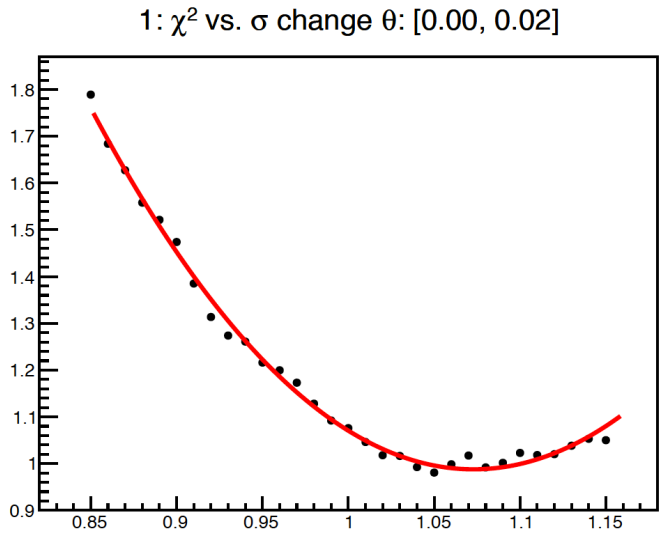
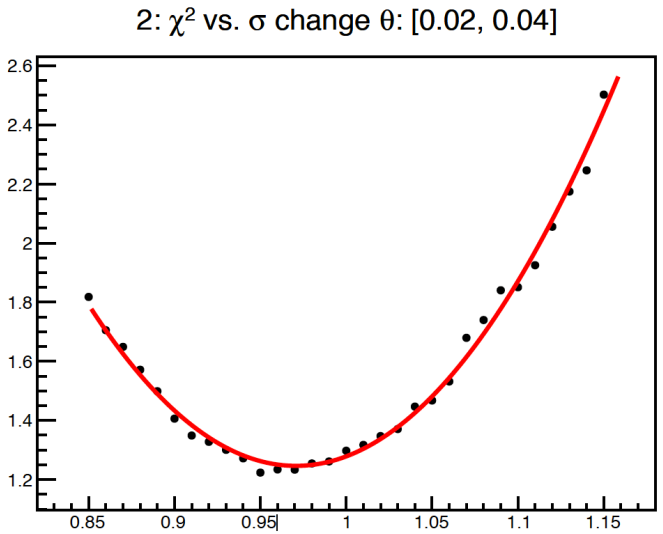
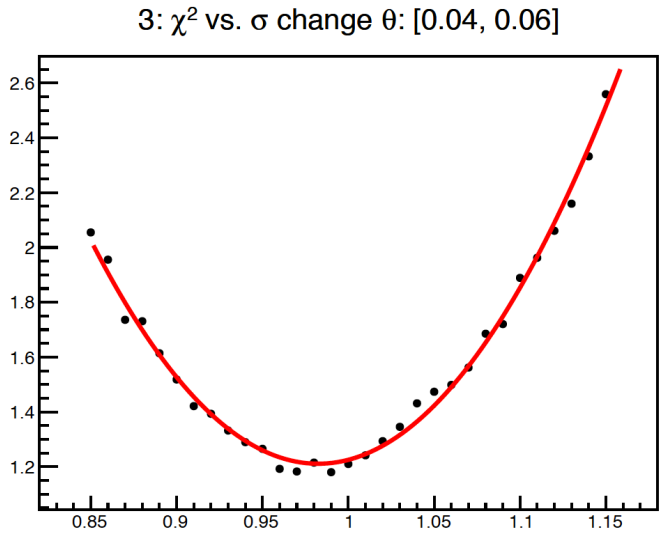
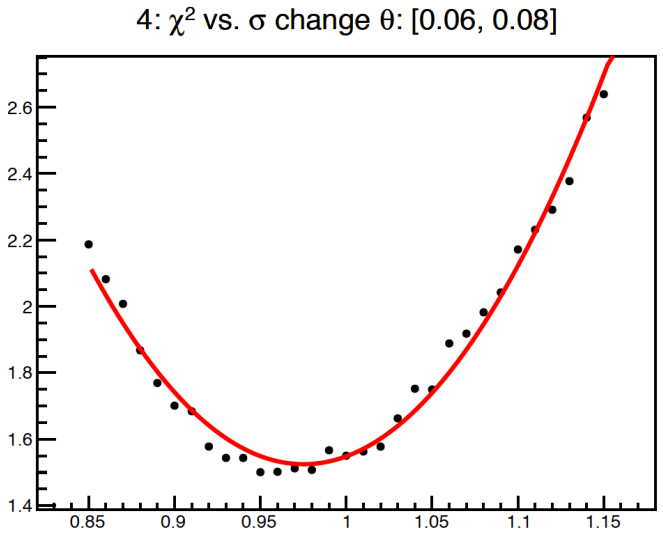
- Optimize the Monte Carlo peak position and sigma to better match data by minimizing chi^2 when fitting rotated mass

