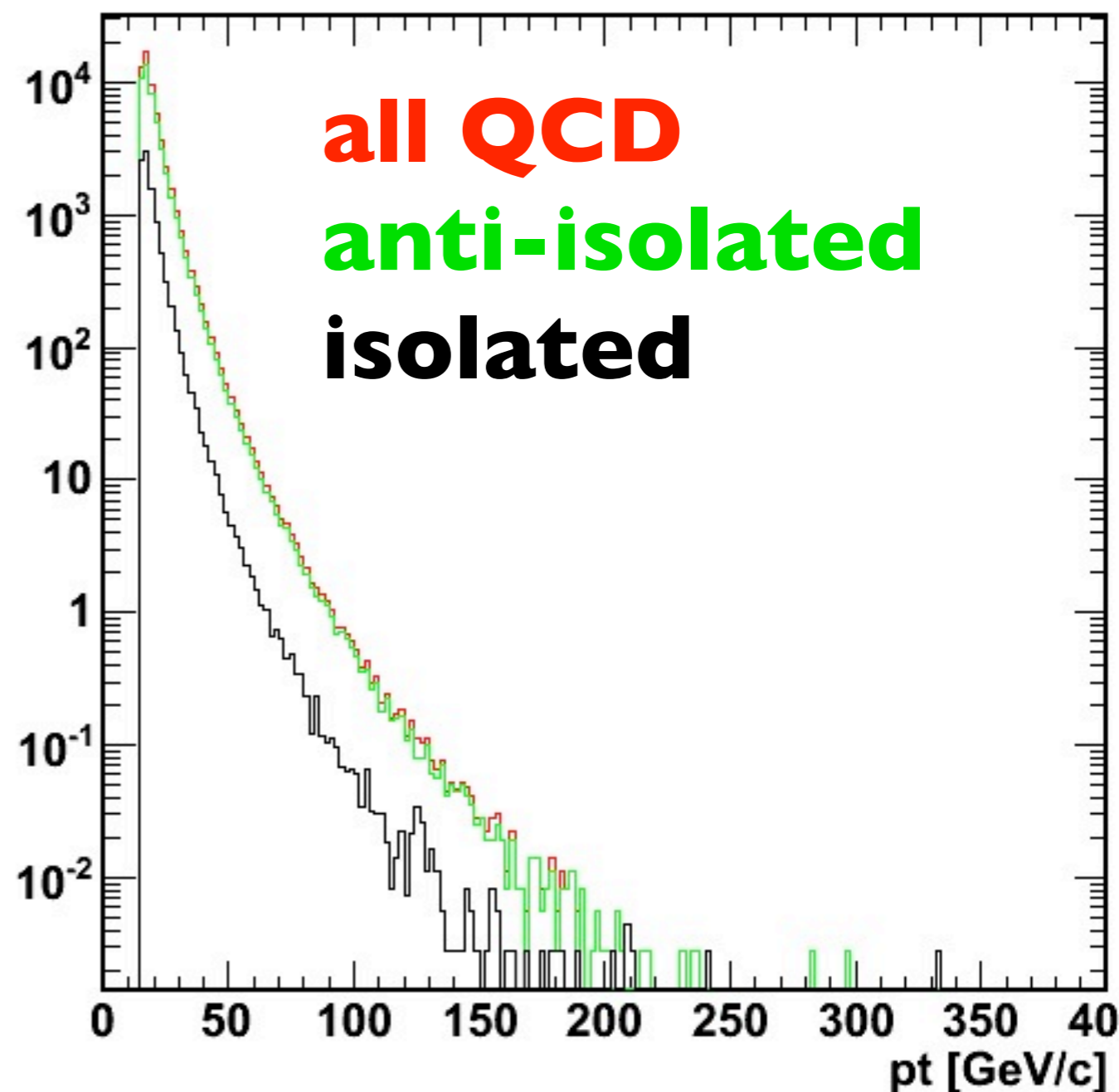


QCD estimation in a nutshell

- QCD di-jet background largely suppressed by isolation cut
- does not remove all
- use anti-isolated di-muon mass spectrum to estimate the QCD background in data

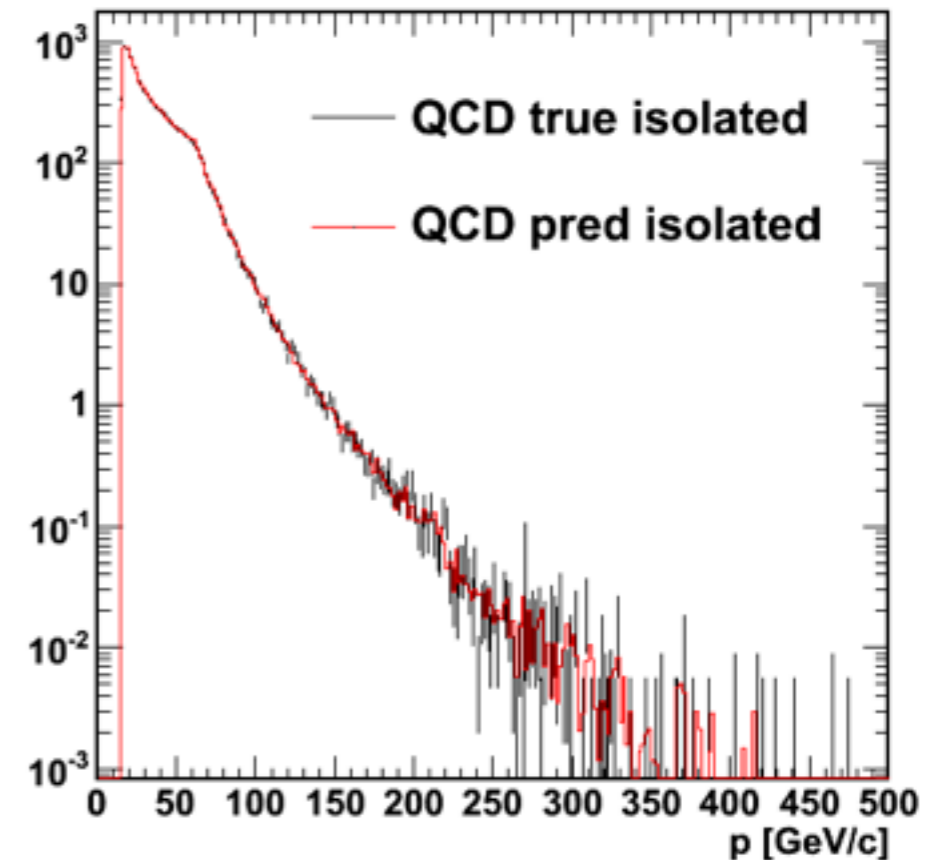
QCD Contribution



the easy case

- using just the MC sample
- 1) find the probability that the a muon (knowing that it's QCD) will be isolated given the p_t , η of the muon
- use the single-muon sample so you don't have to worry about correlations
- 2) assign a weight to each event that is found to be anti-isolated
- big benefit: improved statistical power of the estimation because we're sampling from a large mostly-QCD distribution

isolation prediction



invariant mass QCD prediction

