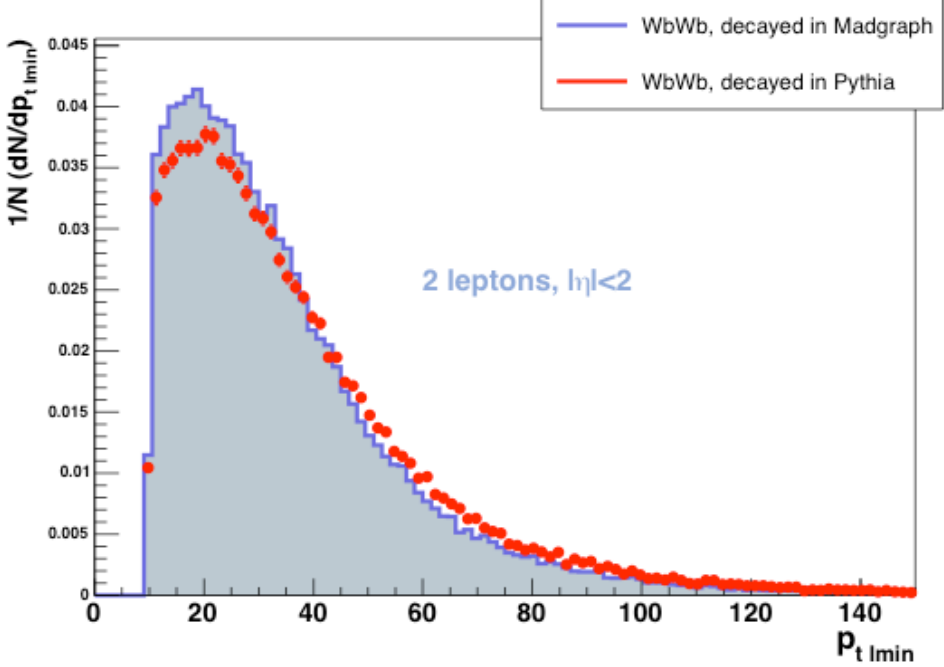
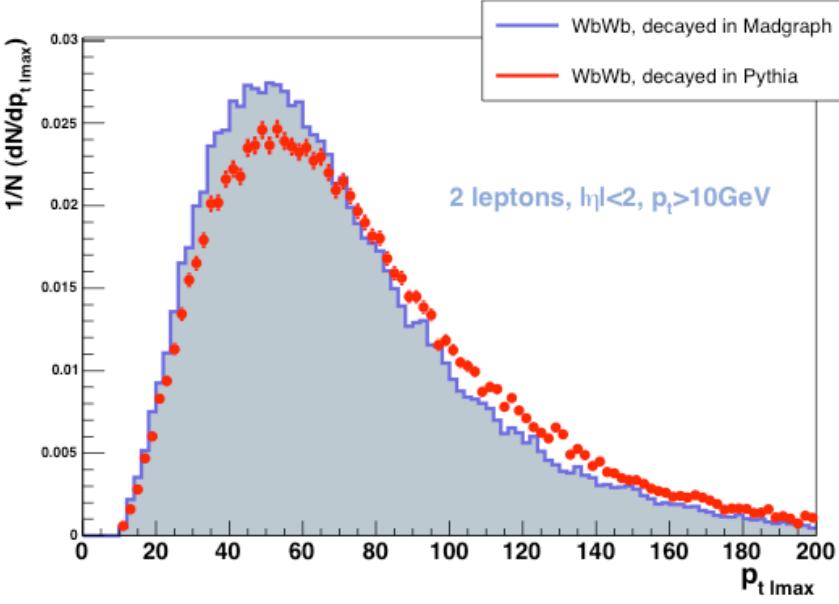
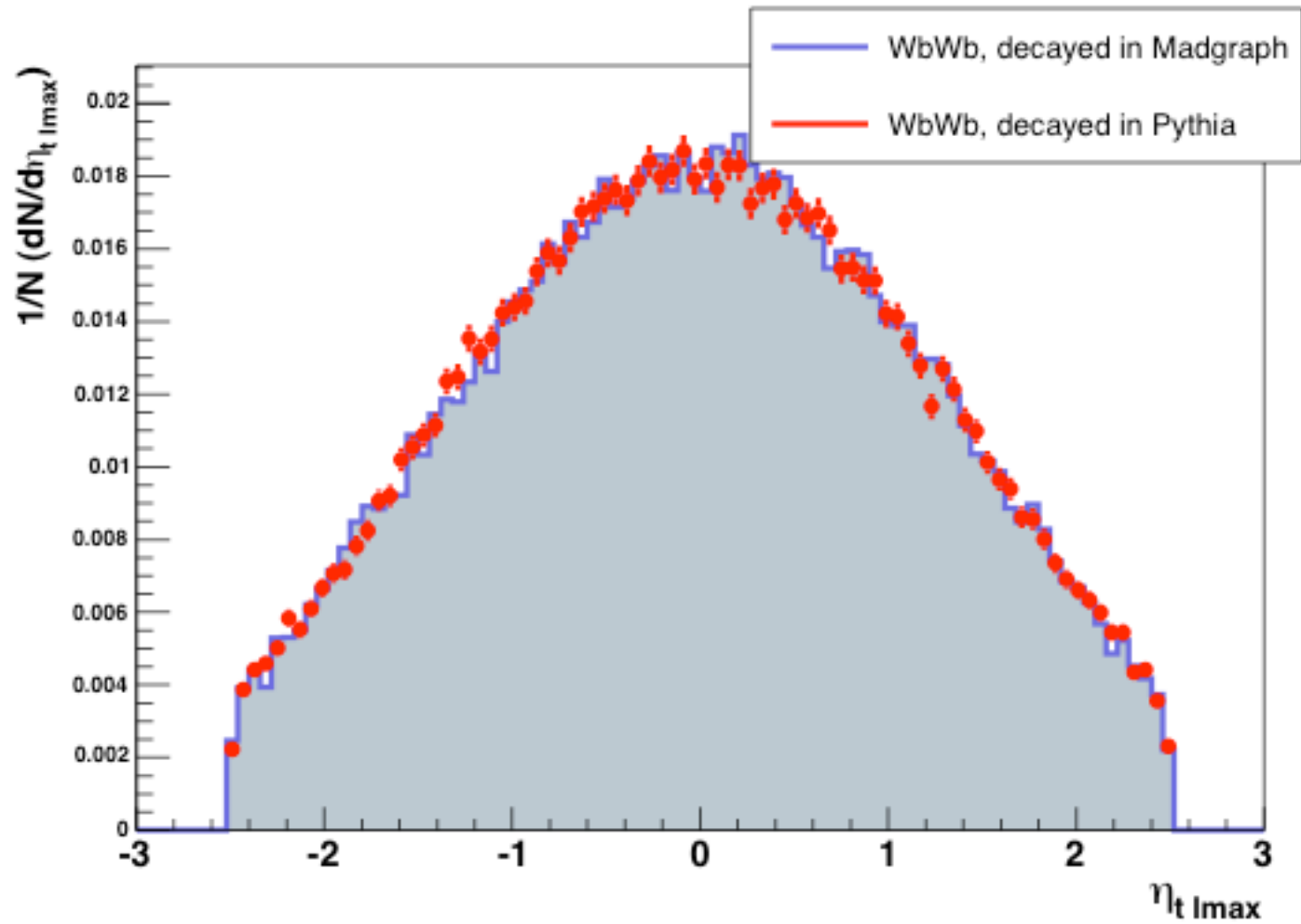