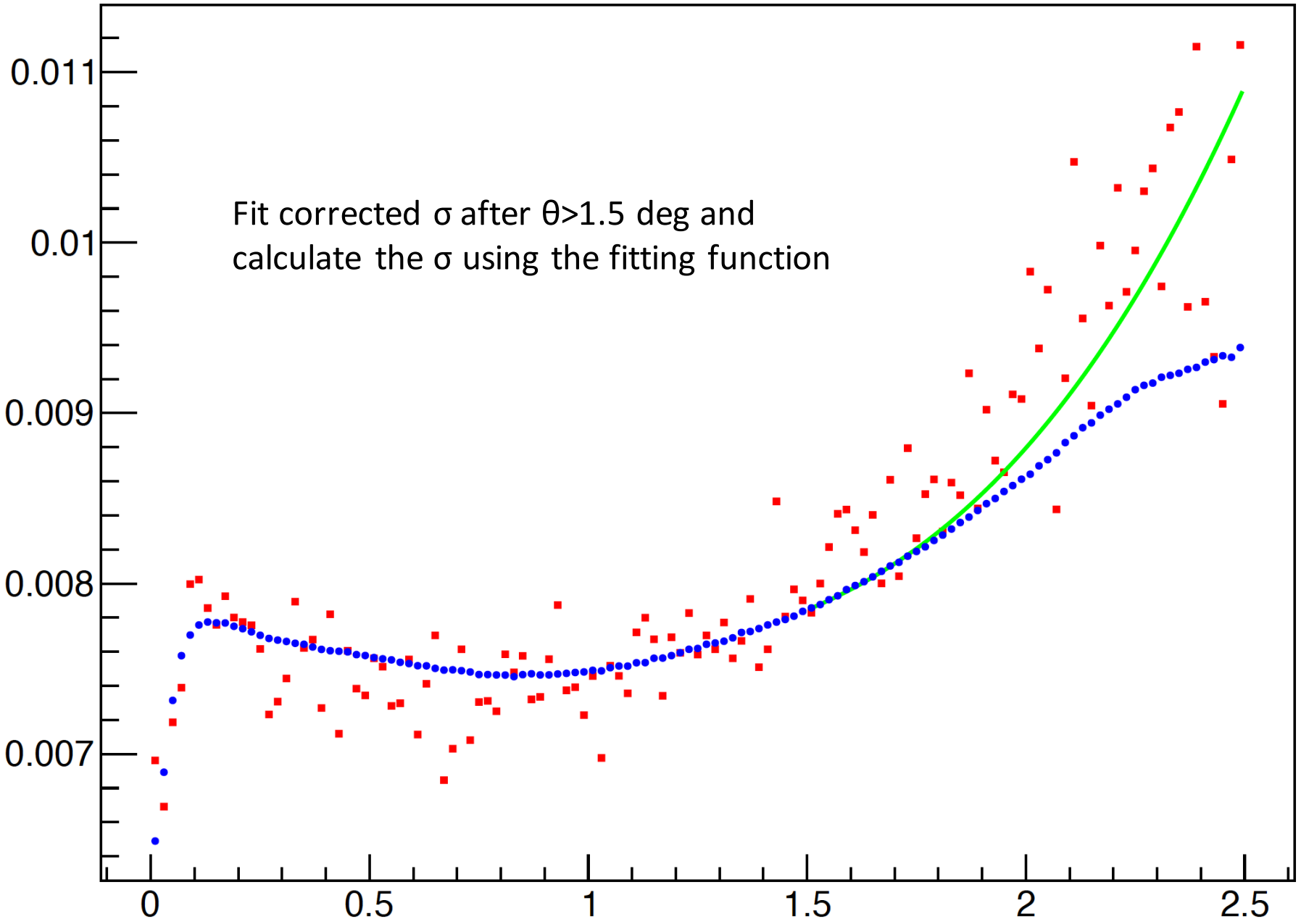




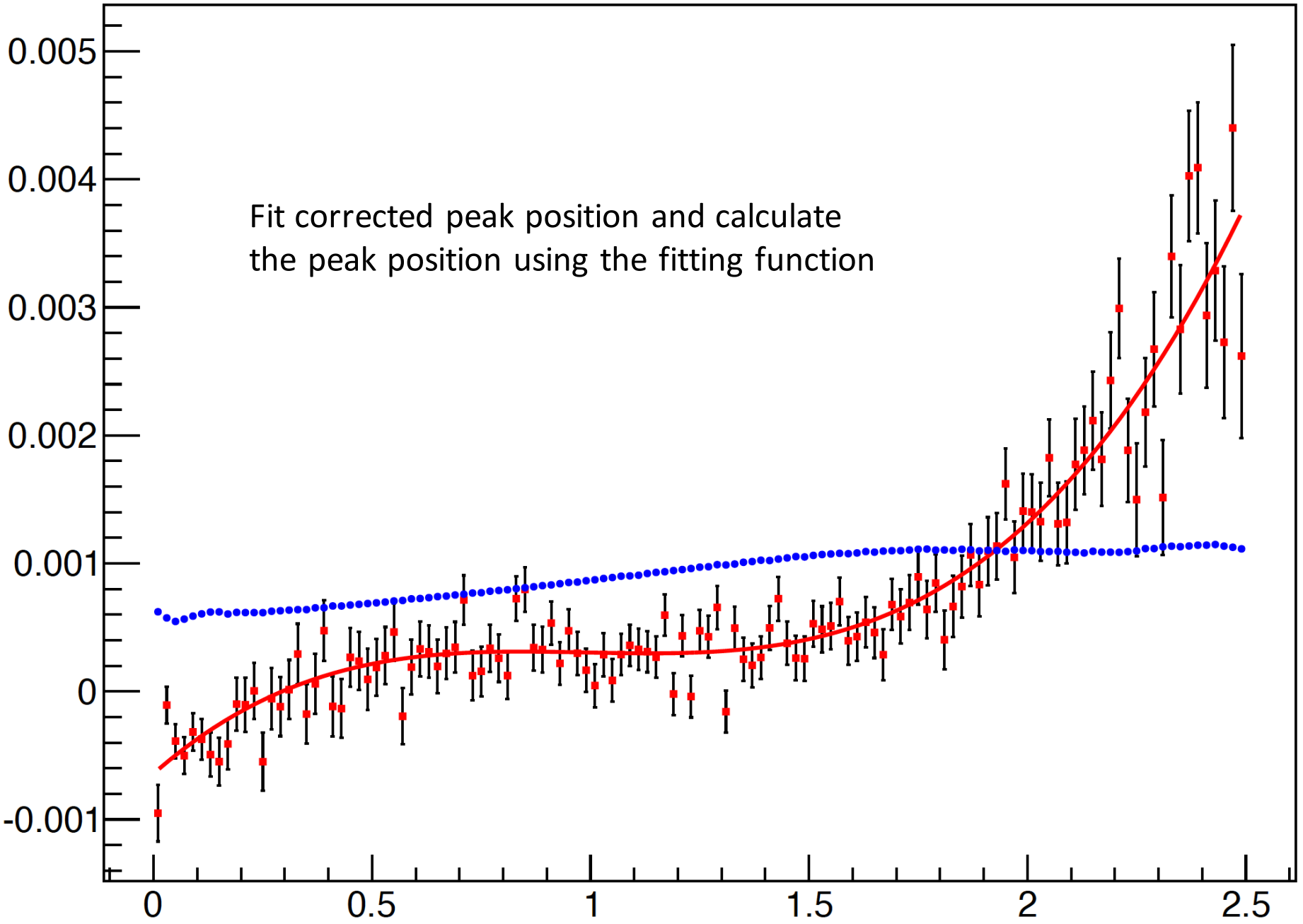




