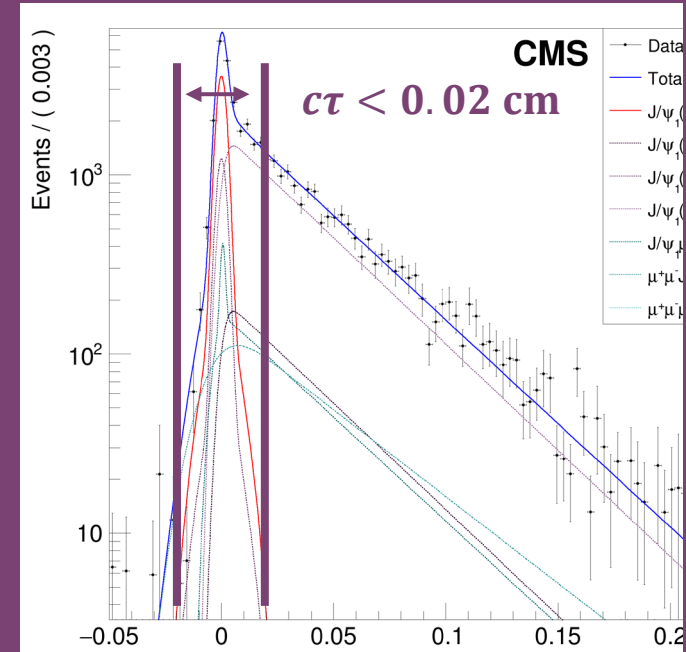




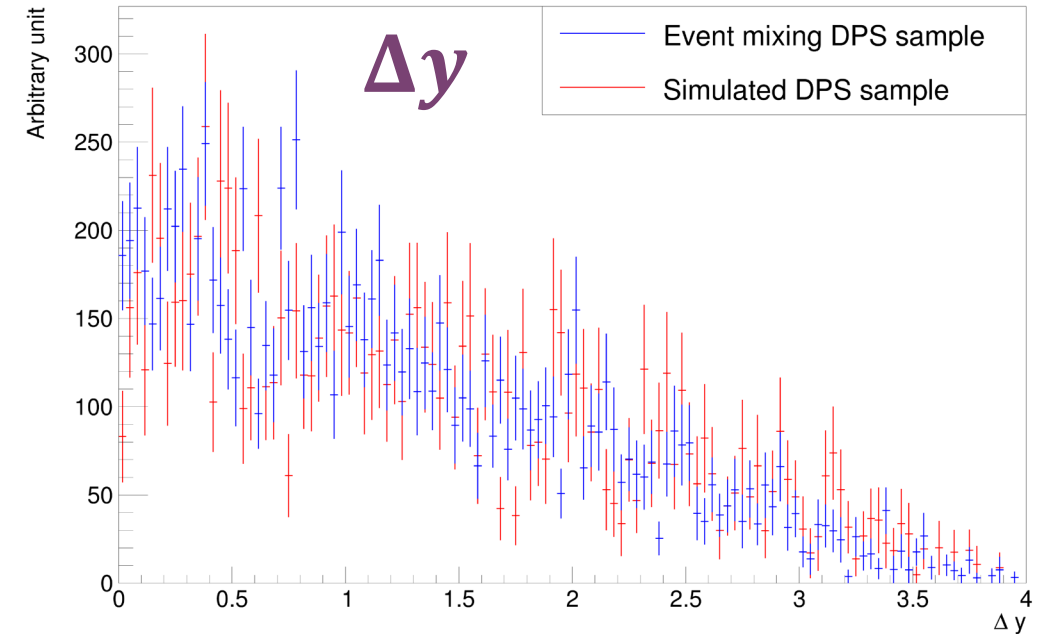
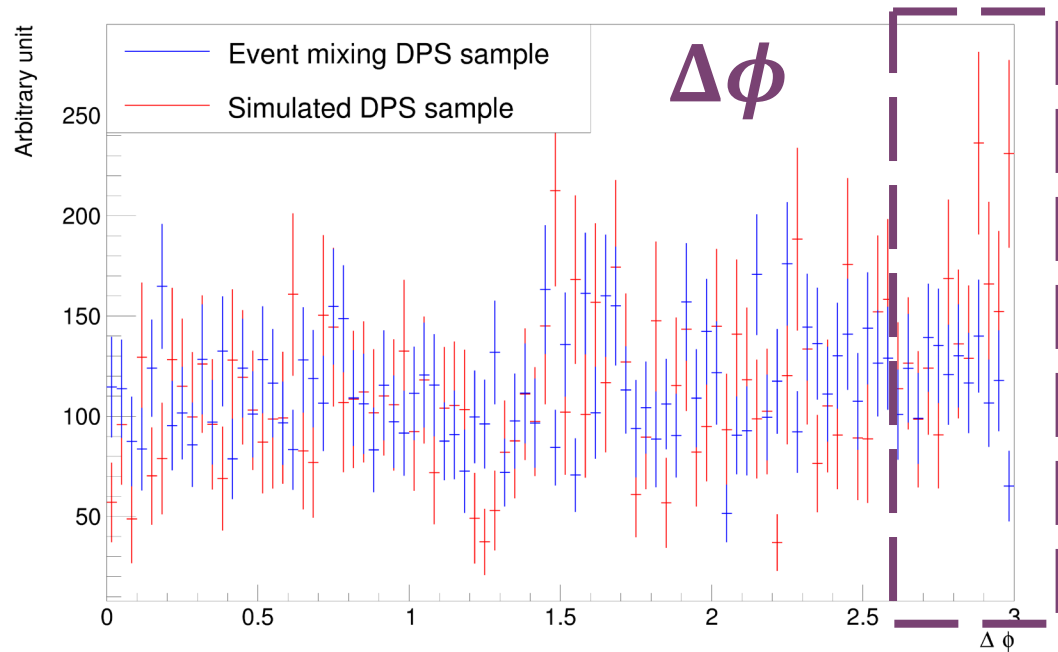
Event mixing DPS sample

