
0.4
0.2
0
–0.2
–0.4
–0.6
–0.8
–1
0
1000
2000
3000
4000
5000
6000
7000
8000
9000
10000
1.2
1.15
1.1
1.05
1
0.95
0.9
0.85
0.8


FGD2_NuMuBkg_CCnQE_in_AntiNu_Mode_ndd_554_0.969894
cos θμ
pμ (MeV)
Ratio to nominal
Q² = 0.10 GeV²
Q² = 0.50 GeV²
Q² = 1.00 GeV²
Q² = 2.00 GeV²
1
0.8
0.6
0.4
0.2
0
–0.2
–0.4
–0.6
–0.8
–1
0
1000
2000
3000
4000
5000
6000
7000
8000
9000
10000
1.2
1.15
1.1
1.05
1
0.95
0.9
0.85
0.8


FGD2_NuMuBkg_CCnQE_in_AntiNu_Mode_ndd_554_1.21408
cos θμ
pμ (MeV)
Ratio to nominal
Q² = 0.10 GeV²
Q² = 0.50 GeV²
Q² = 1.00 GeV²
Q² = 2.00 GeV²
1
0.8
0.6
0.4
0.2
0
–0.2
–0.4
–0.6
–0.8
–1
0
1000
2000
3000
4000
5000
6000
7000
8000
9000
10000
1.2
1.15
1.1
1.05
1
0.95
0.9
0.85
0.8