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NLO-NLL wino-like chargino-neutralino ($\chi_{1,2}^{\pm,0}$) cross sections

The following cross sections are for pure wino-like chargino-neutralino pair production (sum of $\chi_{1,2}^{\pm,0}$ and $\chi_{1,2}^{\pm,0}$, and also for each subprocess individually). They have been calculated for $\sqrt{s} = 13$ TeV at NLO-NLL using the resumino code from B. Fuks et al with CTEQ6.6 and MSTW2008nlo90cl PDFs. The calculation assumes the chargino and neutralino are degenerate, with mass denoted below as $m_{\tilde{\chi}}$. Final numbers are calculated using the PDF4LHC recommendations for the two sets of cross sections.

The following sentence accurately describes all the assumptions in the cross sections calculation and is suitable to be included in the interpretation description:

The production cross sections are computed at NLO plus next-to-leading-log (NLL) precision in a limit of mass-degenerate wino $\chi_{2,2}$ and $\chi_{1,1}$, light bino $\chi_{1,1}$, and with all the other sparticles assumed to be heavy and decoupled.

The slha file used to produce these numbers can found in the attachment below: wino.dat

When using these cross sections, please cite the following two references, available below in bibtex format:

Show References Hide References

```
@article{Fuks:2012qx,
  author      = "Fuks, Benjamin and Klasen, Michael and Lamprea, David R.
                and Rothering, Marcel",
  title       = "{Gaugino production in proton-proton collisions at a
                center-of-mass energy of 8 TeV}",
  journal     = "JHEP",
  volume      = "10",
  pages       = "081",
  doi         = "10.1007/JHEP10(2012)081",
  year        = "2012",
  eprint      = "1207.2159",
  archivePrefix = "arXiv",
  primaryClass = "hep-ph",
  reportNumber = "IPHC-PHENO-12-07, MS-TP-12-05",
  SLACcitation = "%%CITATION = ARXIV:1207.2159;%%",
}
```

```
@article{Fuks:2013vua,
  author      = "Fuks, Benjamin and Klasen, Michael and Lamprea, David R.
                and Rothering, Marcel",
  title       = "{Precision predictions for electroweak superpartner
                production at hadron colliders with {\sc Resumino}}",
  journal     = "Eur. Phys. J. C",
  volume      = "73",
  pages       = "2480",
  doi         = "10.1140/epjc/s10052-013-2480-0",
  year        = "2013",
  eprint      = "1304.0790",
  archivePrefix = "arXiv",
  primaryClass = "hep-ph",
  reportNumber = "CERN-PH-TH-2013-064, IPhC-PHENO-13-02, MS-TP-13-06",
  SLACcitation = "%%CITATION = ARXIV:1304.0790;%%",
}
```

Should the analyzer need the cross-section information for a mass value that is not tabulated below, s/he can obtain it using the ROOT macros provided under:

/afs/cern.ch/user/a/amete/public/EWKGauginoCrossSections_13TeV

For this specific grid one needs to do:

```
root -l 'get_gaugino.C("C1N2", "wino", mass)'
```

where

mass

is the mass of the sparticle in GeV. The result of the interpolation can be seen here.

Envelope of CTEQ6.6 and MSTW2008nlo90cl NLO-NLL wino-like $^+_{102}$ and $^-_{102}$

Show table Hide table

m [GeV]	xsec [fb]	uncertainty [fb]
100	22670.1	973.967
125	10034.8	457.604
150	5180.86	253.223
175	2953.28	154.386
200	1807.39	101.316
225	1165.09	68.8042
250	782.487	48.7463
275	543.03	35.4083
300	386.936	26.3602
325	281.911	20.0201
350	209.439	15.4539
375	158.06	12.0956
400	121.013	9.61659
425	93.771	7.73547
450	73.4361	6.2389
475	58.0811	5.05005
500	46.3533	4.16461
525	37.2636	3.46763
550	30.1656	2.88065
575	24.5798	2.40183
600	20.1372	2.04438
625	16.5706	1.70195
650	13.7303	1.43519
675	11.3975	1.21937
700	9.51032	1.04092
725	7.9595	0.885243
750	6.69356	0.769988
775	5.63562	0.654544
800	4.75843	0.564061
825	4.02646	0.478362
850	3.42026	0.412315
875	2.90547	0.366257
900	2.49667	0.314019
925	2.12907	0.26801

950	1.8164	0.242682
975	1.56893	0.217618
1000	1.34352	0.175604
1025	1.15949	0.155683
1050	0.997903	0.133077
1075	0.86504	0.117638
1100	0.740372	0.107178
1125	0.647288	0.0917503
1150	0.555594	0.0828113
1175	0.486863	0.0644736
1200	0.415851	0.0579252
1225	0.362455	0.0561888
1250	0.316975	0.046491
1275	0.276522	0.0430197
1300	0.240739	0.0339561
1325	0.20999	0.0288259
1350	0.185601	0.0309793
1375	0.161343	0.0231066
1400	0.131074	0.0188826
1425	0.121045	0.0184156
1450	0.110889	0.0173553
1475	0.0906868	0.0153453
1500	0.0795585	0.0130098
1525	0.0694615	0.0116491
1550	0.0610387	0.0106867
1575	0.0531447	0.0100985
1600	0.0468796	0.00943991
1625	0.0413666	0.00870228
1650	0.0359383	0.0078127
1675	0.0313343	0.00724488
1700	0.0271773	0.00682548
1725	0.0239993	0.00575157
1750	0.0209773	0.00520821
1775	0.0183553	0.00474575
1800	0.0161098	0.00436762
1825	0.0139216	0.00392561
1850	0.0120539	0.00376256
1875	0.0104658	0.00347714
1900	0.00937288	0.00298646
1925	0.00814838	0.0027116
1950	0.00713734	0.00244379
1975	0.00621999	0.00223617
2000	0.00544778	0.00207163

