

Process	$B^+ \rightarrow K^+ \mu^+ \mu^-$	$B^+ \rightarrow J/\psi (\mu^+ \mu^-) K^+$	$B^+ \rightarrow \psi(2S) (\mu^+ \mu^-) K^+$
Signal	DCB + Gaussian	Sum of 3 Gaussians	DCB + Gaussian
Comb. & other b bkg.	Exponential <sup>†</sup>	Exponential	Exponential
$B^+ \rightarrow K^* (892)^{0/+} \chi$	DCB (+ expon.)	DCB + exponential	DCB + exponential
$B^+ \rightarrow \pi^+ \chi$	DCB	DCB	DCB
$B^+ \rightarrow J/\psi (\mu^+ \mu^-) K^+$	DCB (nearby $q^2$ )	—	—
$B^+ \rightarrow \psi(2S) (\mu^+ \mu^-) K^+$	DCB (nearby $q^2$ )	—	—

<sup>†</sup> In the last  $q^2$  bin the exponential function is multiplied by  $m_{K^+ \mu^+ \mu^-} - m_{\mu^+ \mu^-} - m_{K^+}$  to account for the phase space suppression.