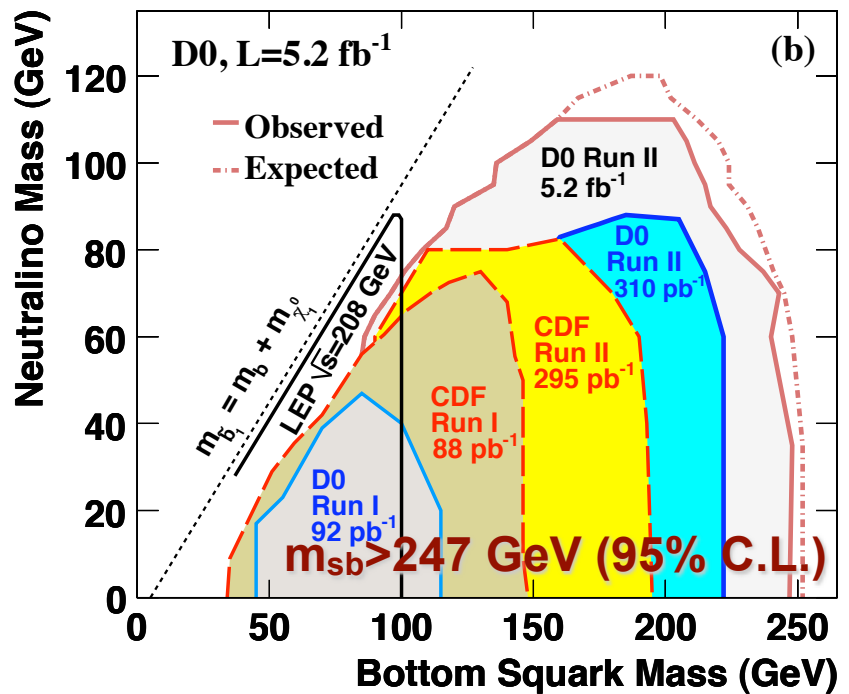
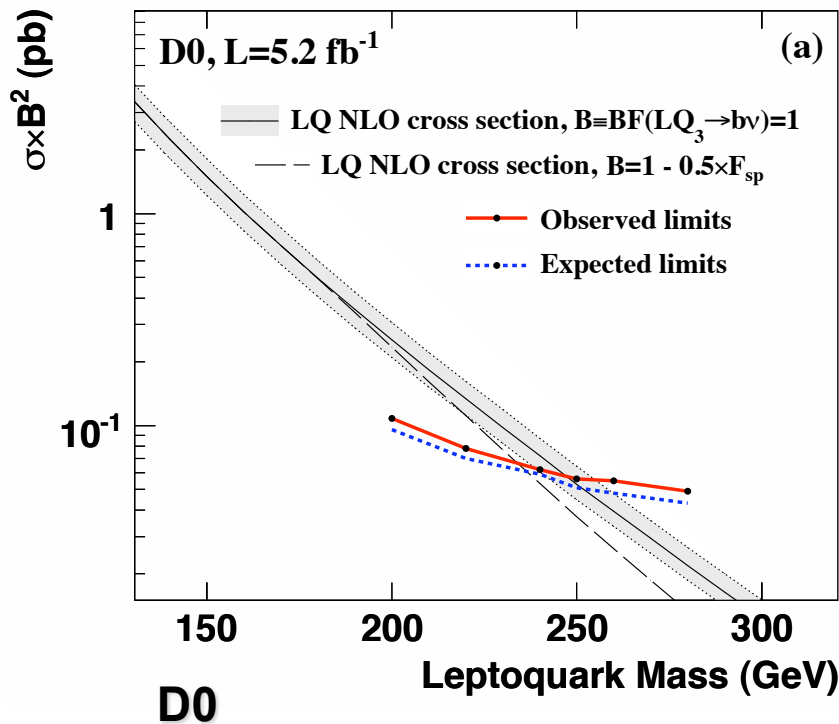


