FIG. 1: Distribution of $\Delta E$ VS $M_{bc}$ for $B^0 \rightarrow K^{*0}\gamma \rightarrow K^+\pi^-\gamma$ candidates in TOP-detector-calibrated 0.389 fb$^{-1}$ out of 0.5 fb$^{-1}$ of Phase II data. The red box corresponds to the signal box defined as $5.27 \text{ GeV}/c^2 < M_{bc} < 5.29 \text{ GeV}/c^2$ and $-0.2 \text{ GeV} < \Delta E < 0.08 \text{ GeV}$. We find four signal candidates in the signal box.

FIG. 2: Distribution of $\Delta E$ VS $M_{bc}$ for $B^+ \rightarrow K^{*+}\gamma \rightarrow K^+\pi^0\gamma$ candidates in TOP-detector-calibrated 0.389 fb$^{-1}$ out of 0.5 fb$^{-1}$ of Phase II data. The red box corresponds to the signal box defined as $5.27 \text{ GeV}/c^2 < M_{bc} < 5.29 \text{ GeV}/c^2$ and $-0.2 \text{ GeV} < \Delta E < 0.08 \text{ GeV}$. We find two signal candidates in the signal box.
FIG. 3: Distribution of $M_{bc}$ for $B^0 \rightarrow K^{*0}\gamma \rightarrow K^+\pi^-\gamma$ candidates in TOP-detector-calibrated 0.389 fb$^{-1}$ out of 0.5 fb$^{-1}$ of Phase II data. Blue line is the result of an extended unbinned maximum likelihood fit. Shape parameters of probability density functions are determined using signal and $q\bar{q}$ Monte-Carlo of the Phase II configuration.

FIG. 4: Distribution of $M_{bc}$ for $B^+ \rightarrow K^{*+}\gamma \rightarrow K^+\pi^0\gamma$ candidates in TOP-detector-calibrated 0.389 fb$^{-1}$ out of 0.5 fb$^{-1}$ of Phase II data. Blue line is the result of an extended unbinned maximum likelihood fit. Shape parameters of probability density functions are determined using signal and $q\bar{q}$ Monte-Carlo of the Phase II configuration.