

## Citation guidance

### PDFs

- CTEQ: CTEQ6L1 [1], CTEQ6.6 [2], CT10NLO [3]
- MSTW: MSTW2008 [4]
- PDF4LHC: PDF4LHC15: [5]

### Prospino2.1

- Squarks and gluinos: [6, 7]
- Stop pairs or sbottom pairs: [6, 8]
- Neutralino, chargino or slepton pairs: [6, 9]
- Neutralino/chargino and gluino: [6, 10, 11]
- Neutralino/chargino and squarks [6, 11]
- One may also include original Prospino references: [12, 13, 14, 7]

### NLL-fast

- Squarks and gluinos: [15, 7, 16, 17, 18, 19] (and [20] if v3.1)
- Stop (sbottom) pair-production: [15, 8, 21, 19] (and [20] if v3.1)

### NNLL-fast

- Squarks and gluinos:[22, 23, 7, 16, 17, 18, 24, 25, 26]
- Stop (sbottom) pair-production: [22, 23, 8, 21, 27]

### LHC SUSY Cross Section Working Group

- 7 TeV or 8 TeV, Squarks and gluinos: [28, 29, 15, 7, 16, 17, 18, 19]
- 7 TeV or 8 TeV, Stop (sbottom) pair: [28, 29, 15, 8, 21, 19]
- 8 TeV, non-colored: (to be filled)
- 13 TeV, colored: (to be filled)
- 13 TeV, EWKino (CC): [30, 31, 32].
- 13 TeV, EWKino (NC or NN): [30, 31, 32, 33]
- 13 TeV, slepton-pair: [34, 32, 35, 36]

## References

- [1] J. Pumplin, *et al.*, *New generation of parton distributions with uncertainties from global QCD analysis*, JHEP **07** (2002) 012 [[hep-ph/0201195](#)].
- [2] P. M. Nadolsky, *et al.*, *Implications of CTEQ global analysis for collider observables*, Phys. Rev. **D78** (2008) 013004 [[arXiv:0802.0007](#)].
- [3] H.-L. Lai, *et al.*, *New parton distributions for collider physics*, Phys. Rev. **D82** (2010) 074024 [[arXiv:1007.2241](#)].
- [4] A. D. Martin, W. J. Stirling, R. S. Thorne, and G. Watt, *Parton distributions for the LHC*, Eur. Phys. J. **C63** (2009) 189–285 [[arXiv:0901.0002](#)].
- [5] J. Butterworth *et al.*, *PDF4LHC recommendations for LHC Run II*, J. Phys. **G43** (2016) 023001 [[arXiv:1510.03865](#)].
- [6] *Prospino2*.  
<https://www.thphys.uni-heidelberg.de/~plehn/index.php?show=prospino>.
- [7] W. Beenakker, R. Hopker, M. Spira, and P. M. Zerwas, *Squark and gluino production at hadron colliders*, Nucl. Phys. **B492** (1997) 51–103 [[hep-ph/9610490](#)].
- [8] W. Beenakker, M. Kramer, T. Plehn, M. Spira, and P. M. Zerwas, *Stop production at hadron colliders*, Nucl. Phys. **B515** (1998) 3–14 [[hep-ph/9710451](#)].
- [9] W. Beenakker, *et al.*, *The Production of charginos / neutralinos and sleptons at hadron colliders*, Phys. Rev. Lett. **83** (1999) 3780–3783 [[hep-ph/9906298](#)] [*Erratum ibid.* **100** (2008) 029901].
- [10] M. Spira in *Supersymmetry and unification of fundamental interactions. Proceedings, 10th International Conference, SUSY'02, Hamburg, Germany, June 17-23, 2002*, pp. 217–226. 2002. [hep-ph/0211145](#).
- [11] T. Plehn in *Physics at LHC. Proceedings, Conference, PHLC 2004, Vienna, Austria, July 13-17, 2004*, Czech. J. Phys. **55** (2005) B213–B220 [[hep-ph/0410063](#)].
- [12] W. Beenakker, R. Hopker, and M. Spira, *PROSPINO: A Program for the production of supersymmetric particles in next-to-leading order QCD*. [hep-ph/9611232](#).
- [13] W. Beenakker, R. Hopker, M. Spira, and P. M. Zerwas, *Squark production at the Tevatron*, Phys. Rev. Lett. **74** (1995) 2905–2908 [[hep-ph/9412272](#)].
- [14] W. Beenakker, R. Hopker, M. Spira, and P. M. Zerwas, *Gluino pair production at the Tevatron*, Z. Phys. **C69** (1995) 163–166 [[hep-ph/9505416](#)].
- [15] *NLL-fast*.  
[https://www.uni-muenster.de/Physik.TP/~akule\\_01/nllfast/doku.php?id=nllfast](https://www.uni-muenster.de/Physik.TP/~akule_01/nllfast/doku.php?id=nllfast).
- [16] A. Kulesza and L. Motyka, *Threshold resummation for squark-antisquark and gluino-pair production at the LHC*, Phys. Rev. Lett. **102** (2009) 111802 [[arXiv:0807.2405](#)].
- [17] A. Kulesza and L. Motyka, *Soft gluon resummation for the production of gluino-gluino and squark-antisquark pairs at the LHC*, Phys. Rev. **D80** (2009) 095004 [[arXiv:0905.4749](#)].
- [18] W. Beenakker, *et al.*, *Soft-gluon resummation for squark and gluino hadroproduction*, JHEP **12** (2009) 041 [[arXiv:0909.4418](#)].
- [19] W. Beenakker, *et al.*, *Squark and Gluino Hadroproduction*, Int. J. Mod. Phys. **A26** (2011) 2637–2664 [[arXiv:1105.1110](#)].
- [20] W. Beenakker, *et al.*, *NLO+NLL squark and gluino production cross-sections with threshold-improved parton distributions*, Eur. Phys. J. **C76** (2016) 53 [[arXiv:1510.00375](#)].
- [21] W. Beenakker, *et al.*, *Supersymmetric top and bottom squark production at hadron colliders*, JHEP **08** (2010) 098 [[arXiv:1006.4771](#)].

