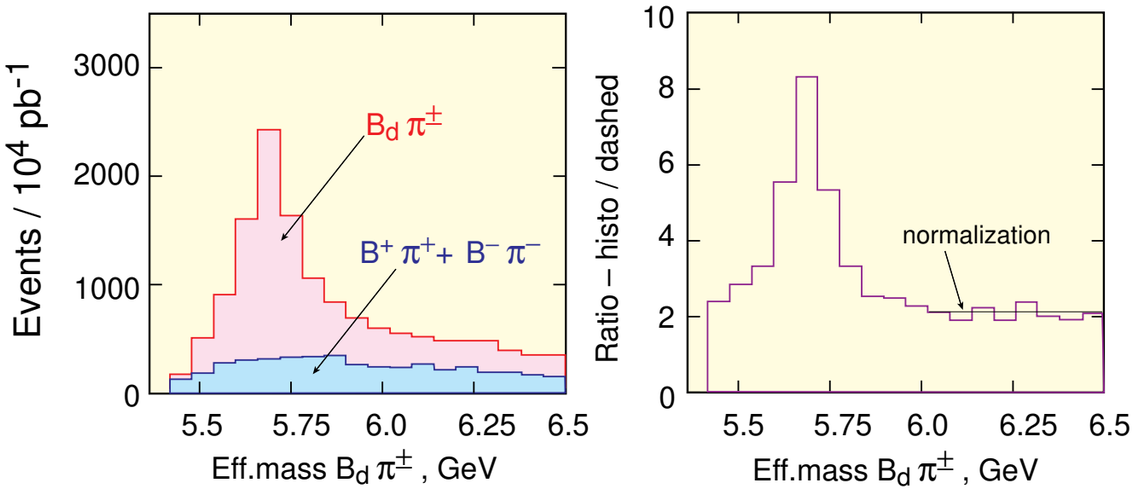
B_J^* tagging

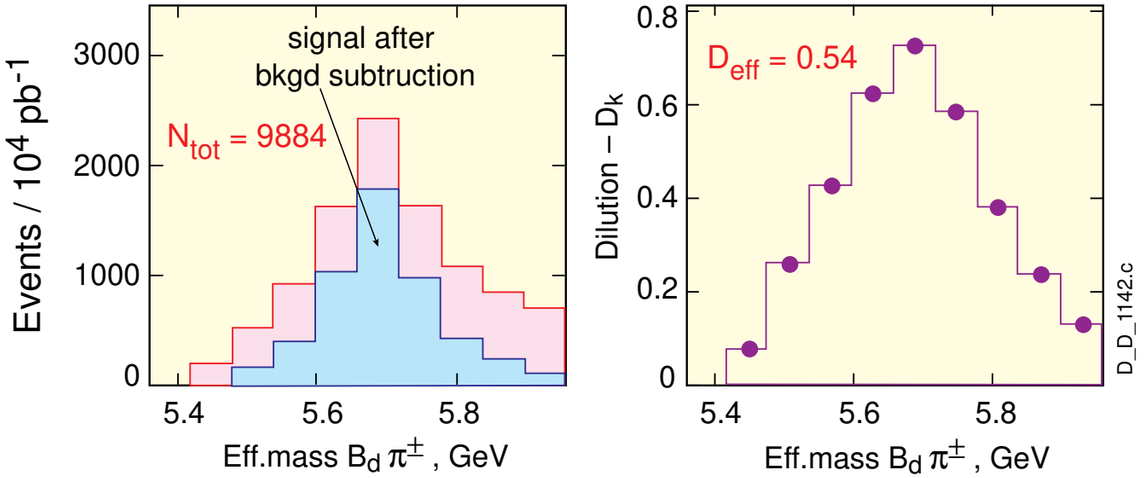
Exploiting $B_J^{*\pm} \to \pi^\pm \, \overset{(-)}{B}{}^{0*}_d$ resonance to tag $\overset{(-)}{B}{}^0_d$

$\overset{(-)}{B}{}^{0*}_d \to \gamma \, \overset{(-)}{B}{}^0_d$

tagging $\pi^\pm$: $P_t^{\pi^\pm} > 1.5$ GeV/c

2 muon trigger





Sensitivity in this channel: $\delta(\sin 2\beta) = 0.039$

With $p_t^\pi > 1$ GeV/c $\longrightarrow$ $\delta(\sin 2\beta) = 0.037$

Using 1 μ trigger ($p_t^\mu > 7$ GeV/c) and rescue

of second μ ($P_t^\mu > 2.5$ GeV/c) $\longrightarrow$ $\delta(\sin 2\beta) = 0.029$