Envelope of CTEQ6.6 and MSTW2008nlo90cl NLO-NLL wino-like $+1_2^0$

Show table Hide table

m [GeV]	xsec [fb]	uncertainty [fb]
100	13895.1	485.572

SUSYCrossSections13TeVn2x1wino < LHCPHysics < TWiki

125	6252.21	222.508
150	3273.84	127.175
175	1890.26	80.6306
200	1170.26	54.8302
225	762.405	37.9761
250	517.259	27.6553
275	362.248	20.51
300	260.319	15.5522
325	191.314	12.0565
350	143.126	9.39716
375	108.84	7.50279
400	83.9069	6.05361
425	65.4553	4.94466
450	51.5901	4.04097
475	41.0233	3.28837
500	32.9135	2.73443
525	26.6028	2.29957
550	21.644	1.92376
575	17.7159	1.60859
600	14.5767	1.38165
625	12.0454	1.15947
650	10.0188	0.977468
675	8.34633	0.832887
700	6.99008	0.714013
725	5.86536	0.602628
750	4.95438	0.532335
775	4.18041	0.452388
800	3.54111	0.389213
825	3.0052	0.335727
850	2.55793	0.284029
875	2.17847	0.255221
900	1.87338	0.216666
925	1.59963	0.185445
950	1.36565	0.168945
975	1.18309	0.15545
1000	1.01451	0.123448
1025	0.879192	0.108224
1050	0.757183	0.0900054
1075	0.651686	0.0799626
1100	0.55945	0.0711016
1125	0.491938	0.0637444
1150	0.419984	0.0565834
1175	0.371485	0.0412257
1200	0.31567	0.0415881
1225	0.27623	0.0371856
1250	0.240685	0.0286937
1275	0.210298	0.0264908
1300	0.18015	0.0229469
1325	0.159393	0.0196224
1350	0.139246	0.0174043

1375	0.120872	0.0154592
1400	0.10087	0.0128138
1425	0.0906208	0.012095
1450	0.0807007	0.0110593
1475	0.0704072	0.0109494
1500	0.0598541	0.00896721
1525	0.0520963	0.00809093
1550	0.0456082	0.00758726
1575	0.0394537	0.00722754
1600	0.0347174	0.00671145
1625	0.0307532	0.00626805
1650	0.0266118	0.00561368
1675	0.0231039	0.00527505
1700	0.0200153	0.00498133
1725	0.0176634	0.00412917
1750	0.0153969	0.00373792
1775	0.0134356	0.00341071
1800	0.0117395	0.00312039
1825	0.0100904	0.00285901
1850	0.00869944	0.00278534
1875	0.00754745	0.00262309
1900	0.00675782	0.00217148
1925	0.00582783	0.00201806
1950	0.0050955	0.00176923
1975	0.00444781	0.00167948
2000	0.00389224	0.00155069

Envelope of CTEQ6.6 and MSTW2008nlo90cl NLO-NLL wino-like $^{-1} \quad ^0 \quad 2$

Show table Hide table

m [GeV]	xsec [fb]	uncertainty [fb]
100	8766.08	517.621
125	3782.8	235.43
150	1907.04	126.192
175	1063.01	73.7751
200	637.14	46.5066
225	402.717	30.8673
250	265.255	21.1263
275	180.802	14.9232
300	126.627	10.8212
325	90.6096	7.9809
350	66.3319	6.07824
375	49.2359	4.60991
400	37.12	3.57812
425	28.3325	2.80898
450	21.8561	2.20924
475	17.0676	1.77199
500	13.4441	1.43549
525	10.6671	1.1752

