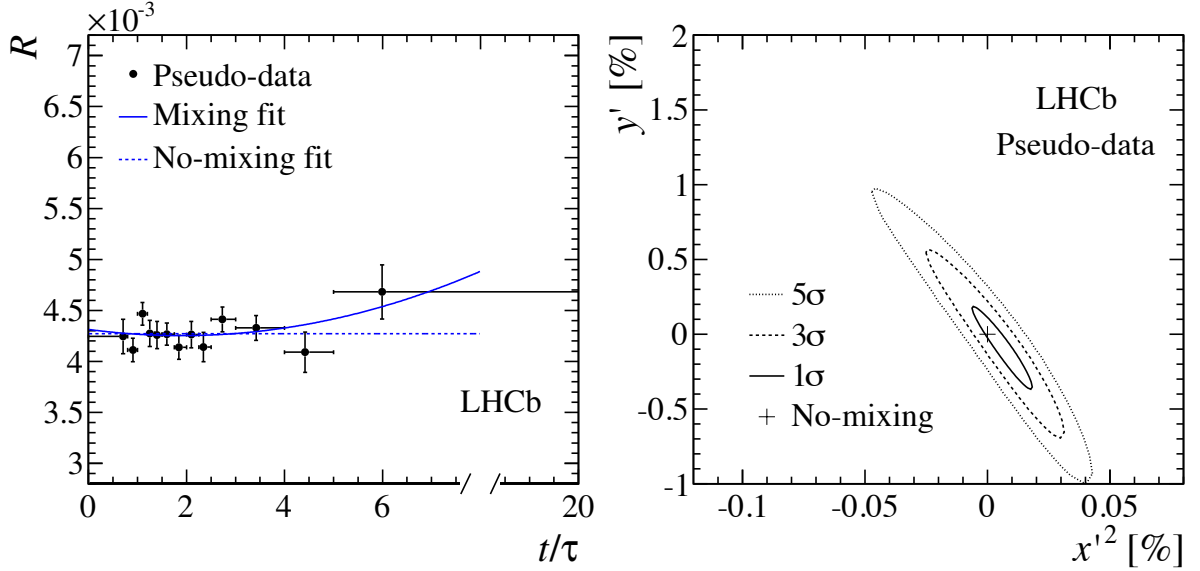Figure 4: Example of a pseudo-experiment where no mixing has been generated. Left: decay-time evolution of the ratio, R, of WS $D^0 \to K^+\pi^-$ to RS $D^0 \to K^-\pi^+$ yields (points) with the projection of the mixing allowed (solid line) and no-mixing (dashed line) fits overlaid. Right: estimated confidence-level (CL) regions in the (x'^2, y') plane for $1 - \mathrm{CL} = 0.317$ (1σ), 2.7×10^{-3} (3σ) and 5.73×10^{-7} (5σ); the cross indicates the no-mixing point.
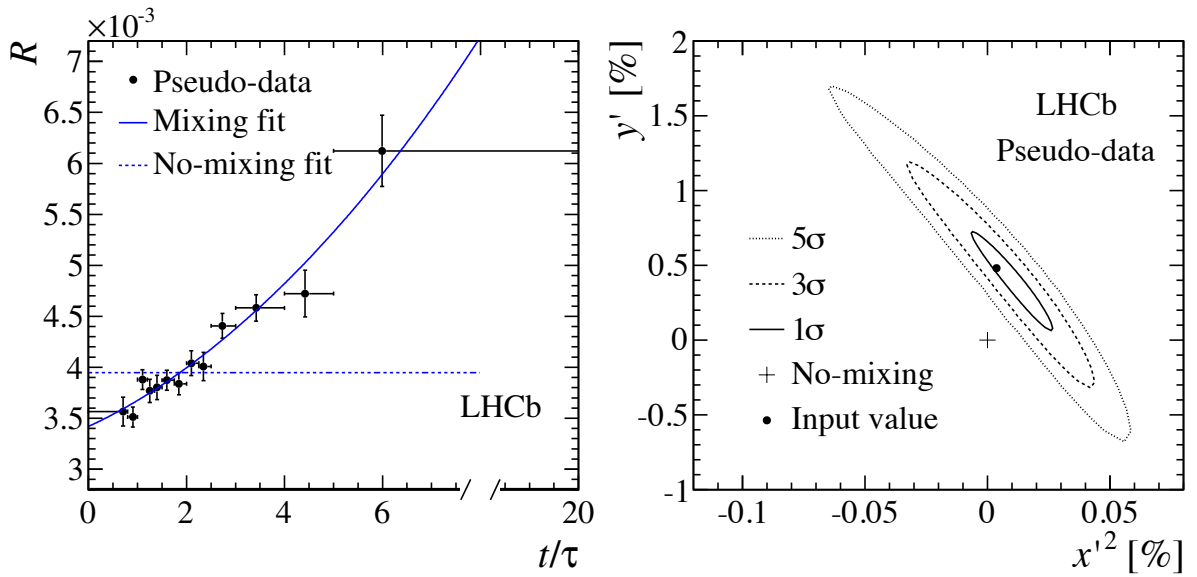
Figure 5: Example of a pseudo-experiment generated according to the following parameters: $R_D = 0.333\%$, $y' = 0.481\%$, $x'^2 = 0.004\%$. Left: decay-time