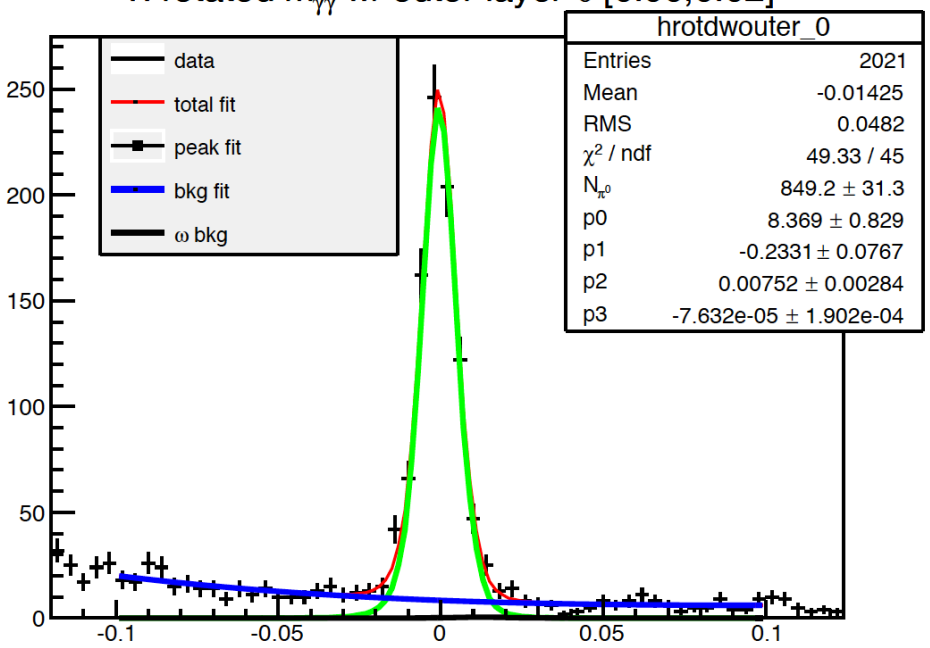
M.C. σ vs. θ before and after correction



