

Expectation of peaking background events

- add efficiency of $J/\psi \rightarrow \text{invisible}$
- **correct N_{anything}**

Channel	$B_{2B}(\%)$ checked	$\epsilon_{2B}(\%)(12)$ updated	$\epsilon_{\text{trig}}(\%)$	Event number(12)	Event number(09)	Event number 12/09
$J/\psi \rightarrow \mu^+\mu^-$	5.961 ± 0.033	6.24 ± 0.02	99.4 ± 0.1	213690	65558 ± 1388	3.26
$J/\psi \rightarrow e^+e^-$	5.971 ± 0.032	6.32 ± 0.02	99.4 ± 0.1	216793	65668 ± 1405	3.30
$J/\psi \rightarrow n\bar{n}$	0.209 ± 0.016	6.13 ± 0.02	99.4 ± 0.1	7360	2361 ± 997	3.34
$J/\psi \rightarrow p\bar{p}$	0.2020 ± 0.0029	2.64 ± 0.02	99.4 ± 0.1	3064	999 ± 28	3.12
Total (total/anything)				440906 (0.763%)	134586 ± 2919 (0.72%)	3.27
N_{others} (others/peaking)				16163 (0.038)	3877 (0.029)	4.17
N_{anything}				$57862.7 * 10^3$ (given by Ryuta) $(57795.5 \pm 8.9) * 10^3$	$(18658.1 \pm 5.0) * 10^3$	3.10
$N_{\text{invisible}}$		39.32		397611 ± 684	137770 ± 406	2.89

$\Psi(2S)$ data 12/09:
341/106=3.22

$$\begin{aligned}
 N(J/\Psi \rightarrow \text{invisible}) &= N_{\text{invisible}} - N_{\text{peaking}} - N_{\text{others}} \times \epsilon_{\text{trig}} \\
 &= 397611 - 440906 - 16163 \times 0.994 \\
 &= -59361 \quad (-670 \text{ in } 2009)
 \end{aligned}$$

$$\begin{aligned}
 \epsilon &= 196234/500000 \\
 &= \boxed{39.25} \pm 0.07\% \\
 &\text{(given by Qian)}
 \end{aligned}$$

$$\begin{aligned}
 \text{nsig} &= \boxed{396332 \pm 686} \\
 &\text{(given by Qian)}
 \end{aligned}$$