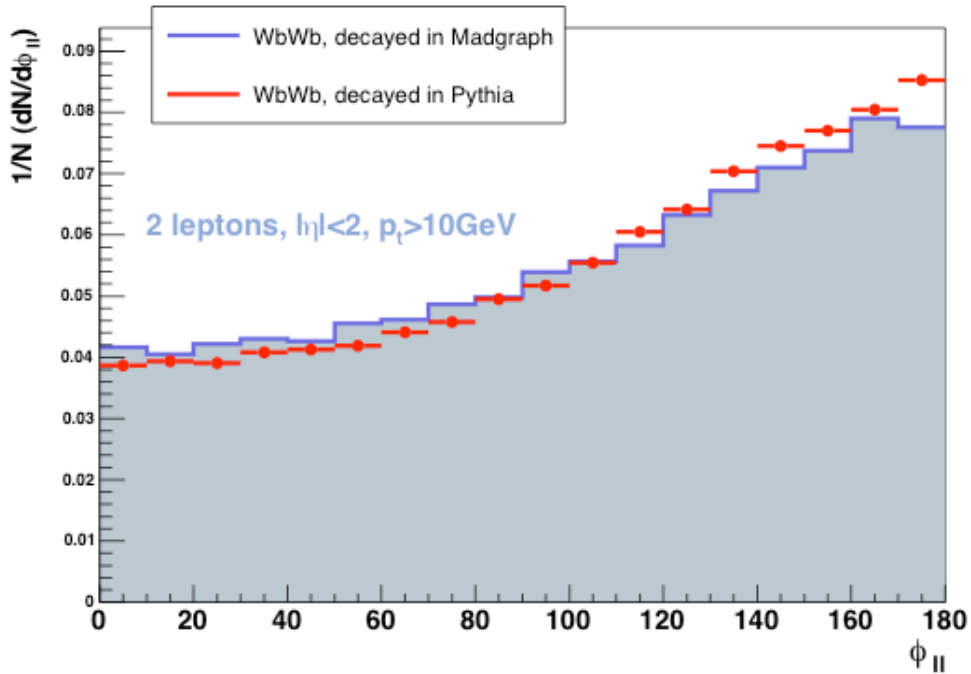
# Compare $WbWb$ with full spin correlations and when $W$ 's are decayed in PYTHIA

