

**Bibliographie de thèse**  
**Liste des entrées dans le fichier .bib**  
Lucas TORTEROTOT  
13 janvier 2020

## Références

- [1] G. Aad & coll. : The ATLAS Collaboration. « Observation of a new particle in the search for the Standard Model Higgs boson with the ATLAS detector at the LHC ». *Physics Letters B* **716.1** (2012), p. 1-29. DOI : <https://doi.org/10.1016/j.physletb.2012.08.020>. URL : <http://www.sciencedirect.com/science/article/pii/S037026931200857X>.
- [2] G. Aad & coll. : The ATLAS Collaboration. « Search for the neutral Higgs bosons of the Minimal Supersymmetric Standard Model in  $pp$  collisions at  $\sqrt{s} = 7$  TeV with the ATLAS detector ». *Journal of High Energy Physics* **02** (2013), p. 095. DOI : [10.1007/JHEP02\(2013\)095](https://doi.org/10.1007/JHEP02(2013)095). arXiv : [1211.6956](https://arxiv.org/abs/1211.6956) [hep-ex].
- [3] T. AALTONEN & coll. : The CDF Collaboration. « Search for Higgs bosons predicted in two-Higgs-doublet models via decays to tau lepton pairs in 1.96 TeV  $p$  anti- $p$  collisions ». *Physical Review Letters* **103** (2009), p. 201801. DOI : [10.1103/PhysRevLett.103.201801](https://doi.org/10.1103/PhysRevLett.103.201801). arXiv : [0906.1014](https://arxiv.org/abs/0906.1014) [hep-ex].
- [4] V. M. ABAZOV & coll. : The DØ Collaboration. « Search for Higgs bosons decaying to  $\tau\tau$  pairs in  $p\bar{p}$  collisions at  $\sqrt{s} = 1.96$  TeV ». *Physics Letters B* **707** (2012), p. 323-329. DOI : [10.1016/j.physletb.2011.12.050](https://doi.org/10.1016/j.physletb.2011.12.050). arXiv : [1106.4555](https://arxiv.org/abs/1106.4555) [hep-ex].
- [5] S. ALIOLI & coll. « A general framework for implementing NLO calculations in shower Monte Carlo programs : the POWHEG BOX ». *Journal of High Energy Physics* **06** (2010), p. 043. DOI : [10.1007/jhep06\(2010\)043](https://doi.org/10.1007/jhep06(2010)043). arXiv : [1002.2581](https://arxiv.org/abs/1002.2581) [hep-ph].
- [6] J. ALLISON & coll. « Geant4 developments and applications ». *IEEE Transactions on Nuclear Science* **53.1** (fév. 2006), p. 270-278. DOI : [10.1109/tns.2006.869826](https://doi.org/10.1109/tns.2006.869826).
- [7] J. ALWALL & coll. « MadGraph 5 : Going Beyond ». *Journal of High Energy Physics* **06** (2011), p. 128. DOI : [10.1007/jhep06\(2011\)128](https://doi.org/10.1007/jhep06(2011)128). arXiv : [1106.0522](https://arxiv.org/abs/1106.0522) [hep-ph].
- [8] J. ANDREJKOVIC & coll. « Data-driven background estimation of fake-tau backgrounds in di-tau final states with 2016 and 2017 data ». *CMS analysis Note* (oct. 2018).
- [9] R. BARATE & coll. : OPAL, DELPHI, LEP Working Group for Higgs boson searches, ALEPH, L3. « Search for the standard model Higgs boson at LEP ». *Physics Letters B* **565** (2003), p. 61-75. DOI : [10.1016/S0370-2693\(03\)00614-2](https://doi.org/10.1016/S0370-2693(03)00614-2). arXiv : [hep-ex/0306033](https://arxiv.org/abs/hep-ex/0306033) [hep-ex].
- [10] C. BERNET. « Caractérisation des détecteurs Micromégas et mesure de la polarisation des gluons sur COMPASS ». Thèse de doct. Paris 7 - Denis Diderot, mai 2004. URL : <http://cds.cern.ch/record/1482660>.
- [11] C. BERNET. « Reconstruction du flux de particules et mise en évidence de la désintégration du boson de Higgs en paire de  $\tau$  avec CMS ». Thèse d'HDR (2017). URL : <https://drive.google.com/open?id=0B3nnTYQibadjVkvUi03cGRiYlk>.
- [12] M. CACCIARI, G. P. SALAM & G. SOYEZ. « FastJet user manual ». *European Physical Journal C* **72** (nov. 2012), p. 1896. DOI : [10.1140/epjc/s10052-012-1896-2](https://doi.org/10.1140/epjc/s10052-012-1896-2). arXiv : [1111.6097](https://arxiv.org/abs/1111.6097) [hep-ph].
- [13] M. CACCIARI, G. P. SALAM & G. SOYEZ. « The Anti- $k_T$  jet clustering algorithm ». *Journal of High Energy Physics* **04** (2008), p. 063. DOI : [10.1088/1126-6708/2008/04/063](https://doi.org/10.1088/1126-6708/2008/04/063). arXiv : [0802.1189](https://arxiv.org/abs/0802.1189) [hep-ph].
- [14] CERN. *The World Wide Web Project*. 1989. URL : <http://info.cern.ch/hypertext/WWW/TheProject.html>.