- [22] *NNLL-fast*.  
[https://www.uni-muenster.de/Physik.TP/~akule\\_01/nllfast/doku.php?id=start](https://www.uni-muenster.de/Physik.TP/~akule_01/nllfast/doku.php?id=start).
- [23] W. Beenakker, C. Borschensky, M. Krmer, A. Kulesza, and E. Laenen, *NNLL-fast: predictions for coloured supersymmetric particle production at the LHC with threshold and Coulomb resummation*, JHEP **12** (2016) 133 [[arXiv:1607.07741](#)].
- [24] W. Beenakker, *et al.*, *NNLL resummation for squark-antisquark pair production at the LHC*, JHEP **01** (2012) 076 [[arXiv:1110.2446](#)].
- [25] W. Beenakker, *et al.*, *Towards NNLL resummation: hard matching coefficients for squark and gluino hadroproduction*, JHEP **10** (2013) 120 [[arXiv:1304.6354](#)].
- [26] W. Beenakker, *et al.*, *NNLL resummation for squark and gluino production at the LHC*, JHEP **12** (2014) 023 [[arXiv:1404.3134](#)].
- [27] W. Beenakker, *et al.*, *NNLL resummation for stop pair-production at the LHC*, JHEP **05** (2016) 153 [[arXiv:1601.02954](#)].
- [28] M. Kramer, *et al.*, *Supersymmetry production cross sections in pp collisions at  $\sqrt{s} = 7$  TeV*. [arXiv:1206.2892](#).
- [29] *LHC SUSY Cross Section Working Group*.  
<https://twiki.cern.ch/twiki/bin/view/LHCPhysics/SUSYCrossSections>.
- [30] J. Debove, B. Fuks, and M. Klasen, *Threshold resummation for gaugino pair production at hadron colliders*, Nucl. Phys. **B842** (2011) 51–85 [[arXiv:1005.2909](#)].
- [31] B. Fuks, M. Klasen, D. R. Lamprea, and M. Rothering, *Gaugino production in proton-proton collisions at a center-of-mass energy of 8 TeV*, JHEP **10** (2012) 081 [[arXiv:1207.2159](#)].
- [32] B. Fuks, M. Klasen, D. R. Lamprea, and M. Rothering, *Precision predictions for electroweak superpartner production at hadron colliders with RESUMINO*, Eur. Phys. J. C **73** (2013) 2480 [[arXiv:1304.0790](#)].
- [33] J. Fiaschi and M. Klasen, *Neutralino-chargino pair production at NLO+NLL with resummation-improved parton density functions for LHC Run II*, Phys. Rev. **D98** (2018) 055014 [[arXiv:1805.11322](#)].
- [34] G. Bozzi, B. Fuks, and M. Klasen, *Threshold Resummation for Slepton-Pair Production at Hadron Colliders*, Nucl. Phys. **B777** (2007) 157–181 [[hep-ph/0701202](#)].
- [35] B. Fuks, M. Klasen, D. R. Lamprea, and M. Rothering, *Revisiting slepton pair production at the Large Hadron Collider*, JHEP **01** (2014) 168 [[arXiv:1310.2621](#)].
- [36] J. Fiaschi and M. Klasen, *Slepton pair production at the LHC in NLO+NLL with resummation-improved parton densities*, JHEP **03** (2018) 094 [[arXiv:1801.10357](#)].