SUSYCrossSections13TeVn2x1wino < LHCPHysics < TWiki

550	8.52674	0.962412
575	6.86761	0.797123
600	5.56289	0.665467
625	4.52654	0.544023
650	3.71232	0.458682
675	3.05164	0.387201
700	2.5208	0.327628
725	2.09484	0.283497
750	1.73984	0.238501
775	1.45562	0.202704
800	1.2175	0.175172
825	1.02139	0.142823
850	0.862477	0.128463
875	0.727098	0.111186
900	0.623379	0.0974831
925	0.529463	0.0826968
950	0.450722	0.0738302
975	0.385788	0.0622388
1000	0.329002	0.0521727
1025	0.280284	0.0474706
1050	0.240707	0.0430882
1075	0.213287	0.0377717
1100	0.180922	0.0360823
1125	0.155356	0.0280178
1150	0.135615	0.0262367
1175	0.115356	0.0232758
1200	0.100687	0.0168488
1225	0.0862252	0.0190064
1250	0.0762914	0.0178031
1275	0.0662261	0.0165332
1300	0.0605883	0.0110105
1325	0.0504674	0.00934855
1350	0.0464939	0.0137161
1375	0.0406594	0.00783768
1400	0.0303342	0.00620691
1425	0.030426	0.00632462
1450	0.0303359	0.00644575
1475	0.0202839	0.00440125
1500	0.0200469	0.00467065
1525	0.0175652	0.00419402
1550	0.0154289	0.00373529
1575	0.0137032	0.00346894
1600	0.0120888	0.0028772
1625	0.010602	0.002622
1650	0.00942027	0.00245189
1675	0.00830173	0.00217528
1700	0.00718864	0.00187223
1725	0.00633142	0.00162956
1750	0.0055801	0.00147077
1775	0.00491951	0.00133538

1800	0.0043716	0.00124894
1825	0.00383388	0.00106927
1850	0.00337664	0.00100039
1875	0.00297123	0.000914831
1900	0.00263965	0.00083959
1925	0.00238853	0.00076317
1950	0.002042	0.000674716
1975	0.00176972	0.000575312
2000	0.00155291	0.000523935

CTEQ6.6 numbers

Sum of NLO-NLL wino-like $^+_1$ 0_2 and $^-_1$ 0_2

Show table Hide table

m [GeV]	xsec [fb]	-scale unc [%]	-pdf unc [%]	+scale unc [%]	+pdf unc [%]
100	22504	-0.95	-3.3	0	3.2
125	9936.7	-0.67	-3.4	0	3.3
150	5118.9	-0.63	-3.5	0	3.5
175	2912.9	-0.56	-3.7	0	3.7
200	1779.1	-0.57	-3.9	0.2	3.9
225	1145.7	-0.47	-4.2	0.26	4.1
250	768.61	-0.47	-4.4	0.3	4.3
275	532.81	-0.47	-4.6	0.37	4.5
300	379.23	-0.47	-4.8	0.4	4.7
325	276.17	-0.44	-5.1	0.4	4.8
350	204.91	-0.44	-5.2	0.37	5.1
375	154.54	-0.37	-5.4	0.44	5.3
400	118.22	-0.37	-5.7	0.34	5.4
425	91.52	-0.34	-5.9	0.31	5.7
450	71.65	-0.34	-6.1	0.31	5.8
475	56.6	-0.27	-6.2	0.28	6.1
500	45.12	-0.21	-6.4	0.21	6.2
525	36.27	-0.31	-6.7	0.14	6.4
550	29.32	-0.24	-6.9	0.072	6.6
575	23.87	-0.17	-7	0.072	6.8
600	19.55	-0.22	-7.4	0.073	6.9
625	16.1	-0.22	-7.6	0	7.1
650	13.31	-0.23	-7.6	0.027	7.4
675	11.06	-0.31	-7.9	0	7.4
700	9.21	-0.31	-8	0.079	7.7
725	7.71	-0.43	-8.2	0.078	7.9
750	6.47	-0.55	-8.4	0.026	8.1
775	5.46	-0.65	-8.7	0.026	8.2
800	4.61	-0.68	-8.9	0.075	8.4
825	3.91	-0.57	-9.2	0.1	8.5
850	3.32	-0.62	-9.3	0.075	8.5
875	2.82	-0.85	-9.9	0.025	8.8
900	2.41	-0.42	-9.4	0.2	9.4

SUSYCrossSections13TeVn2x1wino < LHCPysics < TWiki

925	2.06	-0.52	-9.6	0.33	9.5
950	1.76	-1	-10	0.098	9
975	1.52	-1.2	-11	0.17	9
1000	1.3	-0.75	-10	0.4	10
1025	1.12	-0.92	-10	0.5	11
1050	0.96	-0.95	-9.8	0.68	11
1075	0.84	-1.3	-11	0.67	11
1100	0.72	-1.2	-12	0.35	10
1125	0.63	-1.1	-12	0.58	11
1150	0.54	-0.77	-12	0.42	11
1175	0.47	-0.4	-10	1.1	14
1200	0.41	-1	-13	0.58	12
1225	0.35	-0.81	-12	0.6	12
1250	0.31	-0.78	-13	0.75	13
1275	0.27	-0.99	-13	0.83	13
1300	0.24	-0.9	-14	1.1	13
1325	0.21	-0.95	-14	0.88	14
1350	0.18	-0.92	-14	0.99	14
1375	0.16	-0.65	-14	1.6	15
1400	0.13	-0.48	-14	1.6	15
1425	0.12	-0.67	-14	1.5	16
1450	0.11	-0.72	-15	1.7	16
1475	0.09	-1.1	-16	1.6	15
1500	0.078948	-1.4	-16	2.6	17
1525	0.069138	-1.4	-16	2.7	17
1550	0.06046	-1.5	-17	3	18
1575	0.052947	-1.5	-16	3.1	19
1600	0.046398	-1.5	-16	1.8	21
1625	0.040543	-2	-15	1.7	23
1650	0.035545	-2.1	-16	1.7	23
1675	0.031169	-2.1	-17	1.8	24
1700	0.027339	-2.2	-19	1.8	24
1725	0.023989	-2.5	-20	1.9	24
1750	0.021048	-2.5	-20	2	24
1775	0.018475	-2.6	-21	2	25
1800	0.016221	-2.6	-22	2.3	26
1825	0.014244	-2.7	-22	2.7	25
1850	0.012506	-2.7	-23	2.9	26
1875	0.010983	-2.7	-22	3.1	27
1900	0.00968	-3.2	-23	2.5	28
1925	0.0085234	-3.6	-23	2.3	27
1950	0.0074991	-3.9	-25	2.3	28
1975	0.0066073	-3.9	-25	2.2	28
2000	0.0058009	-3.1	-24	2.3	30