Tevatron Searches: Sbottom

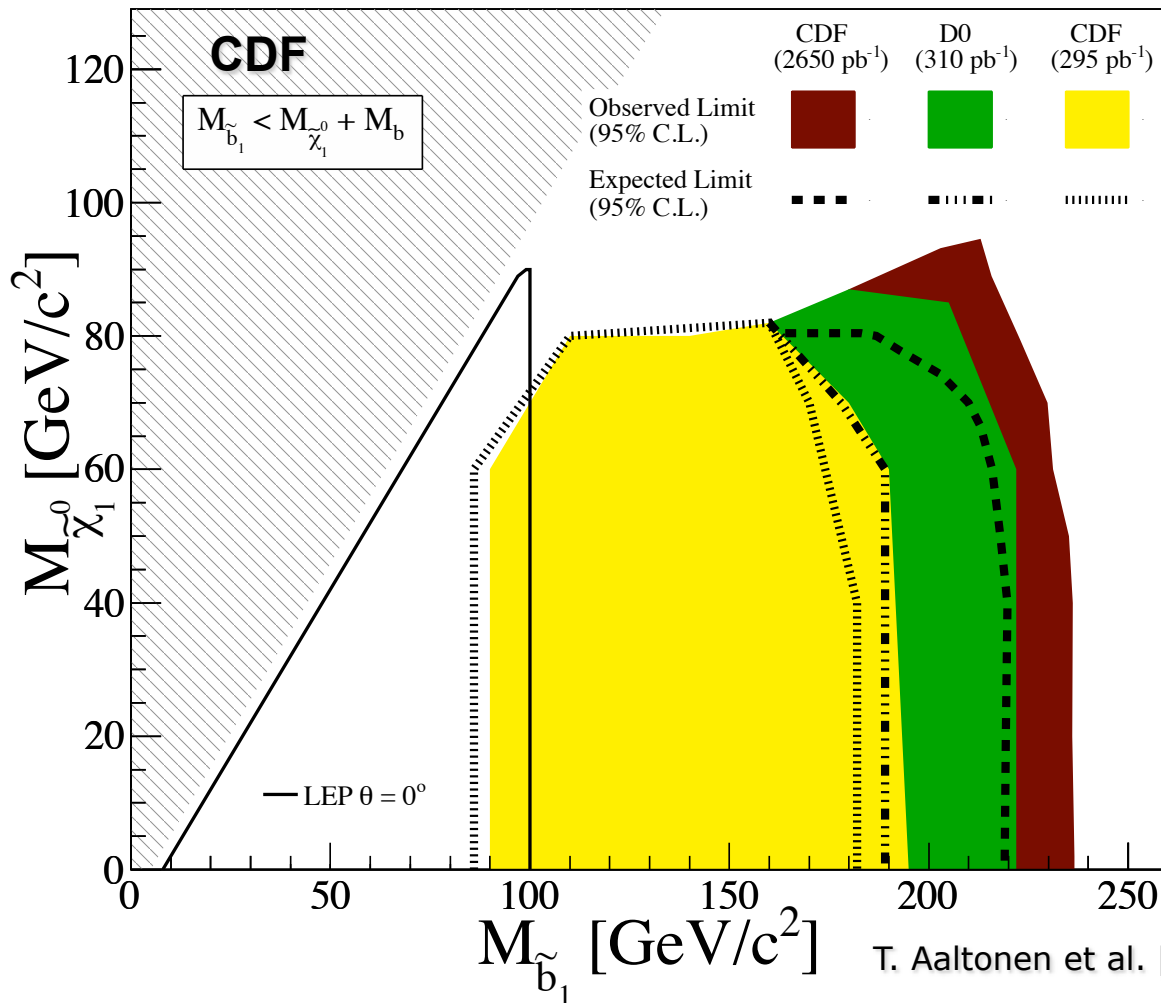
$$\tilde{b} \rightarrow b\tilde{\chi}_1^0$$