evolution of the ratio, R, of WS $D^0 \to K^+\pi^-$ to RS $D^0 \to K^-\pi^+$ yields (points) with the projection of the mixing allowed (solid line) and no-mixing (dashed line) fits overlaid. Right: estimated confidence-level (CL) regions in the (x'^2, y') plane for $1 - \mathrm{CL} = 0.317$ (1σ), 2.7×10^{-3} (3σ) and 5.73×10^{-7} (5σ); the circle and the cross indicate the generated-mixing and the no-mixing points, respectively.
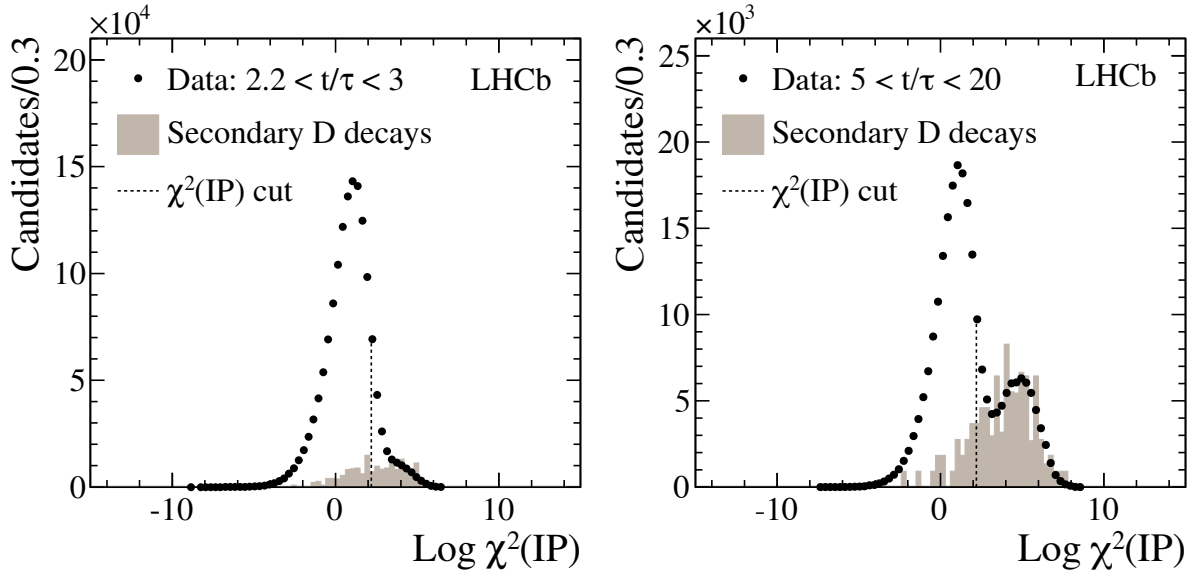
Figure 6: Background-subtracted $\chi^2(\mathrm{IP})$ distributions for RS D^0 decays in two different decay time bins. The dashed line indicates the cut used in the analysis; the hatched histogram represents the estimated secondary component.
