

1 Supplementary material for LHCb-PAPER-2018-031

This appendix contains supplementary material that will be posted on the public cds record but will not appear in the paper.

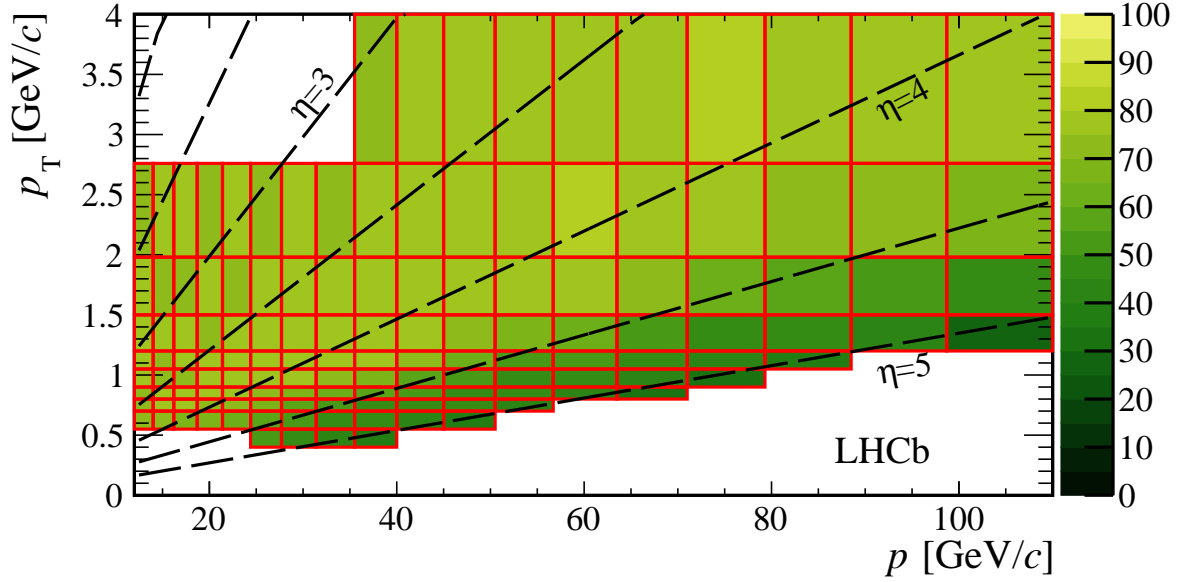


Figure 1: Reconstruction efficiency ϵ_{rec} for antiprotons, including acceptance and track reconstruction efficiency, in per cent. Only the kinematic region considered in this analysis is shown, with the chosen bins represented by the red rectangles.