NLO-NLL wino-like $+_{-1}^{0_2}$

Show table Hide table

m [GeV]	xsec [fb]	-scale unc [%]	-pdf unc [%]	+scale unc [%]	+pdf unc [%]
100	13927	-0.8	-3.2	0	3.1

SUSYCrossSections13TeVn2x1wino < LHCPHysics < TWiki

125	6248.4	-0.6	-3.3	0	3.2
150	3264.6	-0.7	-3.4	0	3.3
175	1880.8	-0.6	-3.6	0	3.4
200	1161.6	-0.6	-3.8	0.2	3.6
225	755.82	-0.5	-4	0.4	3.7
250	511.85	-0.5	-4.2	0.4	3.9
275	357.99	-0.5	-4.4	0.4	4
300	256.93	-0.5	-4.6	0.4	4.2
325	188.55	-0.5	-4.8	0.4	4.3
350	140.95	-0.5	-5	0.4	4.4
375	107.02	-0.4	-5.2	0.5	4.6
400	82.39	-0.4	-5.4	0.4	4.7
425	64.17	-0.4	-5.6	0.4	4.9
450	50.53	-0.4	-5.8	0.4	5
475	40.14	-0.3	-5.9	0.4	5.2
500	32.17	-0.3	-6.1	0.3	5.3
525	25.99	-0.4	-6.4	0.2	5.4
550	21.11	-0.3	-6.5	0.1	5.6
575	17.26	-0.2	-6.6	0.1	5.8
600	14.2	-0.3	-7	0.1	5.8
625	11.74	-0.3	-7.2	0	6
650	9.74	-0.2	-7.1	0	6.2
675	8.12	-0.2	-7.4	0	6.3
700	6.79	-0.2	-7.5	0	6.5
725	5.7	-0.3	-7.6	0	6.7
750	4.8	-0.4	-7.8	0	6.9
775	4.06	-0.5	-8.1	0	7
800	3.44	-0.5	-8.3	0.1	7.1
825	2.92	-0.6	-8.5	0.1	7.3
850	2.49	-0.6	-8.6	0.1	7.3
875	2.12	-0.7	-9.2	0	7.5
900	1.81	-0.4	-8.4	0.2	8.3
925	1.55	-0.3	-8.7	0.4	8.2
950	1.33	-1.2	-9.9	0	7.3
975	1.15	-1.4	-10.5	0	7.2
1000	0.98	-0.6	-9	0.4	9.2
1025	0.85	-0.9	-9.2	0.5	9.4
1050	0.73	-0.9	-8.5	0.9	10
1075	0.64	-1.6	-10.5	0.5	8.6
1100	0.55	-1.2	-11.1	0.3	8.7
1125	0.48	-1	-10.7	0.6	9.9
1150	0.41	-0.7	-11.3	0.4	9.1
1175	0.36	-0.1	-8.2	1.3	13.2
1200	0.31	-1	-11.5	0.6	10.2
1225	0.27	-0.7	-11.4	0.6	10.7
1250	0.24	-0.8	-11.6	0.8	11
1275	0.21	-0.9	-12.4	0.9	10.9
1300	0.18	-0.8	-12.6	1.3	11.2
1325	0.16	-0.9	-12.4	1	11.8
1350	0.14	-0.9	-12.9	1.1	11.8

SUSYCrossSections13TeVn2x1wino < LHCPhysics < TWiki

1375	0.12	-0.6	-12.1	1.8	13.1
1400	0.1	-0.2	-11.9	2	13.5
1425	0.09	-0.5	-12.7	1.8	13.8
1450	0.08	-0.5	-12.9	2.2	14.5
1475	0.07	-0.9	-15	1.9	13.4
1500	0.0597115	-1.4	-14.2	2.6	15
1525	0.0522203	-1.4	-14.8	2.6	15
1550	0.0455892	-1.5	-15.1	2.9	16.4
1575	0.0398661	-1.5	-14.3	3	16.8
1600	0.0348743	-1.6	-14.8	1.6	18.7
1625	0.0302986	-1.7	-13.2	1.7	22.1
1650	0.0265033	-1.7	-14.1	1.7	21.5
1675	0.0231864	-1.7	-15.6	1.8	22.3
1700	0.0202908	-1.8	-18	1.8	23.1
1725	0.0177606	-2.6	-18.2	1.9	22.6
1750	0.0155431	-2.7	-18.9	2	23
1775	0.0136071	-2.7	-19.6	2	23.7
1800	0.0119185	-2.8	-20.5	2.8	24.5
1825	0.0104378	-2.9	-20.7	3.4	23.8
1850	0.0091365	-2.9	-21.3	3.8	25.4
1875	0.0080001	-2.9	-18.6	4.1	26.8
1900	0.00706487	-3.8	-21.5	3	26.2
1925	0.00622541	-4.4	-20.6	2.4	25.9
1950	0.00547282	-4.8	-23.5	2.4	25.3
1975	0.00479632	-4.8	-21.1	2.7	27.6
2000	0.00419527	-2.9	-20.2	2.7	29.6

