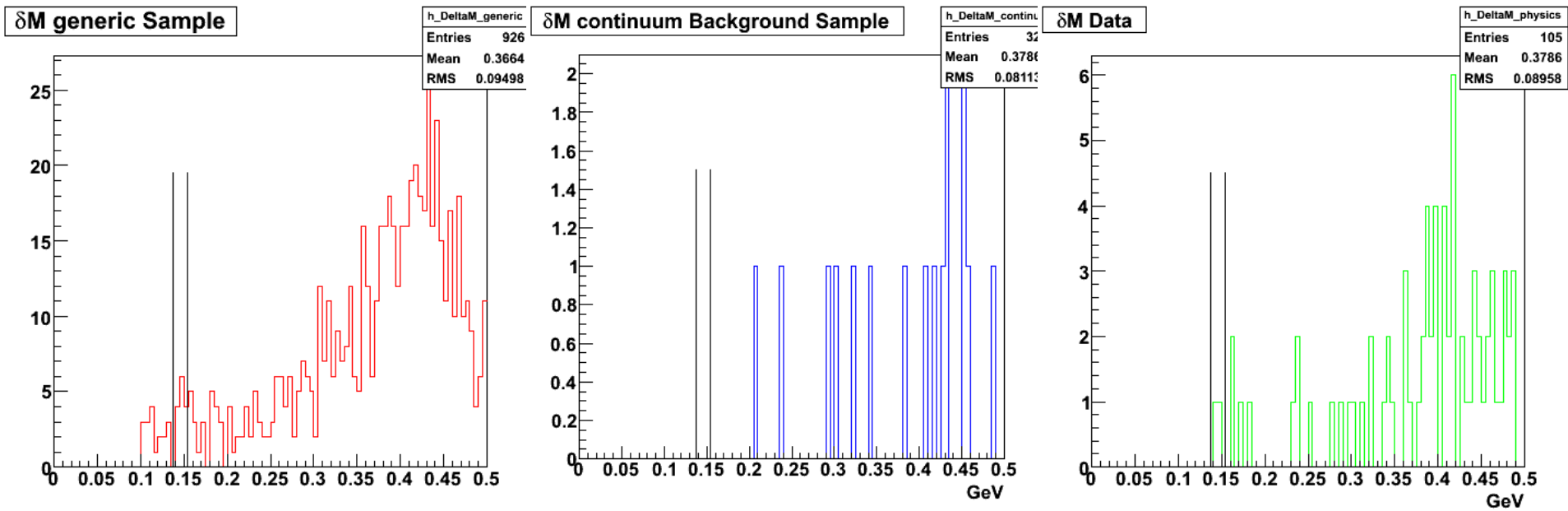


$$D_S^{*+} \rightarrow D_S^+ e^+ e^-$$

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## Contents

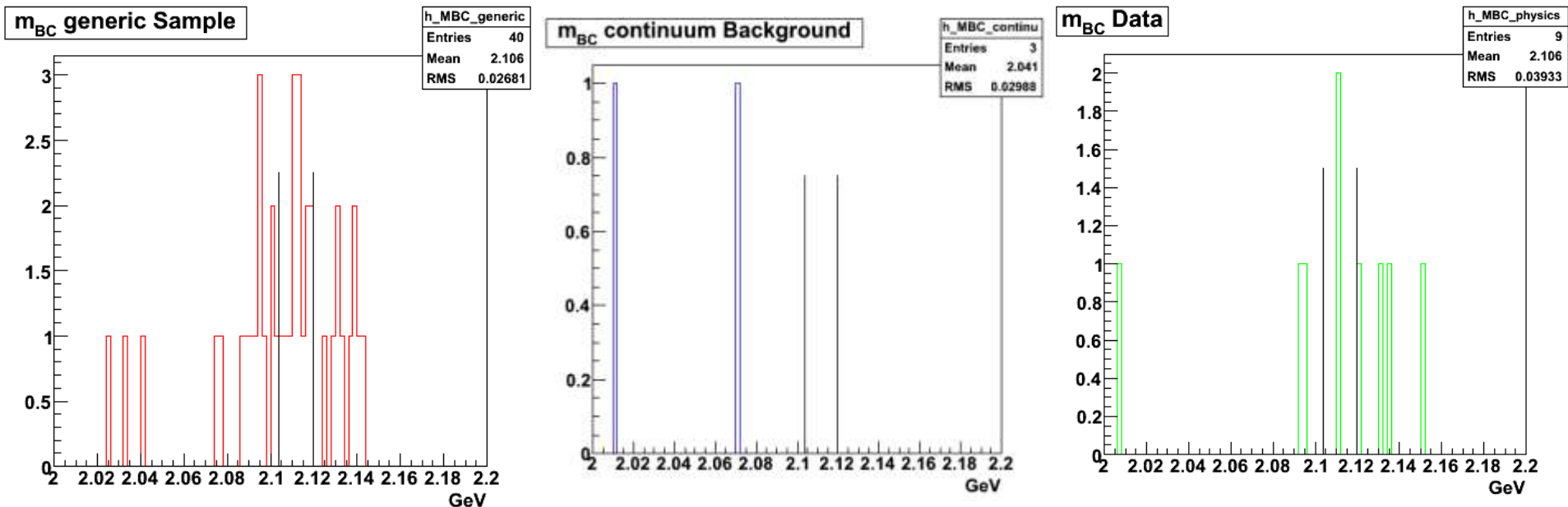
# DeltaM Sidebands



DeltaM for the generic MC, continuum MC and physics data for  $D_s \rightarrow KK\pi$

Mode	$\Delta M < 0.5$ GeV					$\Delta M < 0.25$ GeV				
	ddmix MC	cont MC	tot MC	data	$\frac{MC}{data}$	ddmix MC	cont MC	tot MC	data	$\frac{MC}{data}$
$D_s^+ \rightarrow K^+ K^- \pi^+$	31.7	3.2	34.9	75	0.47	6.7	0.6	7.3	13	0.56
$K_S K^+$	9.2	3.0	12.1	19	0.64	3.0	1.2	4.2	4	1.0
$\eta\pi^+; \eta \rightarrow \gamma\gamma$	2.5	7.4	9.9	24	0.41	0.6	2.6	3.2	7	0.46
$\eta'\pi^+; \eta' \rightarrow \pi^+\pi^-\eta; \eta \rightarrow \gamma\gamma$	2.5	0.6	3.1	4	0.76	0.6	0.0	0.6	1	0.6
$K^+ K^- \pi^+ \pi^0$	105.6	13.2	118.8	226	0.53	22.1	2.8	24.9	46	0.54
$\pi^+ \pi^- \pi^+$	24.6	72.2	96.8	164	0.59	4.9	15.2	20.1	29	0.69
$K^{*+} K^{*0}$	38.8	4.4	43.2	118	0.37	10.7	1.2	11.9	19	0.62
$\eta\rho^+; \eta \rightarrow \gamma\gamma; \rho^+ \rightarrow \pi^+\pi^0$	81.7	166.4	248.1	305	0.81	19.1	40.0	59.1	79	0.75
$\eta'\pi^+; \eta' \rightarrow \rho^0\gamma$	34.1	74.2	108.3	170	0.64	8.1	16.0	24.1	29	0.83

# mBC Sidebands



mBC for the generic MC, continuum MC and physics data for  $D_s \rightarrow KK\pi$