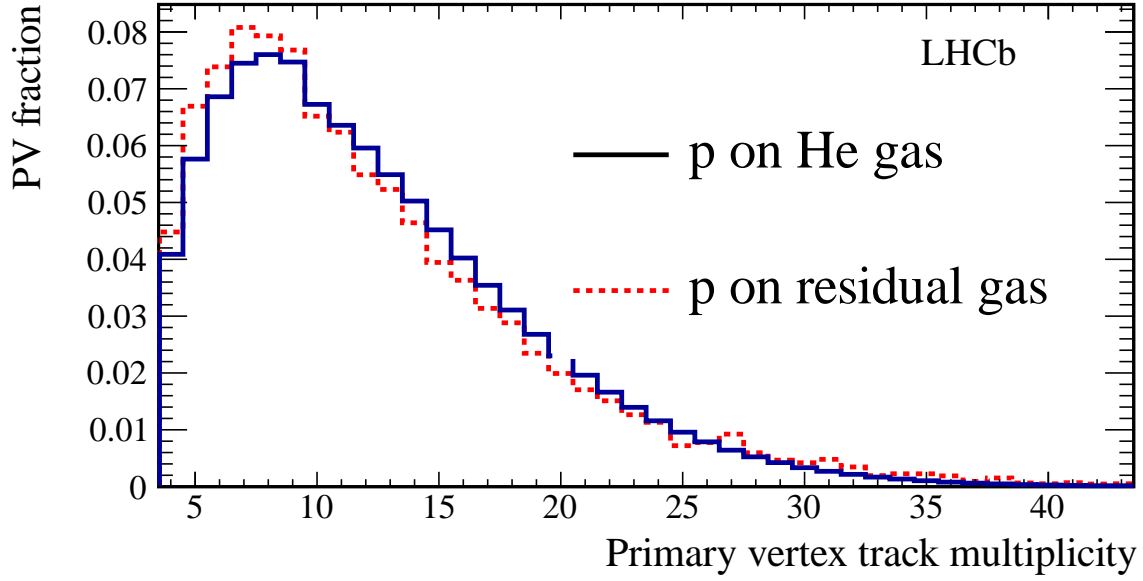


Figure 2: Normalized distributions of PV track multiplicity for collisions on the residual gas (from data without injected helium gas) and on the helium target. The average multiplicity is lower in the first case, demonstrating that the residual gas is dominated by hydrogen, although the high-multiplicity tail of the distribution suggests the presence of heavier contaminants.

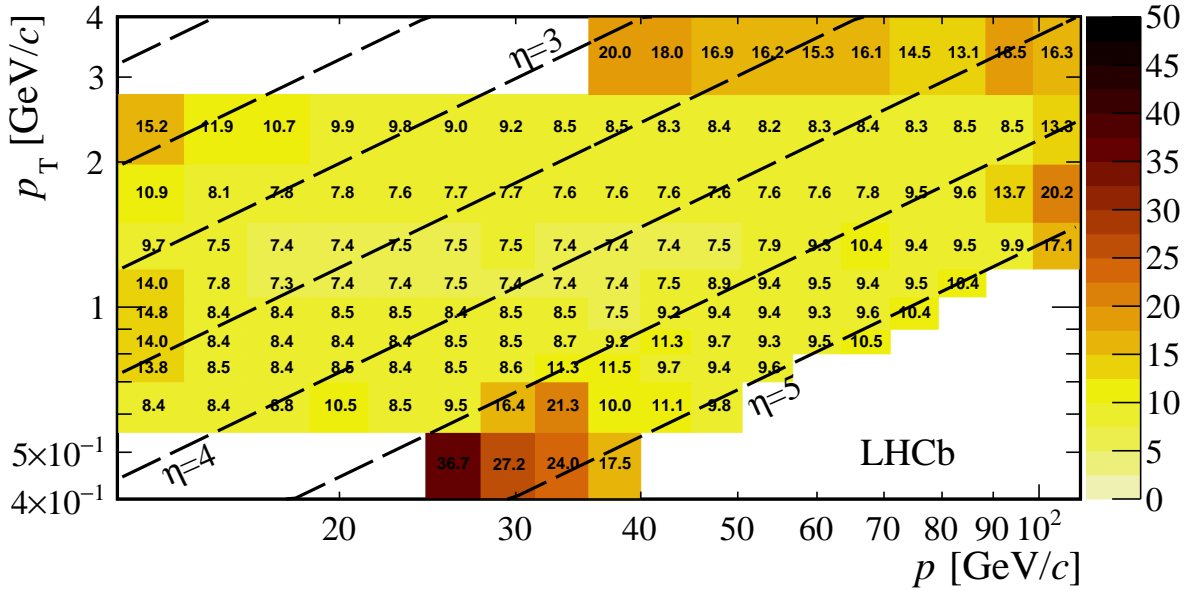


Figure 3: Total relative uncertainty for the cross-section measurement in each kinematic bin, in per cent.