- [15] S. CHATRCHYAN & coll. : The CMS Collaboration. « Evidence for the 125 GeV Higgs boson decaying to a pair of  $\tau$  leptons ». *Journal of High Energy Physics* **05** (20 jan. 2014), p. 104. DOI : [10.1007/JHEP05\(2014\)104](https://doi.org/10.1007/JHEP05(2014)104). arXiv : [1401.5041v2](https://arxiv.org/abs/1401.5041v2) [hep-ex].
- [16] S. CHATRCHYAN & coll. : The CMS Collaboration. « Observation of a new boson at a mass of 125 GeV with the CMS experiment at the LHC ». *Physics Letters* **B716.1** (2012), p. 30-61. DOI : <https://doi.org/10.1016/j.physletb.2012.08.021>. URL : <http://www.sciencedirect.com/science/article/pii/S0370269312008581>.
- [17] S. CHATRCHYAN & coll. : The CMS Collaboration. « Search for a Higgs boson decaying into a b-quark pair and produced in association with b quarks in proton–proton collisions at 7 TeV ». *Physics Letters* **B722** (2013), p. 207-232. DOI : [10.1016/j.physletb.2013.04.017](https://doi.org/10.1016/j.physletb.2013.04.017). arXiv : [1302.2892](https://arxiv.org/abs/1302.2892) [hep-ex].
- [18] S. CHATRCHYAN & coll. : The CMS Collaboration. « Search for neutral Higgs bosons decaying to tau pairs in  $pp$  collisions at  $\sqrt{s} = 7$  TeV ». *Physics Letters* **B713** (2012), p. 68-90. DOI : [10.1016/j.physletb.2012.05.028](https://doi.org/10.1016/j.physletb.2012.05.028). arXiv : [1202.4083](https://arxiv.org/abs/1202.4083) [hep-ex].
- [19] N. D. CHRISTENSEN, T. HAN & S. SU. « MSSM Higgs Bosons at The LHC ». *Physical Review* **D85** (2012), p. 115018. DOI : [10.1103/PhysRevD.85.115018](https://doi.org/10.1103/PhysRevD.85.115018). arXiv : [1203.3207](https://arxiv.org/abs/1203.3207) [hep-ph].
- [20] Dask : Scalable analytics in Python. URL : <https://dask.org/>.
- [21] A. DJOUADI & coll. « The post-Higgs MSSM scenario : Habemus MSSM? » *The European Physical Journal* **C 73.12** (19 juil. 2013), p. 2650. DOI : [10.1140/epjc/s10052-013-2650-0](https://doi.org/10.1140/epjc/s10052-013-2650-0). arXiv : [1307.5205v1](https://arxiv.org/abs/1307.5205v1) [hep-ph].
- [22] V. KHACHATRYAN & coll. : The CMS Collaboration. « Event generator tunes obtained from underlying event and multiparton scattering measurements ». *European Physical Journal* **C76.3** (2016), p. 155. DOI : [10.1140/epjc/s10052-016-3988-x](https://doi.org/10.1140/epjc/s10052-016-3988-x). arXiv : [1512.00815](https://arxiv.org/abs/1512.00815) [hep-ex].
- [23] V. KHACHATRYAN & coll. : The CMS Collaboration. « Reconstruction and identification of tau lepton decays to hadrons and tau neutrino at CMS ». *Journal of Instrumentation* **11.1** (2016), P01019. DOI : [10.1088/1748-0221/11/01/P01019](https://doi.org/10.1088/1748-0221/11/01/P01019). arXiv : [1510.07488](https://arxiv.org/abs/1510.07488) [physics.ins-det].
- [24] V. KHACHATRYAN & coll. : The CMS Collaboration. « Search for neutral MSSM Higgs bosons decaying into a pair of bottom quarks ». *Journal of High Energy Physics* **11** (2015), p. 071. DOI : [10.1007/JHEP11\(2015\)071](https://doi.org/10.1007/JHEP11(2015)071). arXiv : [1506.08329](https://arxiv.org/abs/1506.08329) [hep-ex].
- [25] V. KHACHATRYAN & coll. : The CMS Collaboration. « Search for neutral MSSM Higgs bosons decaying to  $\mu^+\mu^-$  in  $pp$  collisions at  $\sqrt{s} = 7$  and 8 TeV ». *Physics Letters* **B752** (2016), p. 221-246. DOI : [10.1016/j.physletb.2015.11.042](https://doi.org/10.1016/j.physletb.2015.11.042). arXiv : [1508.01437](https://arxiv.org/abs/1508.01437) [hep-ex].
- [26] K. OLIVE & coll. : Particle Data Group. « Review of Particle Physics ». *Chinese Physics* **C38** (2014). DOI : [10.1088/1674-1137/38/9/090001](https://doi.org/10.1088/1674-1137/38/9/090001).
- [27] C. PATRIGNANI & coll. : Particle Data Group. « Review of Particle Physics ». *Chinese Physics* **C40** (2016). DOI : [10.1088/1674-1137/40/10/100001](https://doi.org/10.1088/1674-1137/40/10/100001).
- [28] The ATLAS Collaboration, The CMS Collaboration, The LHC Higgs Combination Group. *Procedure for the LHC Higgs boson search combination in Summer 2011*. Rapp. tech. CMS-NOTE-2011-005. ATL-PHYS-PUB-2011-11. Geneva : CERN, août 2011. URL : <https://cds.cern.ch/record/1379837>.
- [29] S. SCHAEEL & coll. : DELPHI, OPAL, ALEPH, LEP Working Group for Higgs Boson Searches, L3. « Search for neutral MSSM Higgs bosons at LEP ». *European Physical Journal* **C47** (2006), p. 547-587. DOI : [10.1140/epjc/s2006-02569-7](https://doi.org/10.1140/epjc/s2006-02569-7). arXiv : [hep-ex/0602042](https://arxiv.org/abs/hep-ex/0602042) [hep-ex].
- [30] The CMS Collaboration. « Search for additional neutral MSSM Higgs bosons in the di-tau final state in  $pp$  collisions at  $\sqrt{s} = 13$  TeV ». *Journal of High Energy Physics* **09.007** (sept. 2018). DOI : [10.1007/JHEP09\(2018\)007](https://doi.org/10.1007/JHEP09(2018)007).