V. M. Abazov et al. [D0 Collaboration], 1005.2222

Tevatron Searches: Sbottom

$$\tilde{b} \rightarrow b\tilde{\chi}_1^0$$

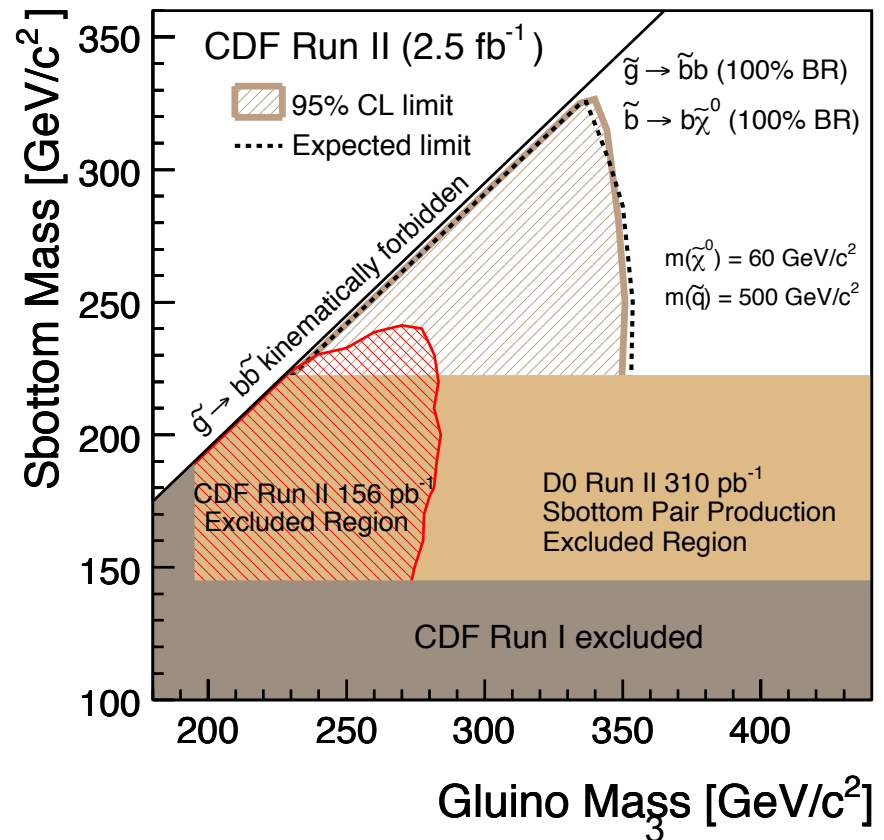
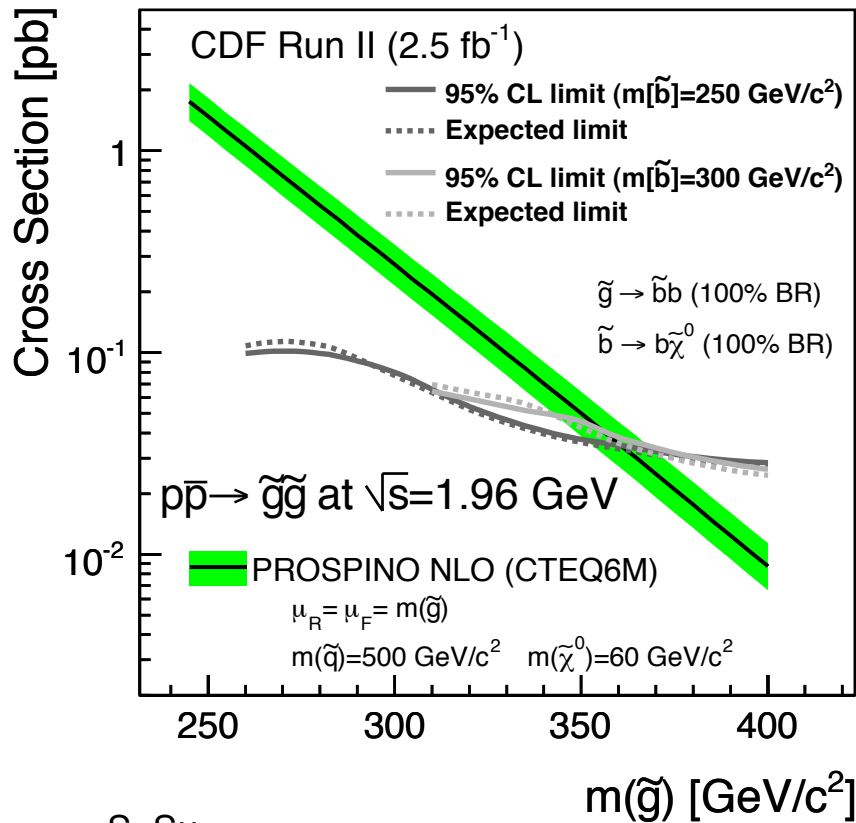