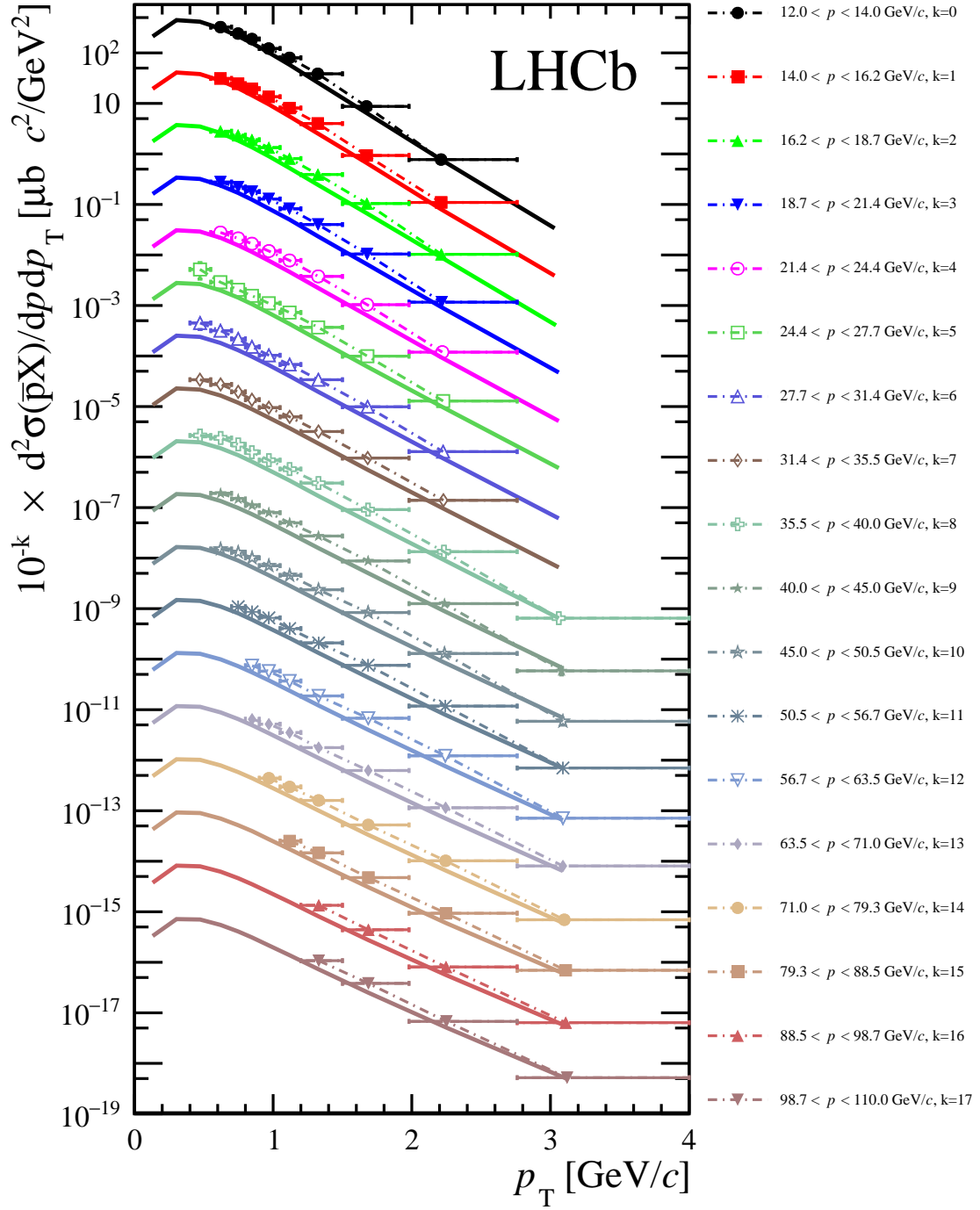


Figure 4: Result for the \bar{p} cross-section measurement. The data points show the double differential cross-section as a function of p_T in the 18 momentum bins, with values successively scaled by a factor 0.1 to improve the readability of the plot. The solid curves show the EPOS-LHC absolute predictions, scaled with the same factors than data. The error bars, which are barely visible, show the uncorrelated uncertainty only.