NLO-NLL wino-like $-1 \quad 0 \quad 2$

Show table Hide table

m [GeV]	xsec [fb]	-scale unc [%]	-pdf unc [%]	+scale unc [%]	+pdf unc [%]
100	8577.2	-1.2	-3.5	0	3.4
125	3688.3	-0.8	-3.6	0	3.6
150	1854.3	-0.5	-3.8	0	3.9
175	1032.1	-0.5	-4	0	4.2
200	617.47	-0.5	-4.2	0.2	4.5
225	389.89	-0.4	-4.5	0	4.8
250	256.76	-0.4	-4.8	0.1	5.1
275	174.82	-0.4	-5	0.3	5.4
300	122.3	-0.4	-5.2	0.4	5.8
325	87.62	-0.3	-5.6	0.4	6
350	63.96	-0.3	-5.7	0.3	6.6
375	47.52	-0.3	-6	0.3	6.9
400	35.83	-0.3	-6.3	0.2	7.1
425	27.35	-0.2	-6.6	0.1	7.5
450	21.12	-0.2	-6.9	0.1	7.8
475	16.46	-0.2	-7	0	8.2
500	12.95	-0	-7.2	0	8.6
525	10.28	-0.1	-7.6	0	8.9
550	8.21	-0.1	-7.8	0	9.3

SUSYCrossSections13TeVn2x1wino < LHCPHysics < TWiki

575	6.61	-0.1	-8.1	0	9.5
600	5.35	-0	-8.4	0	9.8
625	4.36	-0	-8.6	0	10.1
650	3.57	-0.3	-8.8	0.1	10.7
675	2.94	-0.6	-9.3	0	10.5
700	2.42	-0.6	-9.3	0.3	11.2
725	2.01	-0.8	-9.8	0.3	11.3
750	1.67	-1	-10	0.1	11.6
775	1.4	-1.1	-10.4	0.1	11.8
800	1.17	-1.2	-10.8	0	12.1
825	0.99	-0.5	-11.2	0.1	12
850	0.83	-0.7	-11.5	0	12.3
875	0.7	-1.3	-11.9	0.1	12.6
900	0.6	-0.5	-12.3	0.2	12.8
925	0.51	-1.2	-12.3	0.1	13.5
950	0.43	-0.5	-12.3	0.4	14.4
975	0.37	-0.6	-12.5	0.7	14.7
1000	0.32	-1.2	-13.4	0.4	14
1025	0.27	-1	-13.7	0.5	14.2
1050	0.23	-1.1	-14	0	13.9
1075	0.2	-0.2	-12.2	1.2	17.3
1100	0.17	-1.4	-14.7	0.5	14.6
1125	0.15	-1.5	-15	0.5	14.8
1150	0.13	-1	-15.8	0.5	15.1
1175	0.11	-1.4	-16.2	0.4	16.4
1200	0.1	-1	-16.1	0.5	17.5
1225	0.08	-1.2	-15.9	0.6	17.8
1250	0.07	-0.7	-16.4	0.6	18
1275	0.06	-1.3	-17.1	0.6	18.3
1300	0.06	-1.2	-17.3	0.6	19.1
1325	0.05	-1.1	-17.7	0.5	19.6
1350	0.04	-1	-18	0.6	19.7
1375	0.04	-0.8	-17.9	0.9	21.2
1400	0.03	-1.4	-19.5	0.4	19.9
1425	0.03	-1.2	-19.6	0.7	20.8
1450	0.03	-1.3	-20.3	0.5	21.2
1475	0.02	-1.6	-20.5	0.7	22.8
1500	0.0192364	-1.3	-20	2.7	22.9
1525	0.0169178	-1.3	-20.9	2.9	23.5
1550	0.0148704	-1.3	-21.3	3.2	24.4
1575	0.0130809	-1.3	-21.7	3.4	26.4
1600	0.0115242	-1.3	-20	2.4	29.1
1625	0.010244	-2.8	-21.9	1.7	27.3
1650	0.00904192	-3.1	-22.7	1.7	27.4
1675	0.00798307	-3.3	-23	1.8	27.7
1700	0.00704854	-3.3	-23.8	1.8	27.7
1725	0.0062285	-2.1	-24.4	1.8	27.7
1750	0.00550496	-2.1	-25	1.9	28
1775	0.00486808	-2.2	-25.6	2	28.4
1800	0.00430255	-2.2	-26.3	1	30.6