$m_{sb} > 230$ GeV (95% C.L.)

Tevatron Searches: gluino

CDF, Run II, 2.5 fb⁻¹, gluino pair production, $\tilde{g} \rightarrow b\tilde{b}$ $\tilde{b} \rightarrow b\tilde{\chi}_1^0$
 two or more jets, large MET, 2b-tagging

T. Aaltonen et al. [CDF Collaboration], PRL 102, 221801 (2009).

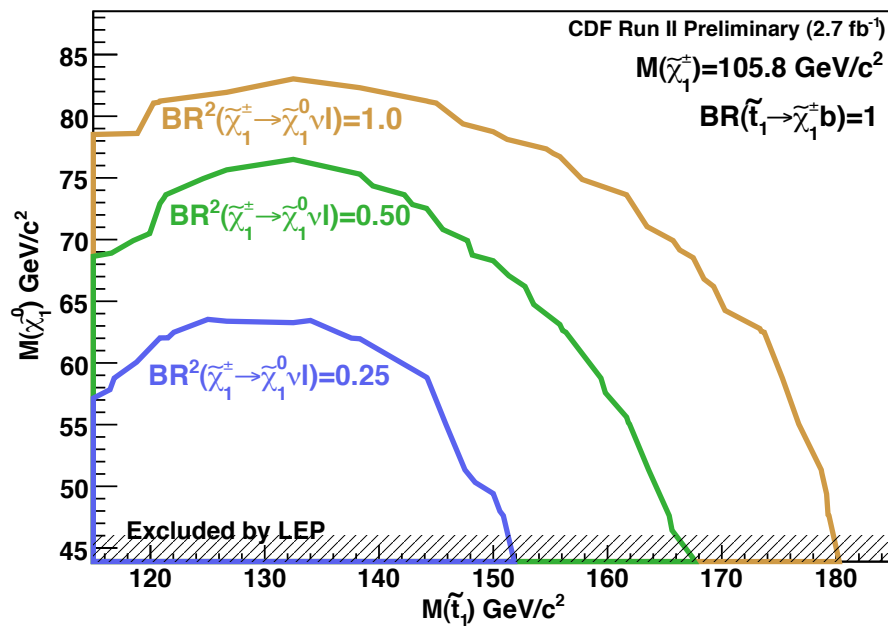


Tevatron Searches: Stop