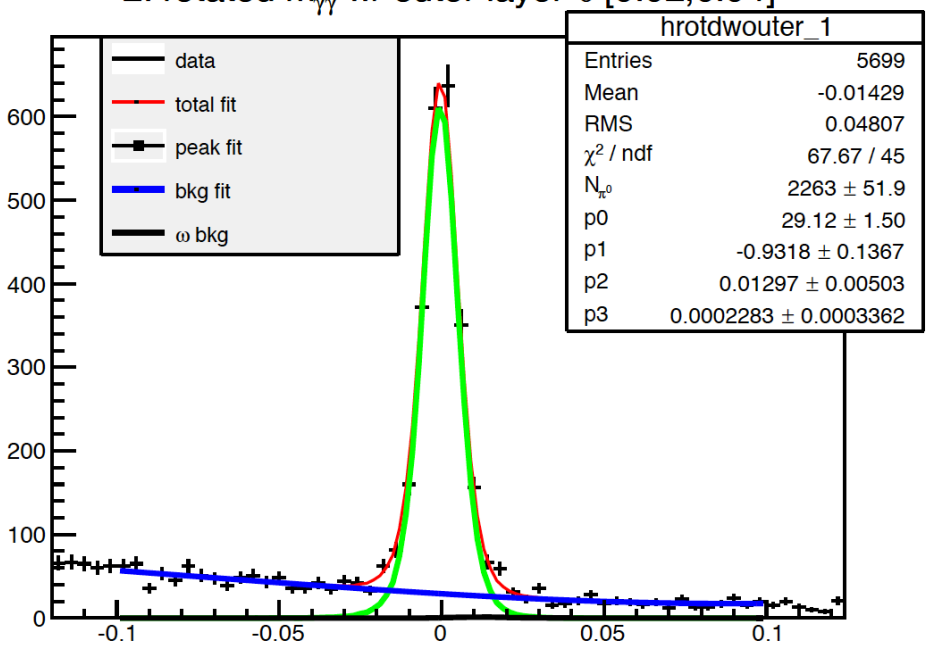
M.C. mean vs. θ before and after correction



1: rotated $m_{\gamma\gamma}$ w/ outer layer θ [0.00,0.02]

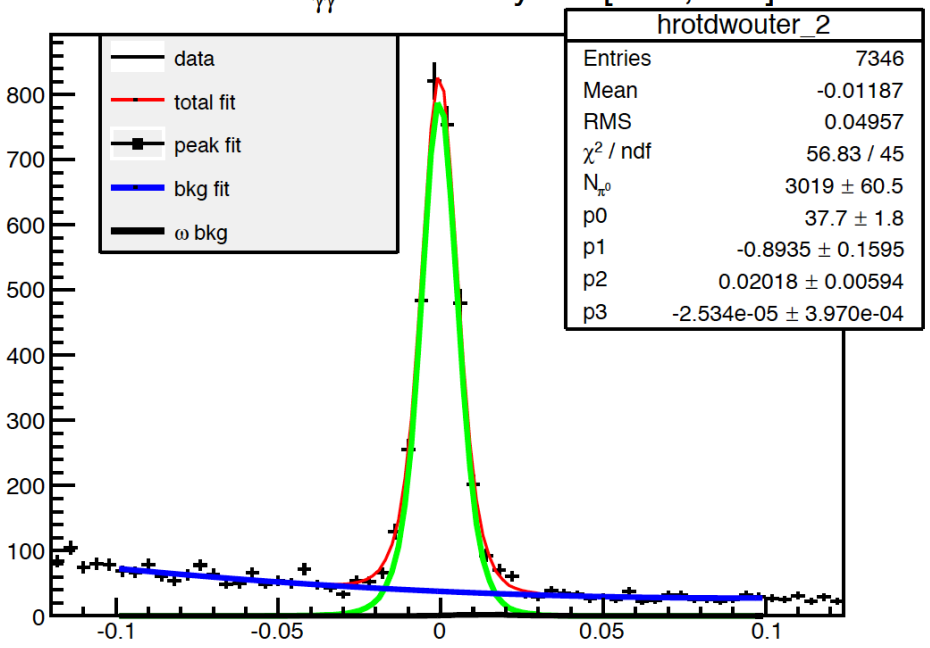


2: rotated $m_{\gamma\gamma}$ w/ outer layer θ [0.02,0.04]