Les Houches workshop, May 2005

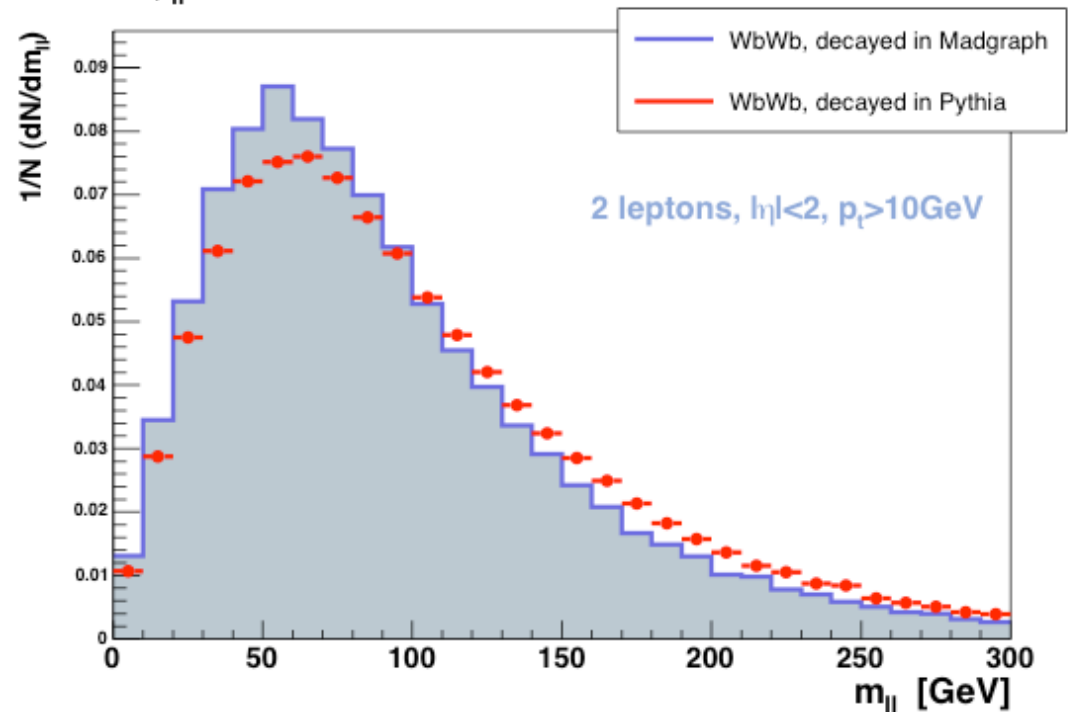
The  $p_t$  spectrum of the leptons is harder when the W's are decayed in PYTHIA