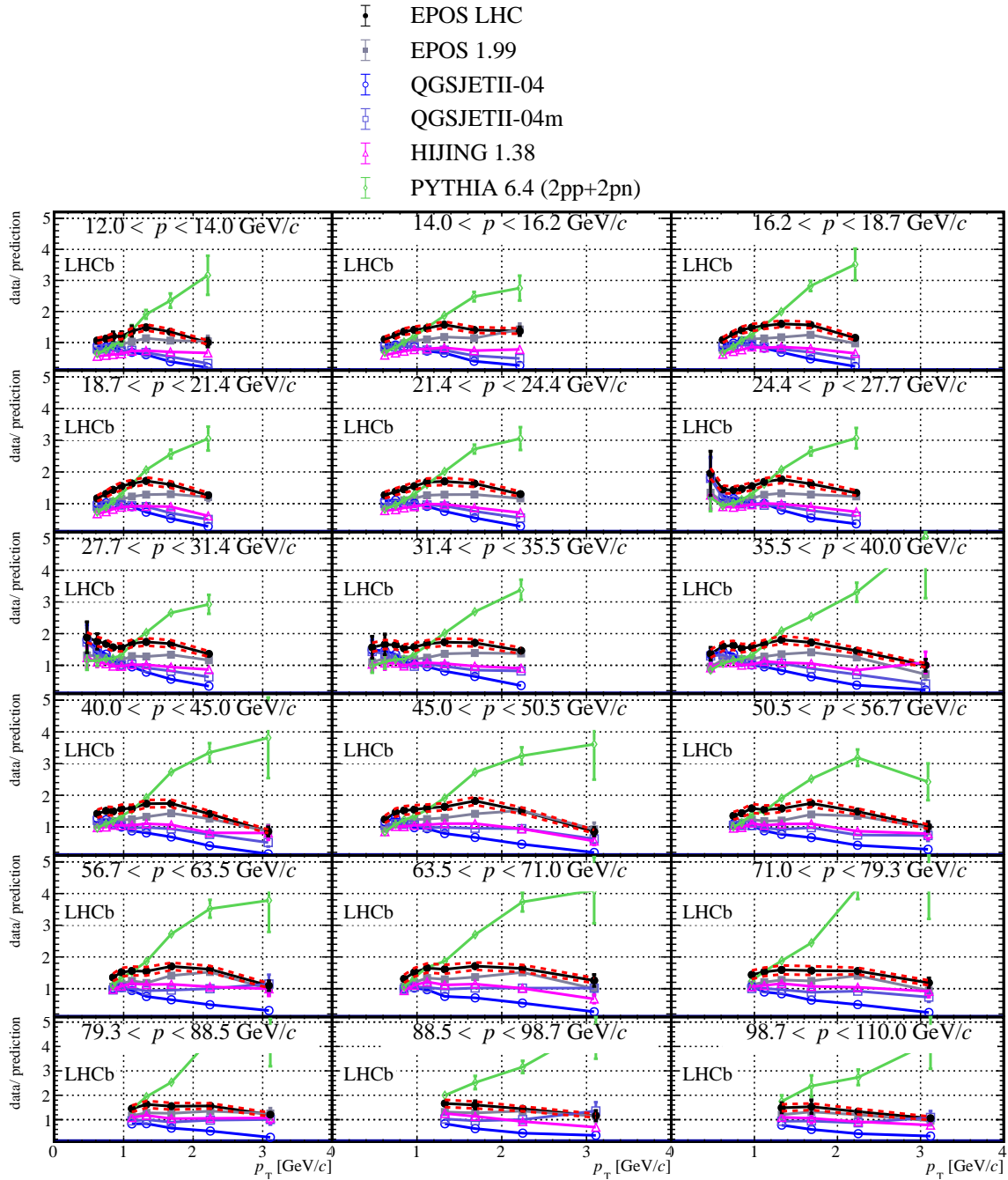


Figure 5: Result for the \bar{p} cross-section measurement, compared to absolute predictions of the (black closed circles) EPOS-LHC, (gray closed squares) EPOS-1.99, (violet open triangles) HIJING 1.38, (blue open circles) QGSJETII-04, (dark blue open squares) QGSJETII-04m and (green open rhombus) PYTHIA 6.4 models. The plots show the data over prediction ratio as a function of p_T in the 18 momentum bins. The black bars represent the uncorrelated error, dominated by the systematic one, for each measurement. The additional correlated uncertainty, shown only for EPOS-LHC but also relevant to the other cases, is indicated by the red dashed lines.