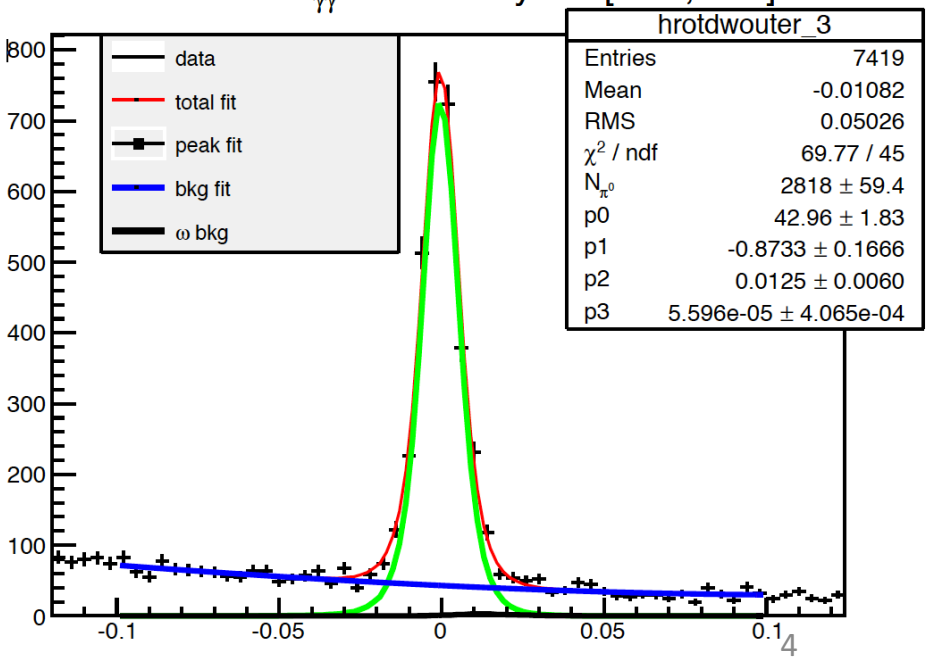


Using best tdiff, tdiff cut [-7, 7] ns

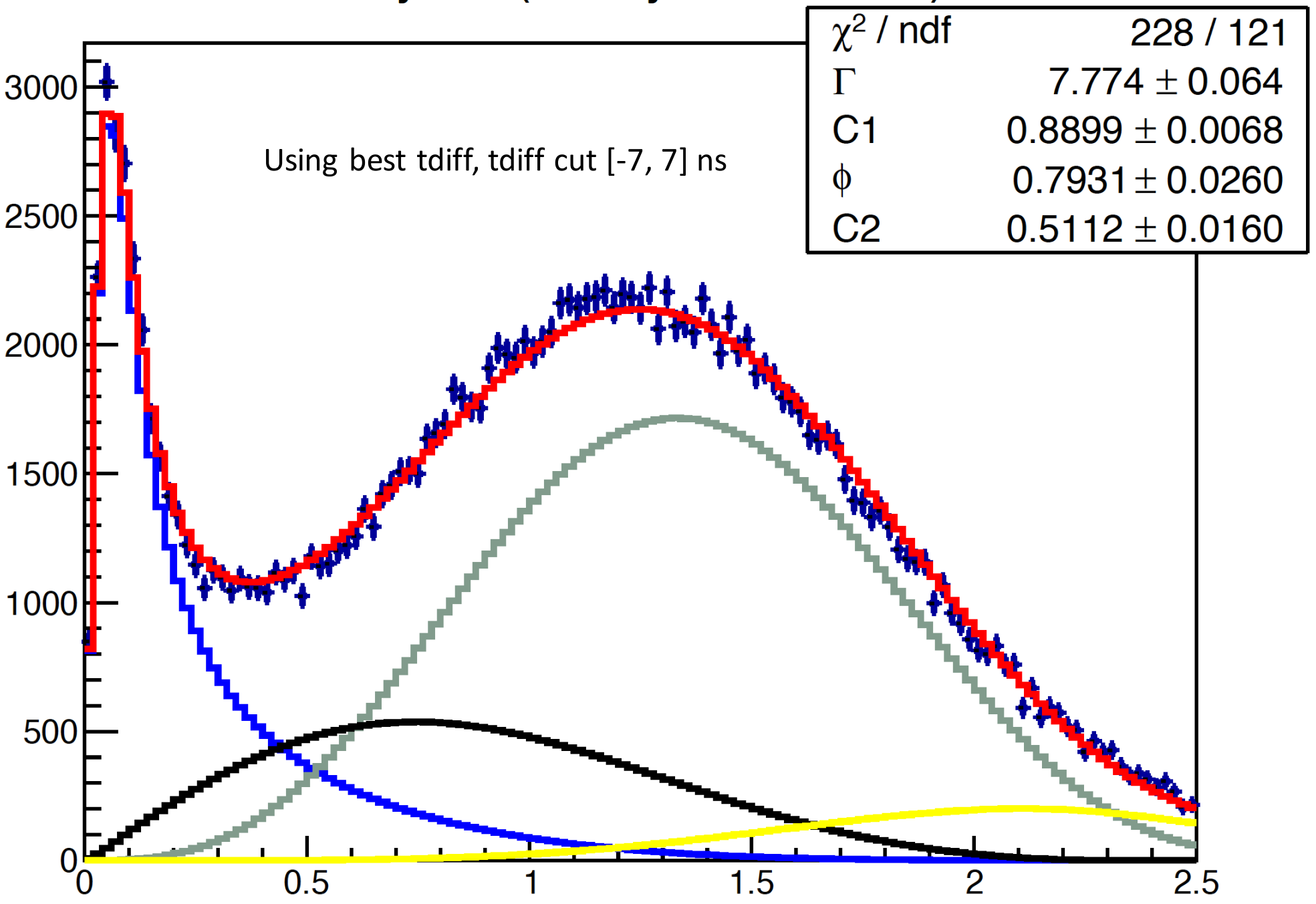
3: rotated $m_{\gamma\gamma}$ w/ outer layer θ [0.04,0.06]