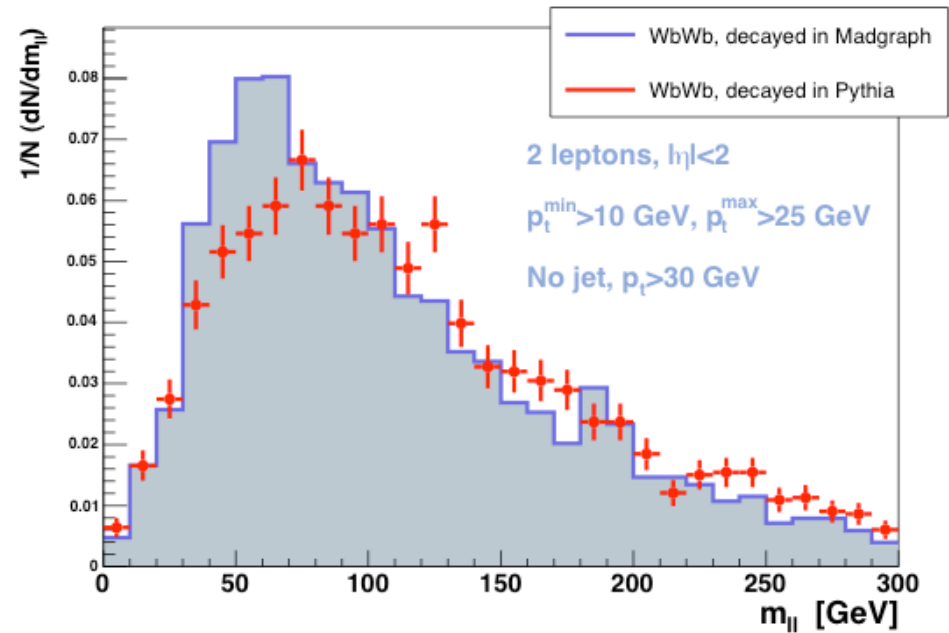
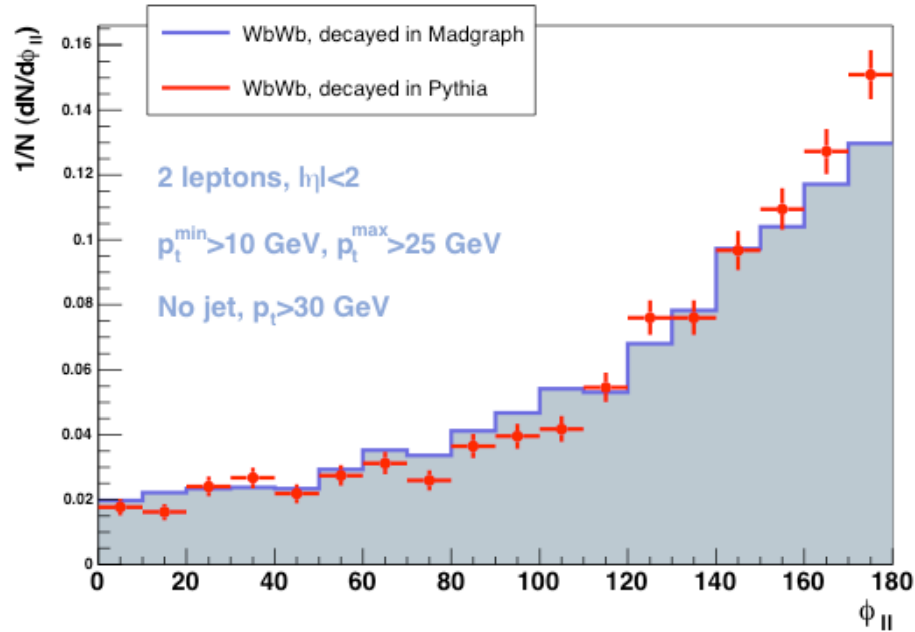




Leptons tend to be more back-to-back when W are decayed by pythia (leading to a high  $m_{II}$ )



# Variables after jet veto and lepton $p_t$ cuts and jet veto



# Selection efficiency: Cross section after cuts

$$(\sigma_{\text{tot}}(pp \rightarrow wbwb) \times \text{BR}(e, \mu, \tau) = 60.6 \text{ pb})$$

	W decayed in MadGraph	W decayed in Pythia
2 isolated leptons ( $p_t > 10 \text{ GeV}$ , $ \eta  < 2$ )	11 pb	12 pb
Jet veto ( $p_t > 30 \text{ GeV}$ , $ \eta  < 2.5$ ) $E_t^{\text{miss}} > 40 \text{ GeV}$	400 fb	410 fb
$\phi_{\parallel} < 45^\circ$ $5 \text{ GeV} < m_{\parallel} < 40 \text{ GeV}$	34 fb	30 fb
$30 \text{ GeV} < p_t^{\text{max}}(\text{lep}) < 55 \text{ GeV}$ $p_t^{\text{min}}(\text{lep}) > 25 \text{ GeV}$	4.7 fb	5.3 fb