

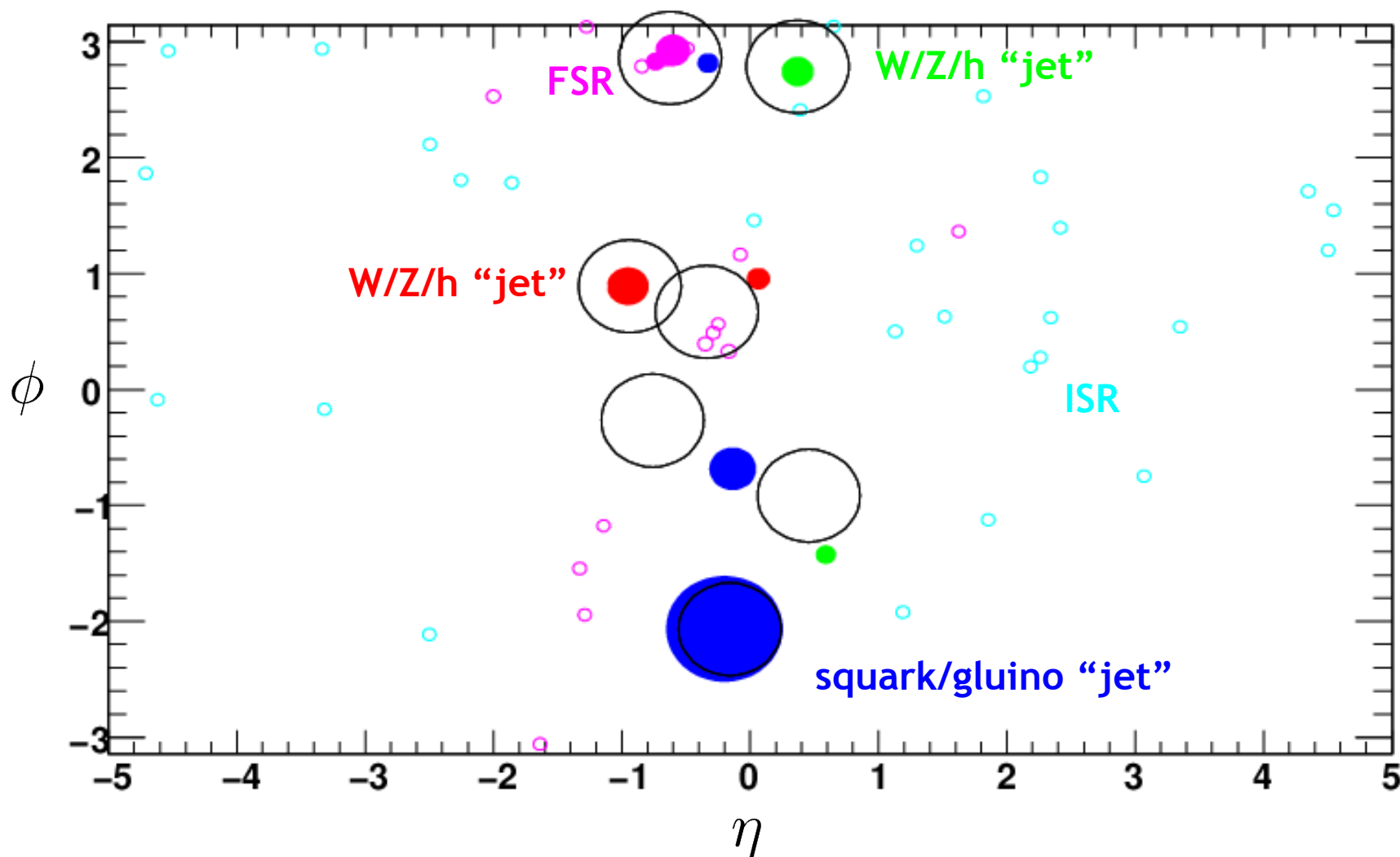
# Update on Kinematic Fits

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GenJet (AntiKt 0.4) selection:  $p_T > 30$  GeV and  $|\eta| < 3.0$  ○

Coloured circles: partons of hard process, radius  $\leftrightarrow p_T$ , filled if  $p_T > 30$  GeV



**Selection:** 6, 7 or 8 GenJets; only signal processes

Harder jet cuts  $\rightarrow$  slightly less problems, but still factor of  $\sim 4$  larger bg (compared to parton niveau)