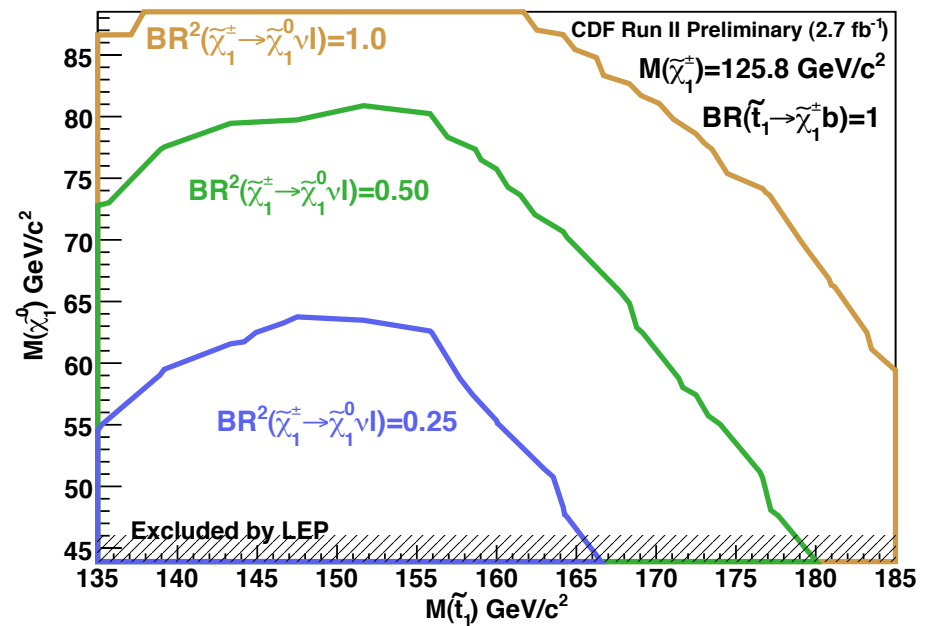
CDF, Run II, 2.7 fb⁻¹, stop pair production, $\tilde{t}_1 \rightarrow b\tilde{\chi}_1^\pm \rightarrow b\tilde{\chi}_1^0 l\nu$

$m_{st} > 150 - 185$ GeV

Observed 95% CL



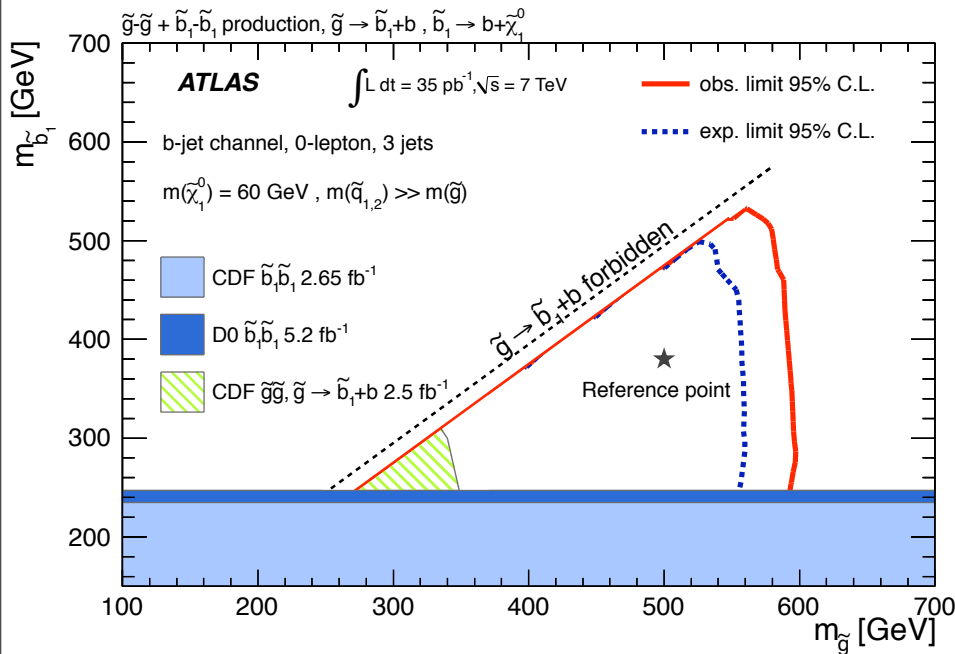
Observed 95% CL



A. G. Ivanov [CDF Collaboration], arXiv:0811.0788 [hep-ex].

ATLAS searches with b-tag

0 lepton, 3 j (1b)