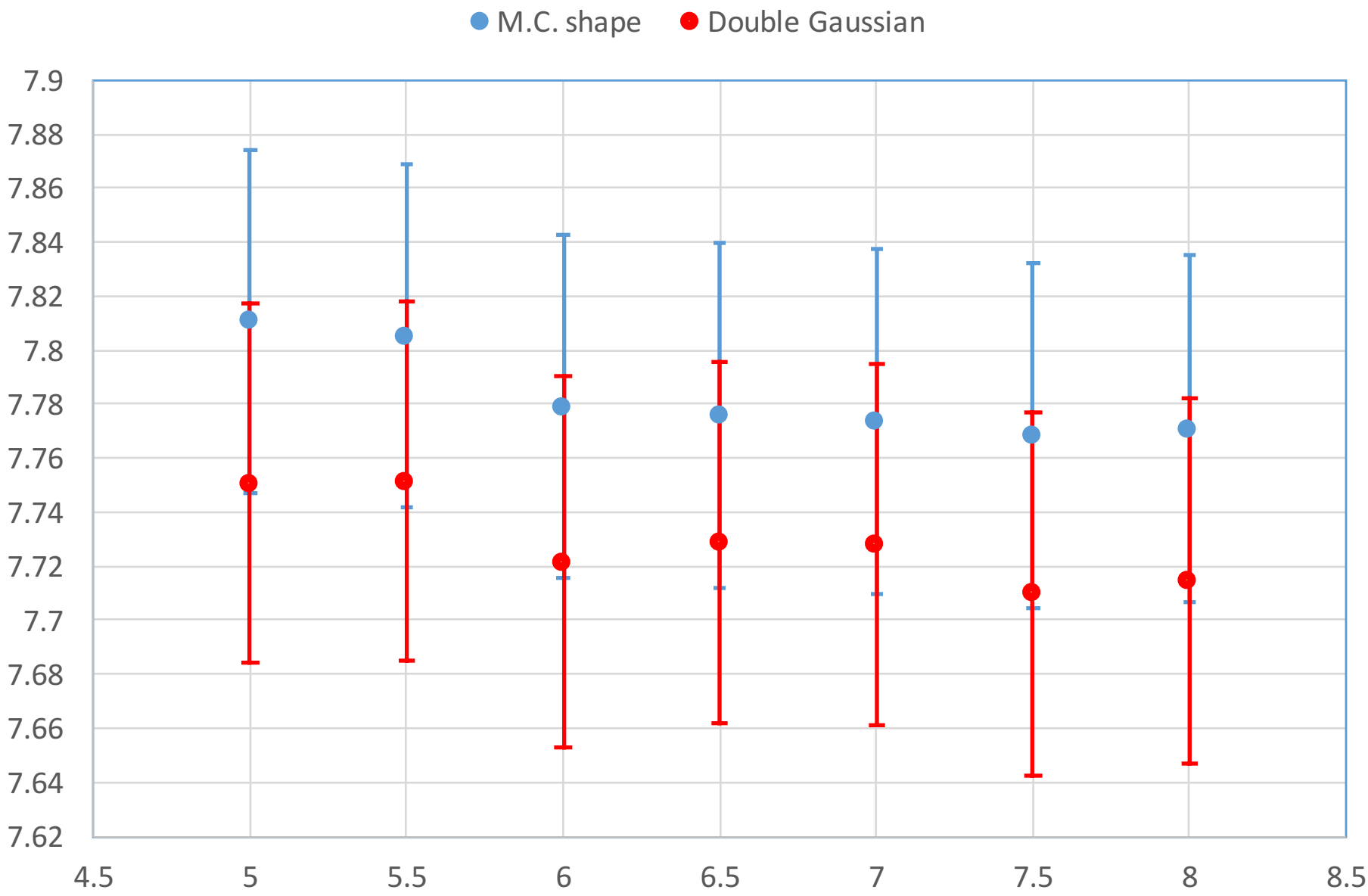
4: rotated $m_{\gamma\gamma}$ w/ outer layer θ [0.06,0.08]

