1 Supplementary material

The following supplementary material is included

- Fig. 1, showing confidence regions for \((x_+, y_+)\) and \((x_-, y_-)\) obtained in the Run 1 measurement [1], in this measurement, and for the combination of these two results described in Sect. 8 of the main paper.

- Fig. 2 showing the distribution of the invariant mass of the \(B^+ (B^-)\) meson in Dalitz bin number \(-4 (+4)\) for \(B \to Dh\) candidates in the downstream \(K^0_s\) category, where \(D \to K^0_s\pi^+\pi^-\). The projections show the result of the fit to extract \(CP\) parameters, described in Sect. 6 of the main paper. \(CP\) violation is visible in the different heights of the \(B^\pm \to DK^\pm\) signal peaks.

References

[1] LHCb collaboration, R. Aaij et al., Measurement of the CKM angle \(\gamma\) using \(B^\pm \to DK^\pm\) decay with \(D \to K^0_s\pi^+\pi^-, K^0_sK^+K^-\) decays, JHEP 10 (2014) 097 [arXiv:1408.2748].
Figure 1: Two-dimensional 68.3% and 95.5% confidence regions for $(x_+, y_+)$ and $(x_-, y_-)$ obtained in the Run 1 measurement [1], in this measurement, and for the combination of these two results described in Sect. 8 of the main paper.

Figure 2: Distribution of the invariant mass of the $B^+$ ($B^-$) meson in Dalitz bin number $-4$ ($+4$) for $B \to D h$ candidates in the downstream $K_S^0$ category, where $D \to K_S^0 \pi^+ \pi^-$. The projections show the result of the fit to extract $C P$ parameters, described in Sect. 6 of the main paper. $C P$ violation is visible in the different heights of the $B^\pm \to D K^\mp$ signal peaks. The $B_s^0$ background shape is shown separately in these plots, because it is treated differently from the other partly reconstructed backgrounds in the Dalitz-plot binned fit.