- To verify the DPS MC sample (simulated DPS sample), an event mixing DPS sample is constructed using 2016 dataset
 - Combine J/ψ_1 with J/ψ_2 from a different candidate
 - Using candidate after all the event selections
 - Candidates with $M_{J/\psi J/\psi} < 7.5$ GeV are excluded from the mixing
 - Candidates with $|c\tau(J/\psi)| > 0.02$ cm are excluded from the mixing





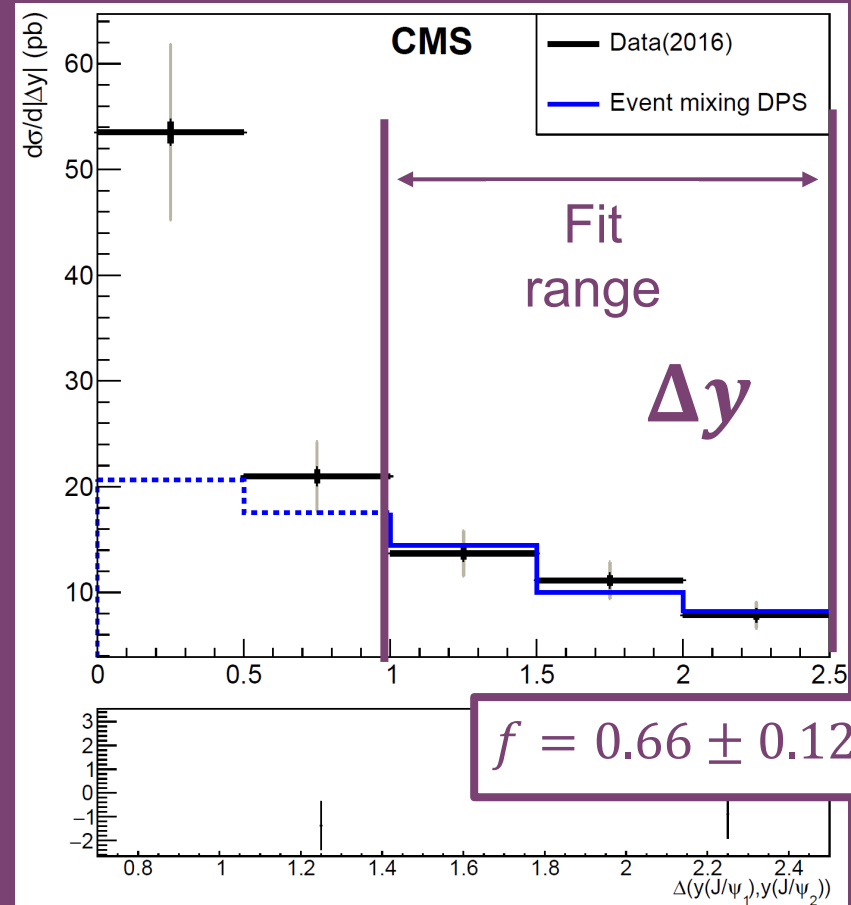
Compare with simulated sample



- Generally good consistency

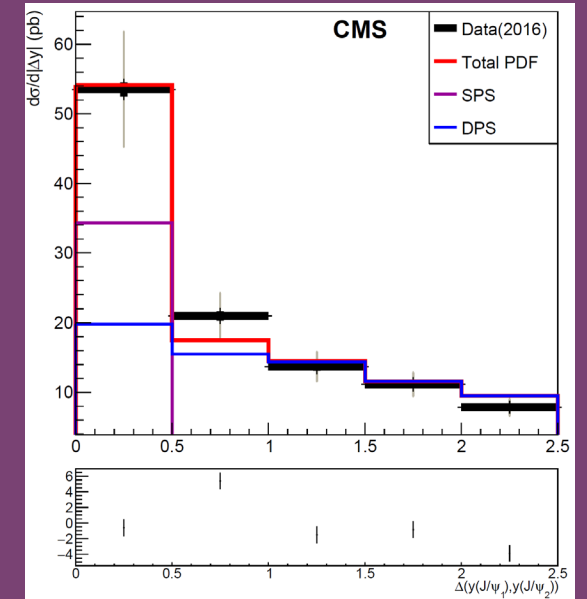


Template fit using the event mixing sample



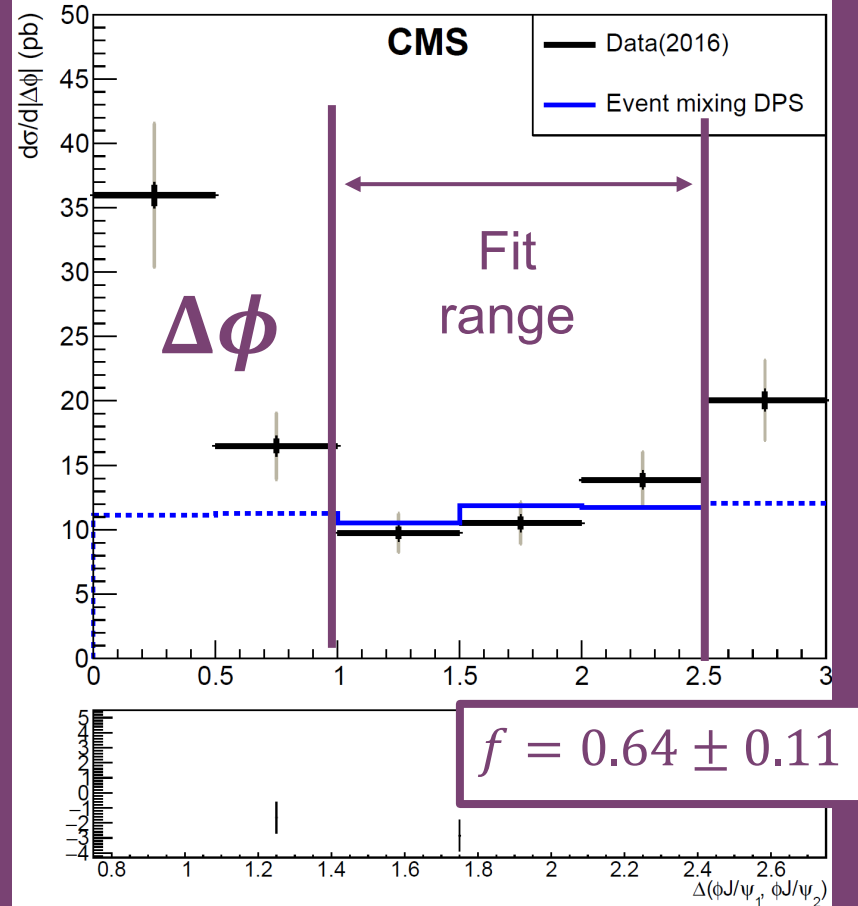
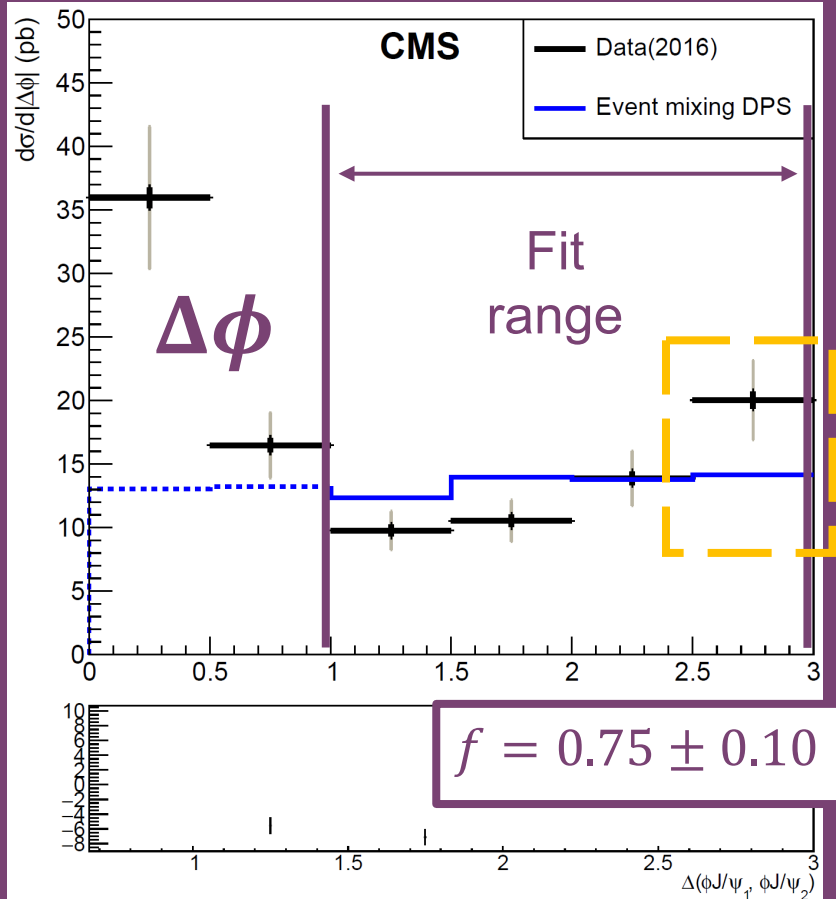
- Result with simulated samples:

