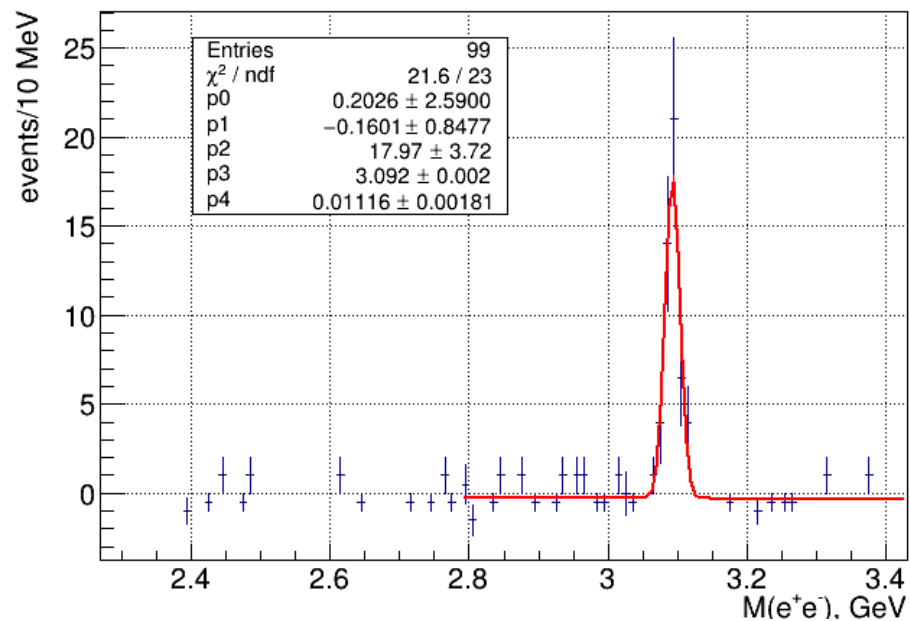


	rest	anal	sim-recon	date
20f/run 2017	offline mon.	v13	2.13	April 24/2017
2016	v4	v6	2.14	May 24/2017
2017	v1	v1	2.15	June 27/2017
2017	v2	v9	2.20.1	Dec. 4/2017
2016	v5	v11	2.20.1	Dec. 4/2017

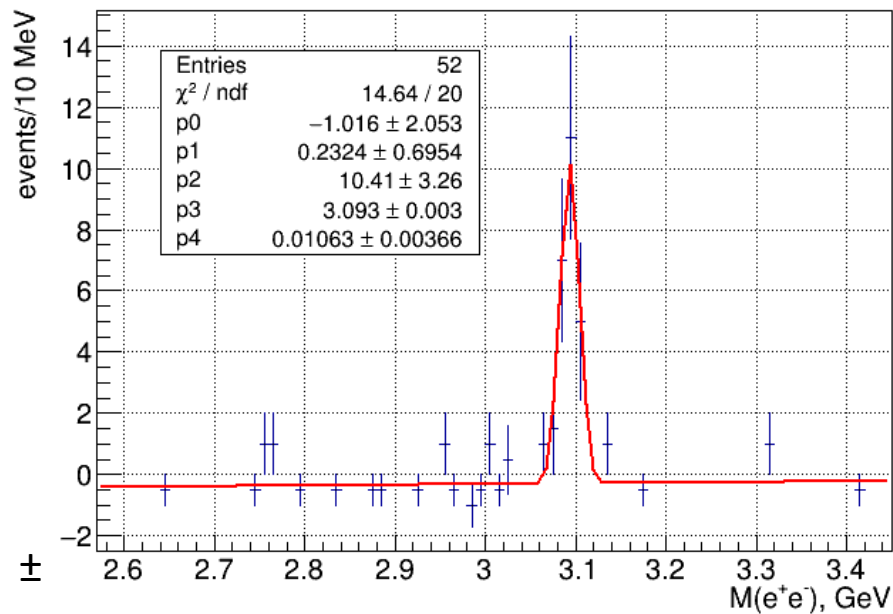
	2016 (golden)		2017 20files/run		2017 all	
	ϕ	J/ ψ	ϕ	J/ ψ	ϕ	J/ ψ
old rec. old anal.	(130±23.0) 275 ± 36	(56.5±8.3) 121±12.7	80.1 ± 19.0	32.0 ± 4.8		
old rec. new anal.			46.7 ± 14.0	23.8 ± 5.6		
old rec. new anal. loose cuts			65.9 ± 16.6	30.2 ± 6.5		
new rec. old anal.						
new rec. new anal.	(104±17.5) 250 ± 29	(28.8±6.2) 62.5±9.2	78.8 ± 31.0 ?	33.2 ± 6.8 ?	483.8± 52.2	133.0± 12.8
new rec. new anal. loose cuts	268±30	70.8±10.1			467.7±55.8	137.1±13.5
lumi, pb-1	10.895		5.804		46.138	
norm. yield	25.24±3.3 22.95±2.7	11.1±1.2 5.74±0.8	13.80±3.27	5.51±0.83	10.49±1.13	2.88±0.28