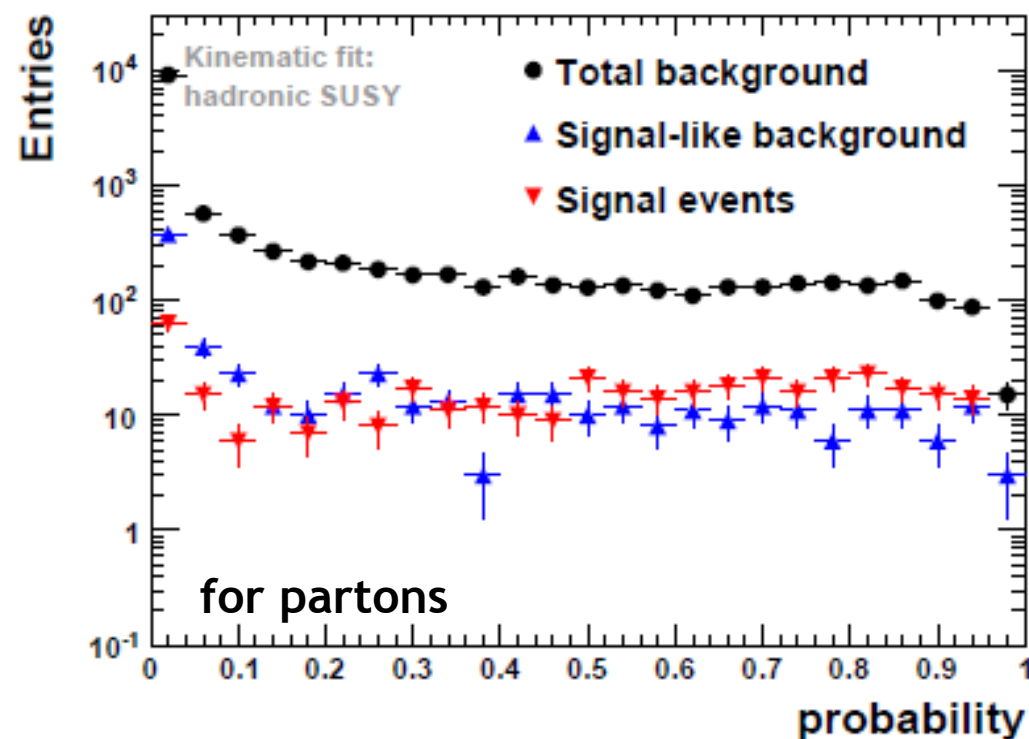
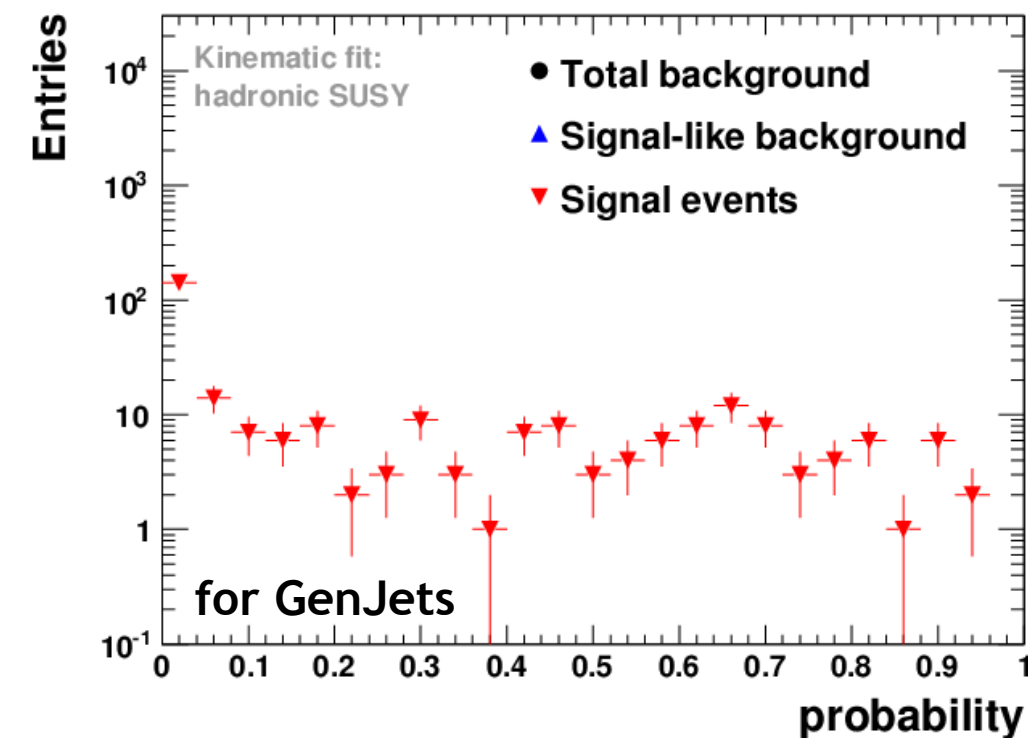
GenJet pt cut  $|\eta| < 3.0$