- Branching ratios
- Small mgluino-msb, msb - $m\chi_1^0$ might lose 2 b jets

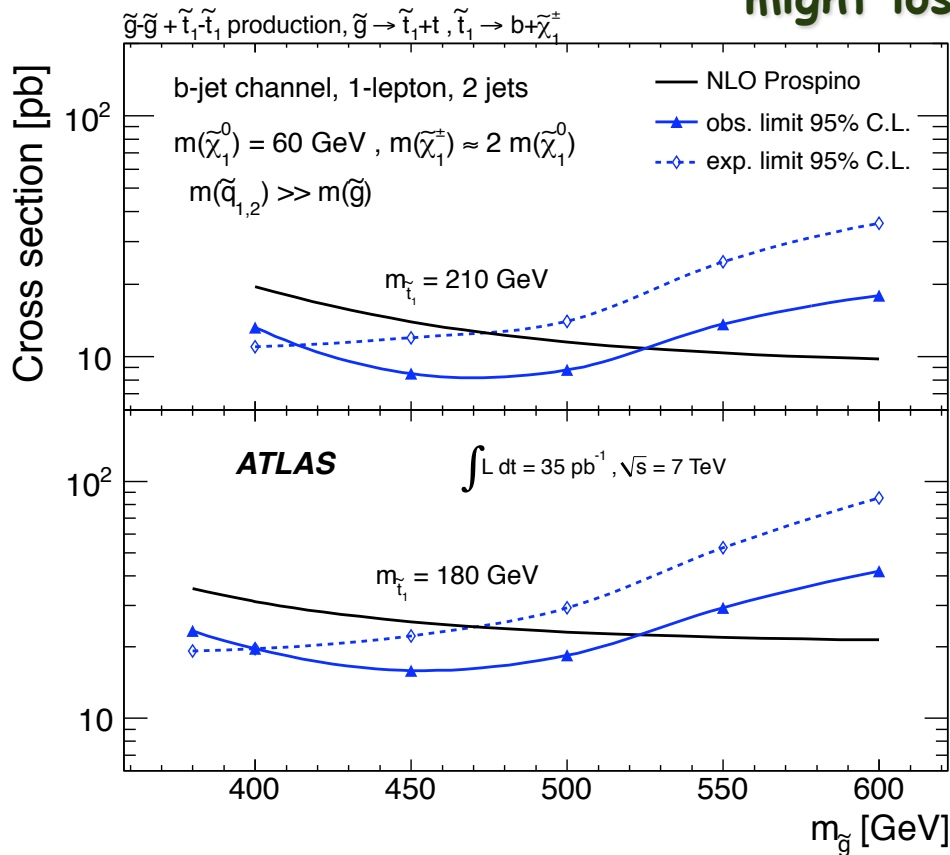
Extra cuts

- ⊙ 2-3 jets
- ⊙ other $f = \text{met}/M_{\text{eff}}$: larger for 2j
- ⊙ other MET, M_{eff} values
- ⊙ loose $\Delta\Phi_{\text{min}}$
- ⊙ transverse sphericity S_T

ATLAS searches with b-tag

1 lepton, 2 j (1b)

Small $m_{\tilde{g}}$ - $m_{\tilde{t}_1}$, $m_{\tilde{t}_1} - m_{\tilde{\chi}_1^\pm}$ $m_{\tilde{\chi}_1^\pm} - m_{\tilde{\chi}_1^0}$
 might lose lepton, also suffer from small $\text{Br}(I)$



Fully hadronic channel with b-tag

- more jets ($\geq 5, 6$)
- $\Delta\Phi_{\text{min}}$
- other values for MET, M_{eff}

ATLAS searches with b-tag