$$f = 0.67 \pm 0.07$$



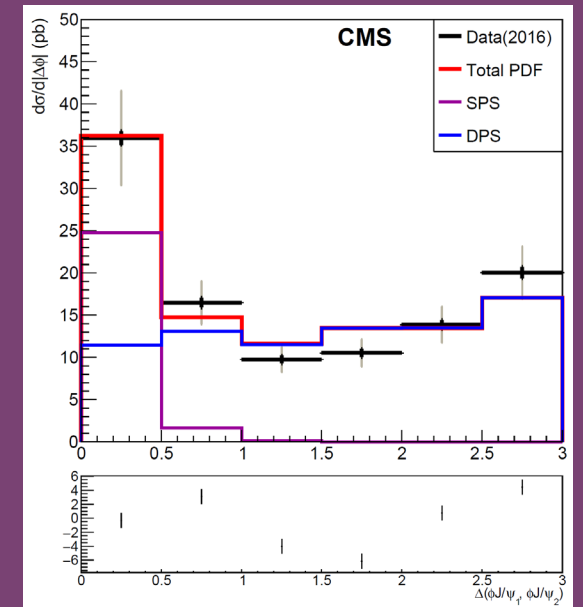


Template fit using the event mixing sample



- Result with simulated samples:

$$f = 0.75 \pm 0.06$$





Summary of the template fit

	Event mixing sample		Simulated samples
$\Delta\phi$	^[1.0,2.5] 0.64 ± 0.11	^[1.0,3.0] 0.75 ± 0.10	0.75 ± 0.06
Δy	^[1.0,2.5] 0.66 ± 0.12		0.67 ± 0.07
$M_{J/\psi J/\psi}$	-		0.72 ± 0.23
$ y_{J/\psi J/\psi} $	-		0.52 ± 0.30

f_{DPS}



Summary

- To verify the DPS MC sample (simulated DPS sample), an event mixing DPS sample is constructed using 2016 dataset
 - Generally consistent with simulated DPS sample, although slight discrepancy is found when $\Delta\phi$ get close to π
 - The result of template fit using the event mixing DPS sample is generally consistent with the result acquired with simulated samples, given the large uncertainty