Figure 4: Distributions of $m(D^0)$ for the $D^0 \to K^- \pi^+ [\mu^+ \mu^-]_{\rho/\omega}$ decays resulting from the selection optimized for (a) $D^0 \to \pi^+ \pi^- \mu^+ \mu^-$ and (b) $D^0 \to K^+ K^- \mu^+ \mu^-$ signals, with fit projections overlaid.

Figure 5: Distributions of $\Delta m$ for (left) $D^0 \to \pi^+ \pi^- \mu^+ \mu^-$ and (right) $D^0 \to K^+ K^- \mu^+ \mu^-$ signals. Additionally to the selection explained in the main text, only candidates with $D^0$ mass in the range $1840 - 1890$ MeV/$c^2$ are shown.
Figure 6: Distributions of $\Delta m$ for the $D^0 \to K^- \pi^+ [\mu^+ \mu^-]_{\rho/\omega}$ decays resulting from the selection optimized for (a) $D^0 \to \pi^+ \pi^- \mu^+ \mu^-$ and (b) $D^0 \to K^+ K^- \mu^+ \mu^-$ signals. Additionally to the selection explained in the main text, only candidates with $D^0$ mass in the range 1840–1890 MeV/$c^2$ are shown.

Figure 7: Differential branching fraction as a function of the dimuon mass for (left) $D^0 \to \pi^+ \pi^- \mu^+ \mu^-$ and (right) $D^0 \to K^+ K^- \mu^+ \mu^-$ decays. The arrows represent the upper limits at 95% confidence level.