1825	0.00380603	-2.2	-26.9	0.7	28.8
1850	0.00336941	-2.3	-27.8	0.6	28.7
1875	0.00298298	-2.3	-30.3	0.6	26.6
1900	0.00261518	-1.4	-28.6	1	31.2
1925	0.00229797	-1.5	-28.9	1.9	31.1
1950	0.00202629	-1.6	-28.8	2	34
1975	0.00181102	-1.5	-34	1	28.6
2000	0.00160565	-3.8	-35.7	1.3	29.3

MSTW2008nlo90cl numbers

Sum of NLO-NLL wino-like $^{+}_{1} \quad ^{0}_{2}$ and $^{-}_{1} \quad ^{0}_{2}$

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m [GeV]	xsec [fb]	-scale unc [%]	-pdf unc [%]	+scale unc [%]	+pdf unc [%]
100	22845	-1.2	-3.4	0.36	3.5
125	10139	-0.68	-3.4	0.25	3.5
150	5244.4	-0.5	-3.5	0.19	3.6
175	2996.4	-0.56	-3.7	0.16	3.7
200	1836.7	-0.56	-3.7	0.33	3.9
225	1186.4	-0.63	-3.9	0.46	4
250	797.95	-0.57	-3.9	0.53	4.1
275	554.51	-0.53	-4.1	0.63	4.3
300	395.63	-0.47	-4.2	0.77	4.4
325	288.65	-0.37	-4.4	0.8	4.5
350	214.53	-0.3	-4.4	0.84	4.8
375	162.14	-0.3	-4.6	0.92	4.9
400	124.23	-0.3	-4.7	0.99	5.1
425	96.37	-0.34	-4.8	0.9	5.3
450	75.55	-0.37	-5	1	5.4
475	59.77	-0.27	-5	0.91	5.5
500	47.72	-0.31	-5.1	1	5.8
525	38.38	-0.34	-5	0.99	6
550	31.11	-0.44	-5.3	1	6.1
575	25.36	-0.57	-5.4	0.93	6.3
600	20.79	-0.46	-5.4	0.96	6.6
625	17.12	-0.69	-5.5	0.72	6.7
650	14.18	-0.69	-5.7	0.65	6.9
675	11.78	-0.75	-5.8	0.68	7.1
700	9.81	-0.57	-5.7	0.96	7.5
725	8.23	-0.77	-6.2	0.81	7.4
750	6.9	-0.73	-6	0.96	8.1
775	5.81	-0.72	-6.1	0.91	8.2
800	4.91	-0.73	-6.4	0.87	8.4
825	4.15	-0.65	-6.4	0.89	8.5
850	3.52	-0.72	-6.6	0.9	8.8
875	3	-0.85	-6.8	0.7	9
900	2.57	-0.83	-6.8	0.8	9.3
925	2.19	-0.93	-7.2	0.72	9.4

SUSYCrossSections13TeVn2x1wino < LHCPHysics < TWiki

950	1.88	-1.2	-7.5	0.7	9.5
975	1.61	-1.5	-7.9	0.63	11
1000	1.38	-1.1	-8.1	0.58	10
1025	1.19	-1.1	-7.9	0.55	11
1050	1.02	-1.3	-8.1	0.7	11
1075	0.88	-1	-8.1	1	12
1100	0.76	-1.1	-8.3	0.67	11
1125	0.66	-1.1	-8.7	0.8	12
1150	0.57	-1.2	-9	0.73	12
1175	0.49	-1.3	-9.3	0.98	12
1200	0.42	-1.5	-9.5	0.98	13
1225	0.37	-1.5	-9.9	0.9	13
1250	0.32	-1.4	-10	0.95	14
1275	0.28	-1.4	-11	1.1	14
1300	0.24	-1.7	-11	0.95	14
1325	0.21	-1.9	-13	0.34	13
1350	0.18	-1	-8.1	2.9	20
1375	0.16	-1.5	-13	0.43	15
1400	0.13	-1.5	-13	0.63	15
1425	0.12	-1.2	-13	0.75	16
1450	0.11	-1.9	-14	0.86	17
1475	0.09	-1.7	-14	1.8	18
1500	0.078451	-2.2	-14	1.7	18
1525	0.068352	-2.3	-15	1.8	18
1550	0.059565	-2.3	-15	1.8	19
1575	0.051758	-2.5	-17	1.6	20
1600	0.045257	-3.9	-17	2	20
1625	0.039456	-2.5	-17	2	21
1650	0.0344	-2.6	-18	2.2	22
1675	0.029995	-2.7	-20	2.1	22
1700	0.025778	-2.9	-21	1.6	25
1725	0.022806	-2.9	-20	2.2	24
1750	0.019885	-2.9	-20	2.2	24
1775	0.017338	-3	-21	2.3	25
1800	0.015116	-3	-22	2.4	26
1825	0.01314	-2.9	-24	2.7	27
1850	0.01131	-2.7	-27	3.2	29
1875	0.0098347	-6.2	-28	2.8	32
1900	0.0086186	-2.4	-26	3.2	31
1925	0.0075742	-3.9	-28	2.8	32
1950	0.0065969	-3.4	-29	3	34
1975	0.0057362	-1.9	-30	3.7	34
2000	0.0050057	-3.6	-32	1.4	34