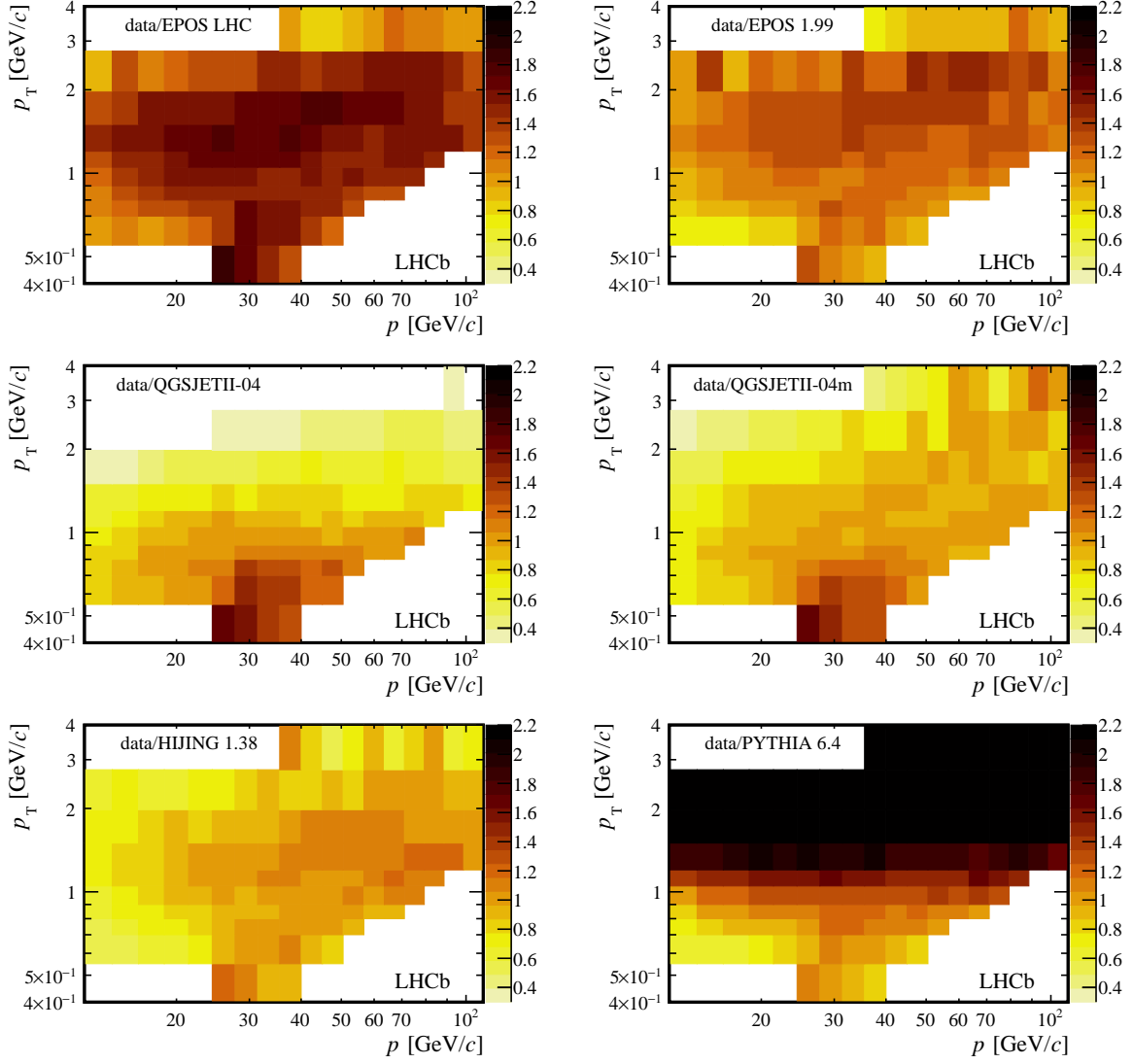


Figure 6: Ratio of the cross-section in kinematic bins between data and the six considered predictions.