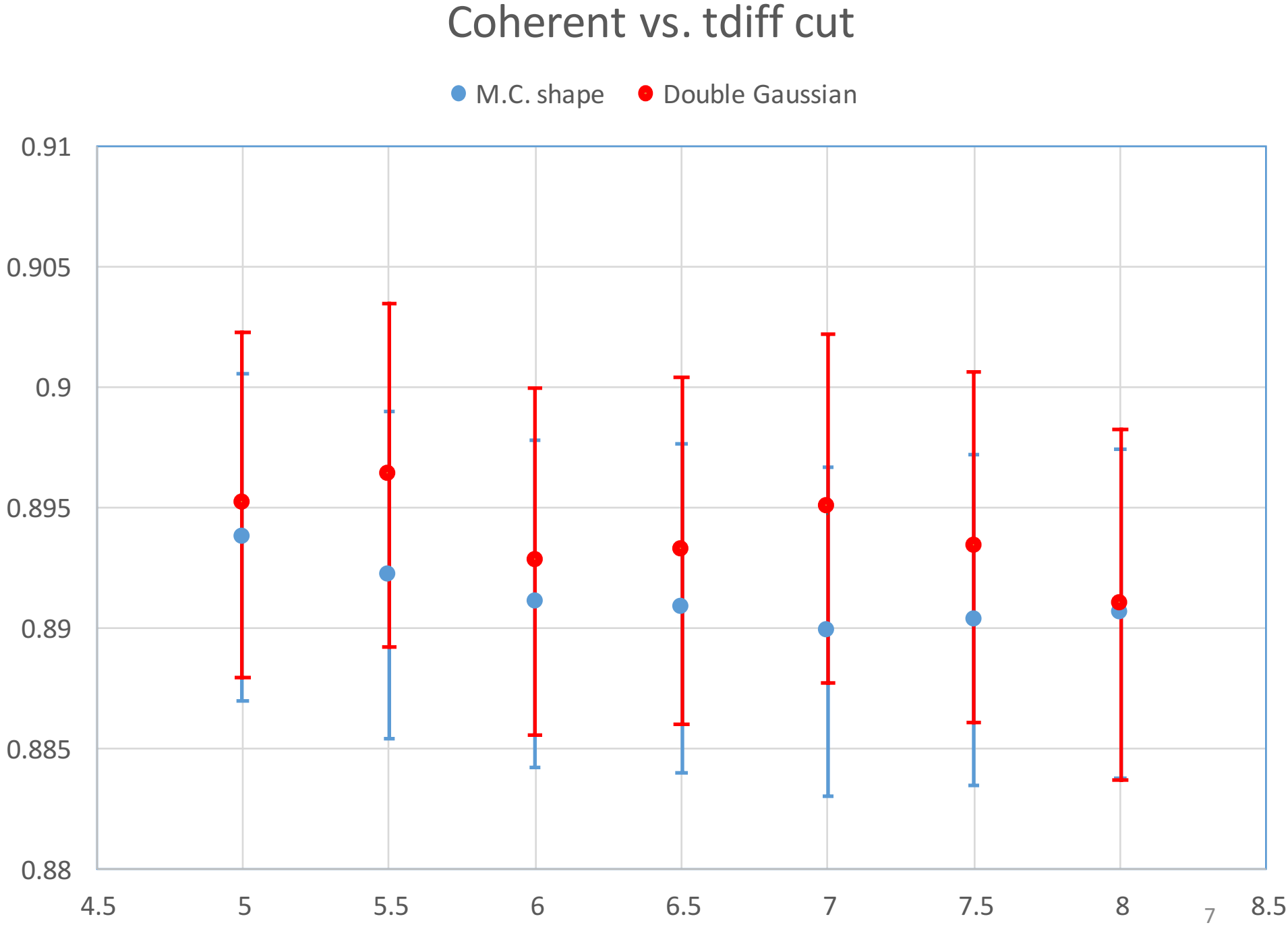


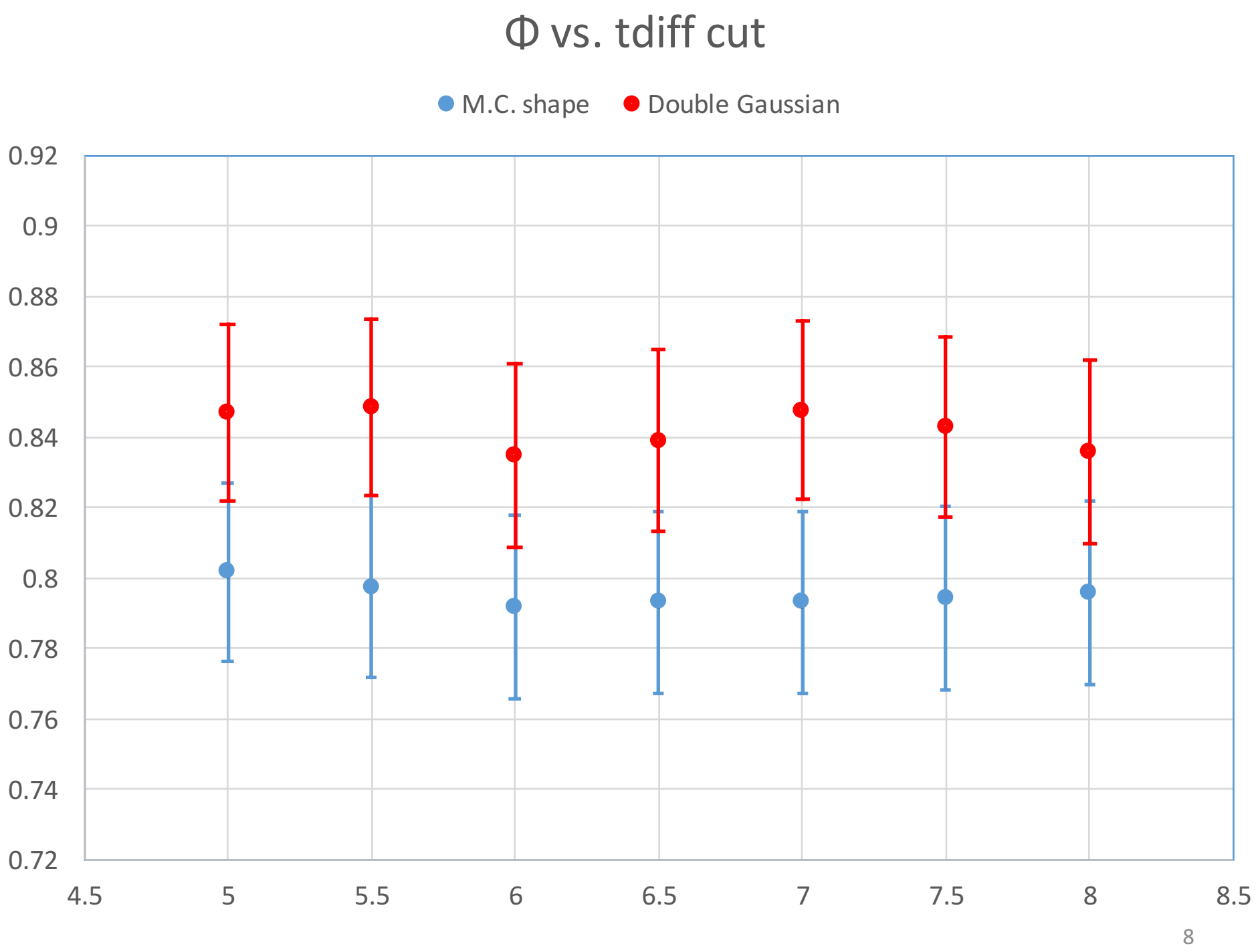
π^0 yield (Si, crystal w/ tran.)