NLO-NLL wino-like $+1 \quad 0 \quad 2$

Show table Hide table

m [GeV]	xsec [fb]	-scale unc [%]	-pdf unc [%]	+scale unc [%]	+pdf unc [%]
100	13884	-1.2	-3.2	0.6	3.4
125	6260.4	-0.6	-3.2	0.4	3.4

SUSYCrossSections13TeVn2x1wino < LHCPHysics < TWiki

150	3285.6	-0.5	-3.3	0.3	3.5
175	1902.3	-0.6	-3.4	0.2	3.6
200	1180	-0.6	-3.4	0.4	3.8
225	770.73	-0.7	-3.6	0.6	3.8
250	523.65	-0.6	-3.6	0.7	4
275	367.41	-0.6	-3.8	0.8	4.1
300	264.51	-0.5	-3.9	0.9	4.2
325	194.59	-0.4	-4	1	4.4
350	145.77	-0.3	-4.1	1.1	4.5
375	110.96	-0.3	-4.2	1.2	4.7
400	85.62	-0.3	-4.3	1.3	4.9
425	66.88	-0.4	-4.4	1.3	5.1
450	52.74	-0.4	-4.5	1.4	5.3
475	41.98	-0.3	-4.6	1.3	5.4
500	33.71	-0.4	-4.7	1.3	5.6
525	27.25	-0.4	-4.6	1.4	5.9
550	22.2	-0.5	-4.9	1.4	6
575	18.19	-0.6	-5	1.3	6.1
600	14.98	-0.6	-5	1.3	6.4
625	12.39	-0.8	-5.1	1	6.5
650	10.3	-0.8	-5.3	0.9	6.7
675	8.59	-0.8	-5.3	0.9	6.8
700	7.18	-0.7	-5.3	1.2	7.2
725	6.04	-0.8	-5.9	1.1	7
750	5.08	-0.7	-5.4	1.3	7.9
775	4.29	-0.8	-5.6	1.2	7.9
800	3.63	-0.7	-5.8	1.1	8.2
825	3.08	-0.7	-5.8	1.1	8.4
850	2.62	-0.8	-6.1	1.1	8.4
875	2.24	-0.8	-6.2	0.9	8.6
900	1.92	-0.6	-6	1	8.8
925	1.64	-0.8	-6.7	0.9	8.8
950	1.41	-1.1	-6.9	0.8	8.8
975	1.21	-1.4	-7.1	0.7	10.6
1000	1.04	-1	-7.4	0.6	9.4
1025	0.9	-1.1	-7.1	0.5	9.7
1050	0.77	-1.2	-7.3	0.7	10
1075	0.66	-1	-7.2	1.1	10.8
1100	0.57	-1.1	-7.2	0.7	10.6
1125	0.5	-1.1	-7.7	0.9	11.1
1150	0.43	-1.2	-8.1	0.8	10.8
1175	0.37	-1.4	-8.2	1	11.5
1200	0.32	-1.5	-8.5	1	11.6
1225	0.28	-1.6	-8.8	0.9	11.9
1250	0.24	-1.5	-9.1	1	12.2
1275	0.21	-1.4	-9.3	1.2	12.7
1300	0.18	-1.7	-9.8	0.9	12.8
1325	0.16	-1.9	-12.5	0.1	11.4
1350	0.13	-1.2	-5.5	3.7	20
1375	0.12	-1.9	-11.3	0.5	13.6

SUSYCrossSections13TeVn2x1wino < LHCPHysics < TWiki

1400	0.1	-1.7	-11.6	0.7	13.4
1425	0.09	-1.3	-12	0.9	14.1
1450	0.08	-2.1	-12.2	1	14.3
1475	0.07	-1.8	-12.3	2	16.1
1500	0.0584941	-2.3	-12.8	1.8	15.9
1525	0.050882	-2.4	-13.3	1.9	16.4
1550	0.0442648	-2.4	-13.9	1.9	16.9
1575	0.0382355	-2.6	-15.5	1.4	17.1
1600	0.0335069	-4.8	-15.7	2	17.5
1625	0.0291533	-2.6	-15.8	2.1	18.1
1650	0.025364	-2.7	-17	1	19.1
1675	0.0220669	-2.8	-19	2.2	18.6
1700	0.0186373	-3	-19.1	1.4	23.9
1725	0.0166997	-3.1	-18.7	2.3	21.2
1750	0.0145246	-3	-19.5	2.3	22.1
1775	0.0126312	-3.1	-20.4	2.4	22.9
1800	0.0109832	-3.1	-21.3	2.5	23.8
1825	0.00949805	-2.8	-23.7	3	24.1
1850	0.00800207	-2.2	-26	4.2	27
1875	0.00691565	-7.5	-27.8	2.7	31.3
1900	0.00607454	-2.2	-24.4	3.7	28.7
1925	0.00541098	-4.8	-29.2	2.7	25.9
1950	0.00469803	-3.4	-29	3.3	31
1975	0.00406287	-2	-31.8	4.4	31.7
2000	0.00354198	-3.6	-33.7	1.2	30.6

