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Chargino Neutralino Cross Section vs Chargino mass as used by ATLAS

The tables below report the mass of the chargino1 (assumed to be degenerate with the neutralino2), the cross section calculated using the envelope and the corresponding uncertainty.

These cross sections have been used in this confnote. [↗](#)

The cross sections differ from those used by CMS due to the non-zero higgsino component present in the relevant charginos and neutralinos.

Chargino+ Neutralino

112.5	4.1796550	0.0658108
117.5	3.5655794	0.0623925
130	2.4578099	0.0605453
142.5	1.7469562	0.0614241
150	1.4424485	0.0570722
155	1.2734135	0.0541951
175	0.8053968	0.0596618
175	0.8053968	0.0596618
192.5	0.5610849	0.0592816
200	0.4841195	0.0575899
225	0.3065397	0.0623806
250	0.1998918	0.0574974
250	0.1998918	0.0574974
267.5	0.1528537	0.0585006
300	0.0932699	0.0648579
300	0.0932699	0.0648579
325	0.0659234	0.0672082
350	0.0477262	0.0686587
375	0.0353087	0.0686556
392.5	0.0282031	0.0751439
425	0.0194272	0.0750640
425	0.0194272	0.0750640
450	0.0144111	0.0788910
500	0.0083071	0.0776705
500	0.0083071	0.0776705
517.5	0.0070688	0.0801138
550	0.0050505	0.0786143
550	0.0050505	0.0786143
575	0.0039274	0.0787955
625	0.0023568	0.0821303
625	0.0023568	0.0821303
642.5	0.0020010	0.0812401
675	0.0014927	0.0813107
675	0.0014927	0.0813107
700	0.0012067	0.0837222
750	0.0007328	0.0822007
750	0.0007328	0.0822007
750	0.0007328	0.0822007

Chargino- Neutralino

112.5	2.3429265	0.0862056
117.5	1.9763374	0.0830634
130	1.3278558	0.0793683
142.5	0.9168908	0.0800702
150	0.7481803	0.0788533
155	0.6549598	0.0797272
175	0.3996680	0.0775254

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175	0.3996680	0.0775254
192.5	0.2702694	0.0755760
200	0.2303283	0.0744805
225	0.1399333	0.0768729
250	0.0880037	0.0757726
250	0.0880037	0.0757726
267.5	0.0655287	0.0766922
300	0.0384561	0.0799419
300	0.0384561	0.0799419
325	0.0263839	0.0792385
350	0.0185075	0.0846645
375	0.0134021	0.0874715
392.5	0.0105400	0.0973080
425	0.0070532	0.0910097
425	0.0070532	0.0910097
450	0.0051102	0.0933589
500	0.0028426	0.1007162
500	0.0028426	0.1007162
517.5	0.0023919	0.1004746
550	0.0016821	0.1023248
550	0.0016821	0.1023248
575	0.0012949	0.1058971
625	0.0007638	0.1121978
625	0.0007638	0.1121978
642.5	0.0006431	0.1137896
675	0.0004785	0.1182987
675	0.0004785	0.1182987
700	0.0003855	0.1210013
750	0.0002330	0.1265437
750	0.0002330	0.1265437
750	0.0002330	0.1265437

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