1 Comparison to NLO predictions and other measurements, addendum

Alternatively, the total cross section can also be calculated using the Weizsäcker-Williams approximation with FMNR up to to a cutoff scale in Q^2, chosen here to be m_b^2 [1]. It has been checked that this yields the same result as combining FMNR with HVQDIS. This approximation has also been used to obtain the NLO prediction for the $\Delta\phi(\mu\mu)$ distribution (Fig. 1). For this prediction, the two b quarks are fragmented and decayed independently using parameters and decay spectra extracted from LEP measurements. Reasonable agreement is obtained.

References

[1] S. Frixione et al., PL **B 319**, 339 (1993);
S. Frixione et al., PL **B 348**, 633 (1995).

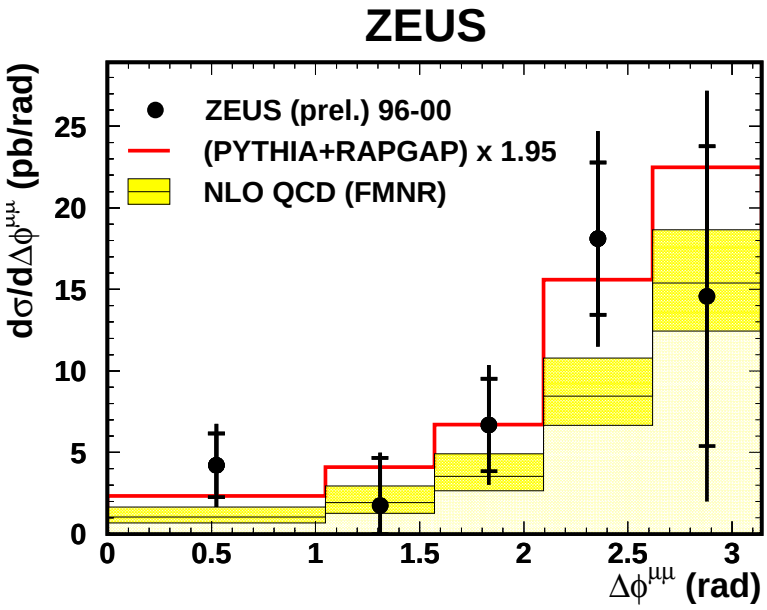

Figure 1: *Cross-section $d\sigma/d\Delta\phi^{\mu\mu}$ for dimuon events from $b\bar{b}$ decays in which each muon originates from a different $b(\bar{b})$ quark, with $p_T^{\mu} > 1.5$ GeV and $-2.2 < \eta^{\mu} < 2.5$ for both muons. The data (solid dots) are compared to the scaled sum of the predictions by the LO+PS generators PYTHIA and RAPGAP (histogram) and the NLO prediction from FMNR (band).*