	pt > 20 GeV	pt > 30 GeV	pt > 40 GeV
Event OK	2	3	4
Event not OK	33	32	31

Signal parton missed	28	28	29
Signal parton merged (no W/Z/h)	14	13 $\rightarrow$	10
Signal parton merged (W/Z/h)	1	3	2
Signal parton splitted	11 $\rightarrow$	6	7
ISR jets	27 $\rightarrow$	23	23
FSR jet	3	3	1
? jet	8	9	9

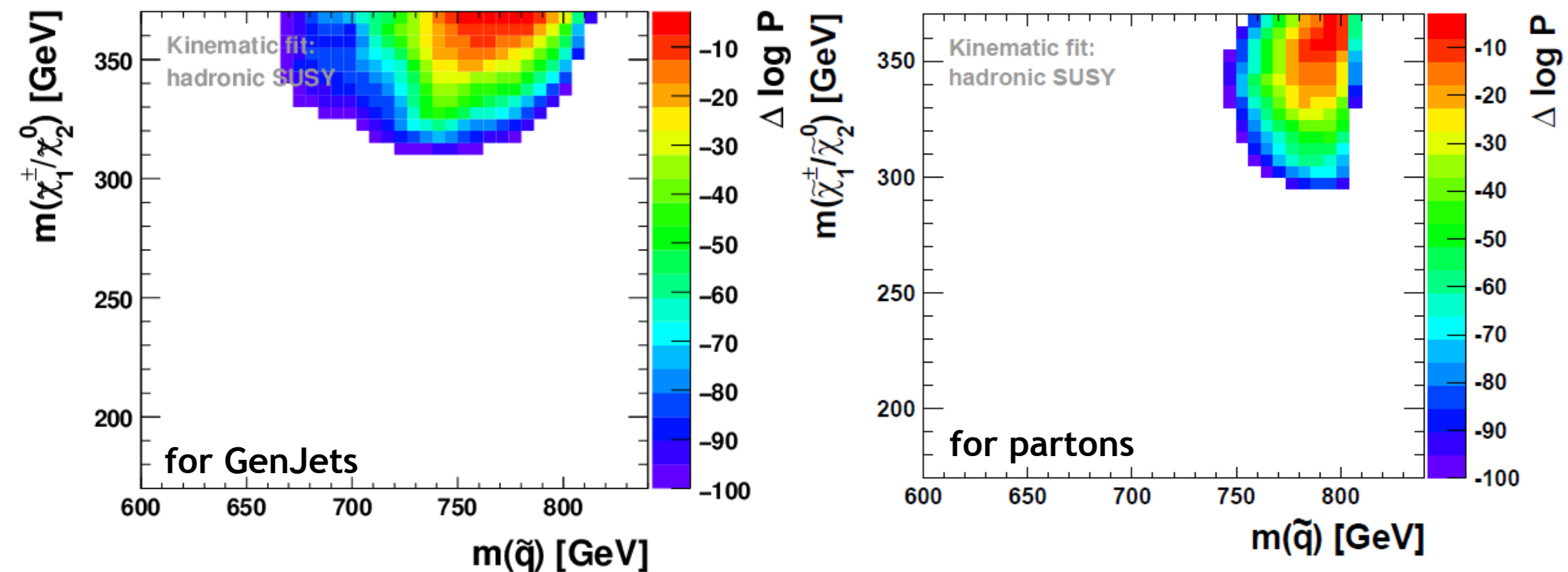
6 jets	9	12	11
7 jets	11	14	17
8 jets	15	9	7
Event OK:NotOK (7 jets)	2:9	3:11	4:13

Comparison (parton niveau): 1:1



Fit probability of GA for GenJet fit reasonable flat (only events with exactly 7 GenJets **and** all partons within the acceptance are selected)

Increase towards low probability values due to new background (as described above)?



$\Delta \log P$  shows some difference if GenJets are used instead of partons

Scan to larger chargino/neutralino masses needed (maximum of distribution seems to be *not very much changed*)