Mode	$m_{BC} < 2.102$ GeV					$m_{BC} > 2.122$ GeV				
	ddmix	cont	tot	data	$\frac{MC}{data}$	ddmix	cont	tot	data	$\frac{MC}{data}$
	MC	MC	MC			MC	MC	MC		
$D_s^+ \rightarrow K^+K^-\pi^+$	0.9	0.4	1.3	3	0.42	0.5	0.0	0.5	4	0.13
$K_S K^+$	0.8	0.6	1.4	1	1.35	0.2	0.4	0.6	1	0.6
$\eta\pi^+; \eta \rightarrow \gamma\gamma$	0.1	0.8	0.9	1	0.9	0.0	0.2	0.2	0	inf
$\eta'\pi^+; \eta' \rightarrow \pi^+\pi^-\eta; \eta \rightarrow \gamma\gamma$	0.1	0.0	0.1	0	inf	0.1	0.0	0.1	0	inf
$K^+K^-\pi^+\pi^0$	12.1	2.4	14.5	19	0.76	4.1	1.0	5.1	5	1.0
$\pi^+\pi^-\pi^+$	1.3	5.6	6.9	4	1.7	0.7	2.2	2.9	2	1.5
$K^{*+}K^{*0}$	2.0	0.2	2.2	3	0.73	1.3	0.0	1.3	0	inf
$\eta\rho^+; \eta \rightarrow \gamma\gamma; \rho^+ \rightarrow \pi^+\pi^0$	4.4	7.4	11.8	16	0.73	2.2	7.2	9.4	11	0.86
$\eta'\pi^+; \eta' \rightarrow \rho^0\gamma$	1.6	6.2	7.8	4	2.0	0.9	2.0	2.9	1	2.9

Re-pass2 and Re-dtagging of Dataset47 missed some files. One job submitted for every run. The runs that worked had no missed or new Ds! ^\_^

Dataset 48 has been entirely skimmed.

Added photon information for reconstruction of  $D_s^*$   $\rightarrow$   $D_s$  gamma channel in ntuple. Brian suggested I put  $e^+e^- \rightarrow \text{Unf}$  information into ntuple. Making cuts for this.