NLO-NLL wino-like $-\frac{0}{1} \frac{2}{2}$

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m [GeV]	xsec [fb]	-scale unc [%]	-pdf unc [%]	+scale unc [%]	+pdf unc [%]
100	8961.1	-1.1	-3.6	0	3.6
125	3878.6	-0.8	-3.8	0	3.6
150	1958.8	-0.5	-3.9	0	3.8
175	1094.1	-0.5	-4.1	0.1	3.9
200	656.69	-0.5	-4.3	0.2	4.1
225	415.69	-0.5	-4.5	0.2	4.3
250	274.3	-0.5	-4.6	0.2	4.4
275	187.1	-0.4	-4.8	0.3	4.6
300	131.12	-0.4	-4.9	0.5	4.8
325	94.06	-0.3	-5.2	0.4	4.8
350	68.76	-0.3	-5.1	0.3	5.3
375	51.18	-0.3	-5.5	0.3	5.2
400	38.61	-0.3	-5.5	0.3	5.4
425	29.49	-0.2	-5.7	0	5.6
450	22.81	-0.3	-6.2	0.2	5.5
475	17.79	-0.2	-5.9	0	5.9
500	14.01	-0.1	-6	0.3	6.2
525	11.13	-0.2	-6.1	0	6.4
550	8.91	-0.3	-6.4	0	6.5
575	7.17	-0.5	-6.4	0	6.9

SUSYCrossSections13TeVn2x1wino < LHCPHysics < TWiki

600	5.81	-0.1	-6.4	0.1	7.2
625	4.73	-0.4	-6.6	0	7.2
650	3.88	-0.4	-6.7	0	7.5
675	3.19	-0.6	-7.1	0.1	7.8
700	2.63	-0.2	-6.8	0.3	8.3
725	2.19	-0.7	-7.1	0	8.6
750	1.82	-0.8	-7.6	0	8.7
775	1.52	-0.5	-7.5	0.1	9.1
800	1.28	-0.8	-8	0.2	8.8
825	1.07	-0.5	-8	0.3	8.8
850	0.9	-0.5	-8.2	0.3	10.1
875	0.76	-1	-8.5	0.1	10.3
900	0.65	-1.5	-9	0.2	10.9
925	0.55	-1.3	-8.8	0.2	11.3
950	0.47	-1.5	-9.4	0.4	11.6
975	0.4	-1.7	-10.2	0.4	12
1000	0.34	-1.6	-10.4	0.5	12.1
1025	0.29	-1.3	-10.2	0.7	13
1050	0.25	-1.5	-10.5	0.7	13.5
1075	0.22	-1.1	-10.6	0.7	14.1
1100	0.19	-1.1	-11.6	0.6	14.2
1125	0.16	-1.1	-12	0.5	14.6
1150	0.14	-1.2	-11.8	0.5	15.6
1175	0.12	-0.9	-12.6	0.9	15.5
1200	0.1	-1.3	-12.8	0.9	16.5
1225	0.09	-1.3	-13.5	0.9	16.9
1250	0.08	-1.3	-14.1	0.8	17.6
1275	0.07	-1.4	-14.5	1	18.2
1300	0.06	-1.6	-14	1.1	19.3
1325	0.05	-1.9	-15.1	1.1	19.2
1350	0.05	-0.6	-14.8	0.9	20.4
1375	0.04	-0.5	-17	0.2	20.3
1400	0.03	-0.9	-16.9	0.4	21.8
1425	0.03	-1	-17	0.3	22.5
1450	0.03	-1.3	-18.3	0.5	22.6
1475	0.02	-1.5	-18.2	1.1	23.4
1500	0.019957	-2	-18.2	1.6	23.8
1525	0.0174699	-2.1	-18.7	1.6	24.5
1550	0.0152999	-2.2	-19.2	1.7	25.2
1575	0.0135224	-2.1	-19.9	2.2	26.9
1600	0.0117497	-1.5	-20	2	27.3
1625	0.0103025	-2.3	-20.5	1.8	28.3
1650	0.00903611	-2.4	-21	5.5	30.9
1675	0.00792775	-2.4	-20.9	1.9	32.1
1700	0.00714025	-2.7	-25.4	2.3	26.8
1725	0.00610664	-2.5	-22.7	2	30.3
1750	0.00536083	-2.6	-23.2	2.1	30.9
1775	0.00470688	-2.7	-23.7	2.1	31.7
1800	0.00413321	-2.7	-24.3	2.2	32.4
1825	0.00364245	-3.1	-23.9	1.8	33.7

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1850	0.00330822	-3.9	-27.9	0.7	32.3
1875	0.00291906	-3	-29.4	2.9	33
1900	0.00254405	-2.9	-29.1	2.1	36.7
1925	0.00216326	-1.8	-24.8	2.9	45.6
1950	0.00189888	-3.3	-27.8	2.2	40.1
1975	0.00167329	-1.8	-27.3	1.9	40.1
2000	0.00146377	-3.6	-29.1	1.8	40.6

-- LesyaShchutska - 2015-02-11

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