J/ ψ event-by-event comparison (over 67 skims from 2016)

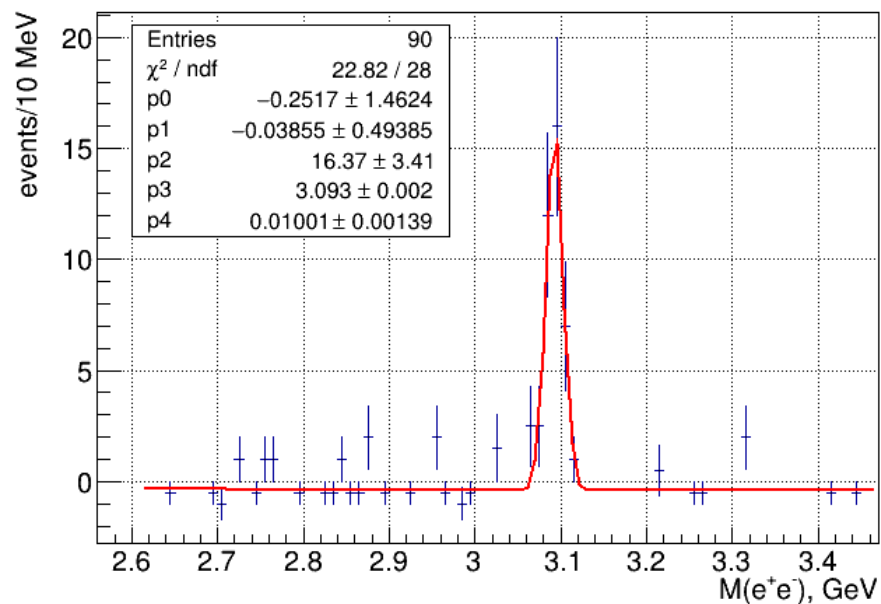
old recon. 50.4 J/ ψ 's



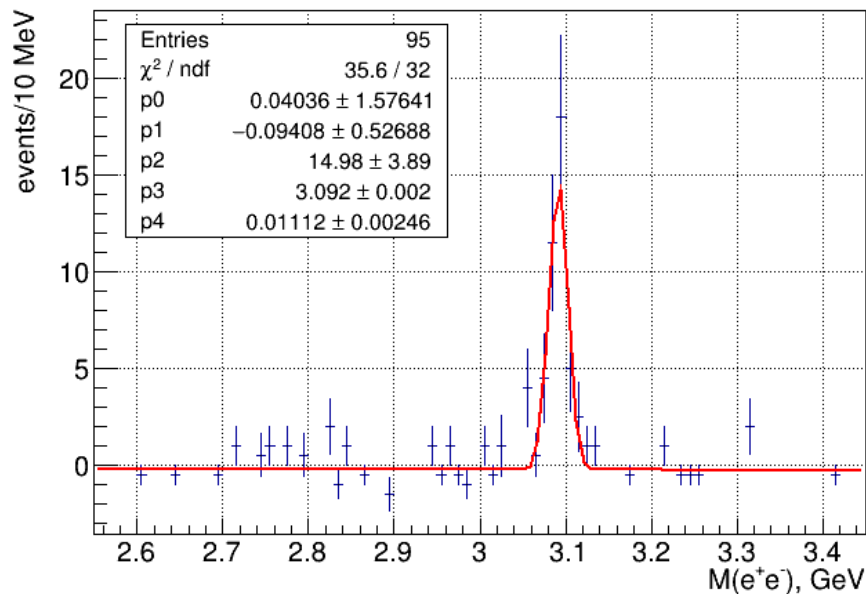
2017 recon. 27.7 J/ ψ 's



2017 recon. Simon's time 40.9 J/ ψ 's



current recon. 41.7 J/ ψ 's



J/ ψ photoproduction helicity conservation

Fit with $p_0(1+p_1 \cdot \cos^2\theta)$