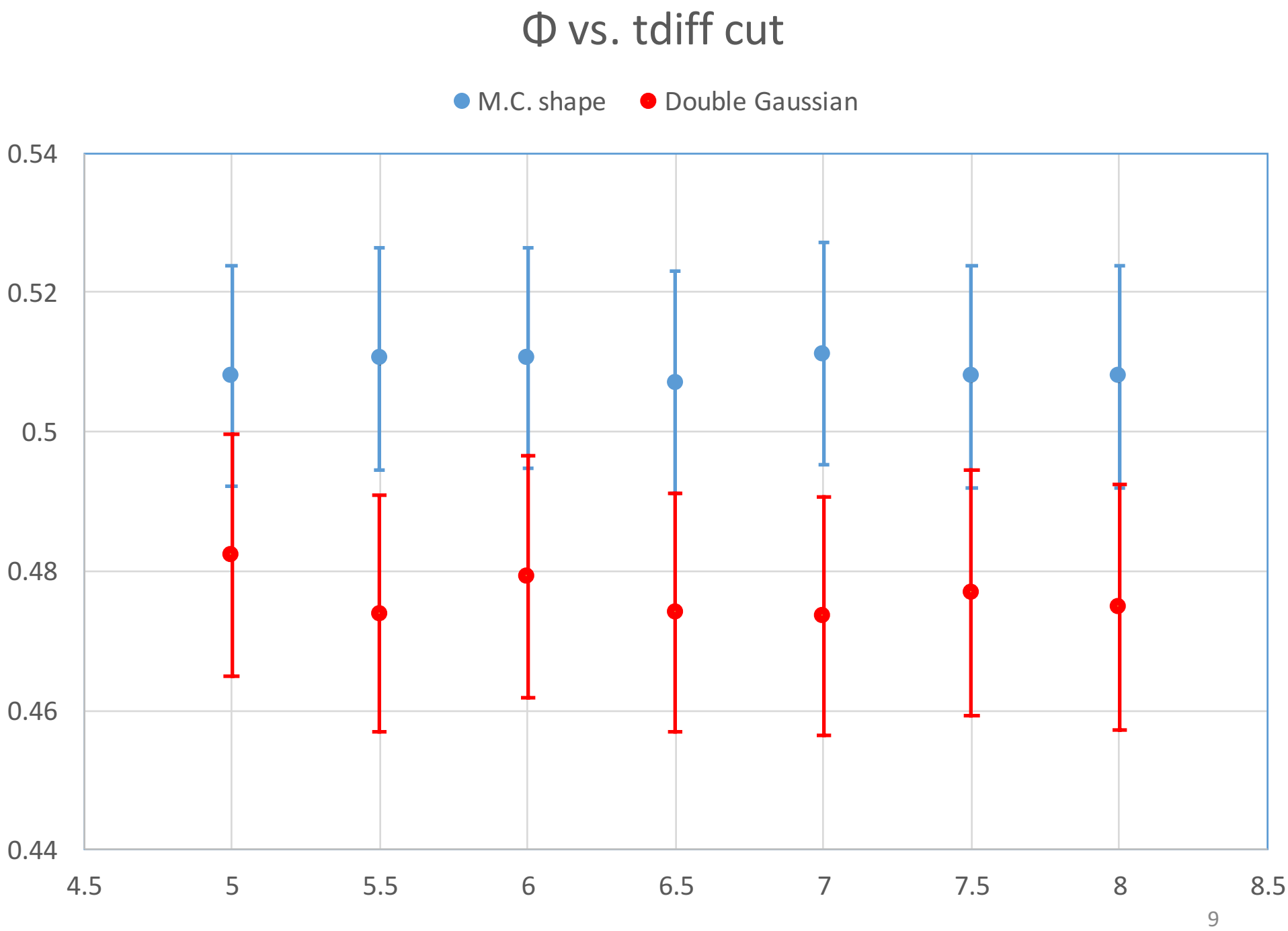


Γ vs. tdiff cut




Coherent vs. tdiff cut
M.C. shape
Double Gaussian
0.91
0.905
0.9
0.895
0.89
0.885
0.88
4.5
5
5.5
6
6.5
7
7.5
8
8.5


Φ vs. tdiff cut
M.C. shape
Double Gaussian
0.92
0.9
0.88
0.86
0.84
0.82
0.8
0.78
0.76
0.74
0.72
4.5
5
5.5
6
6.5
7
7.5
8
8.5


Φ vs. tdiff cut
M.C. shape
Double Gaussian
0.54
0.52
0.5
0.48
0.46
0.44
4.5
5
5.5
6
6.5
7
7.5
8
8.5