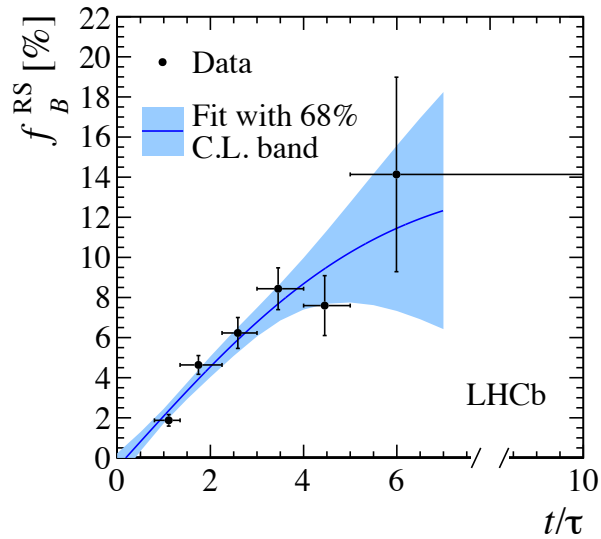

Figure 7: Measured fraction of secondary decays entering the final RS sample as a function of decay time (points), with overlaid the projection of a fit to a sigmoid-like function (solid line). The hatched area is the 68% C.L. region as estimated by the fit.
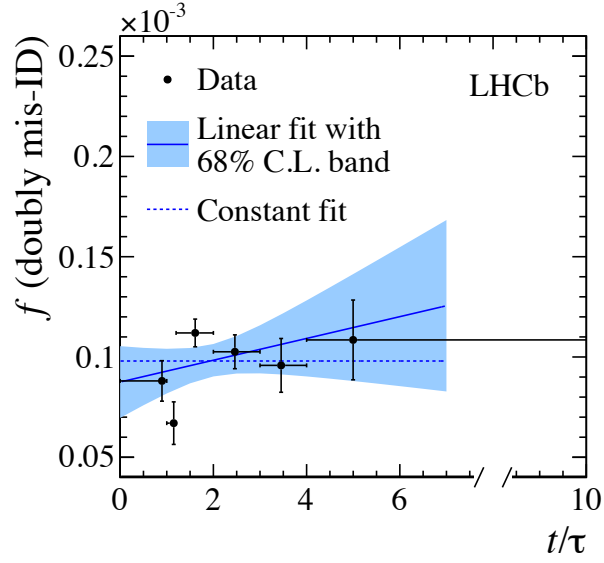
Figure 8: Decay-time evolution of the number of doubly misidentified RS events observed in the D^0 mass sidebands of the WS sample normalized to the RS signal yield. The solid (dashed) line is the result of a fit assuming linear (constant) decay-time dependence. The hatched area is the 68% C.L. region of the linear fit.
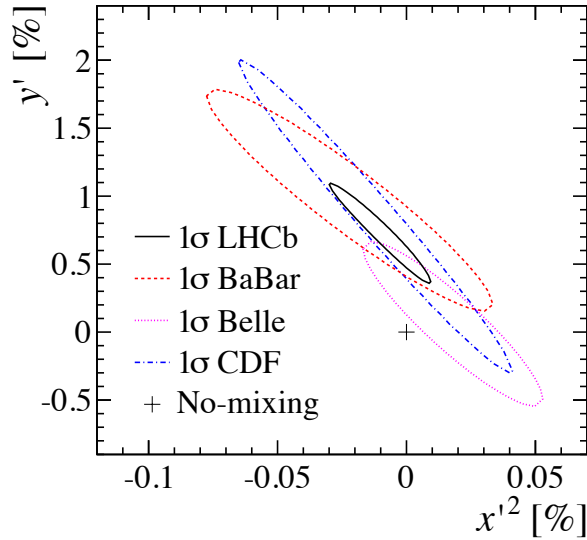

Figure 9: Allowed 68% confidence level regions in the (x'^2, y') plane as measured by the different experiments.