- [31] A. SIRUNYAN & coll. « Particle-flow reconstruction and global event description with the CMS detector ». *Journal of Instrumentation* **12**.10 (juin 2017), P10003. DOI : [10.1088/1748-0221/12/10/P10003](https://doi.org/10.1088/1748-0221/12/10/P10003). arXiv : [1706.04965v2](https://arxiv.org/abs/1706.04965v2) [physics.ins-det]. URL : <http://stacks.iop.org/1748-0221/12/i=10/a=P10003>.
- [32] A. SIRUNYAN & coll. : The CMS Collaboration. « Search for additional neutral MSSM Higgs bosons in the  $\tau\tau$  final state in proton-proton collisions at  $\sqrt{s} = 13$  TeV ». *Journal of High Energy Physics* **9** (sept. 2018). DOI : [10.1007/JHEP09\(2018\)007](https://doi.org/10.1007/JHEP09(2018)007).
- [33] A. SIRUNYAN & coll. : The CMS collaboration. « An embedding technique to determine  $\tau\tau$  backgrounds in proton-proton collision data ». *Journal of Instrumentation* **14**.06 (juin 2019). DOI : [10.1088/1748-0221/14/06/p06032](https://doi.org/10.1088/1748-0221/14/06/p06032).
- [34] T. SJÖSTRAND & coll. « An Introduction to PYTHIA 8.2 ». *Computer Physics Communications* **191** (2015), p. 159-177. DOI : [10.1016/j.cpc.2015.01.024](https://doi.org/10.1016/j.cpc.2015.01.024). arXiv : [1410.3012](https://arxiv.org/abs/1410.3012) [hep-ph].
- [35] M. TANABASHI & coll. : Particle Data Group. « Review of Particle Physics ». *Phys. Rev.* **D98** (août 2018). DOI : [10.1103/PhysRevD.98.030001](https://doi.org/10.1103/PhysRevD.98.030001).
- [36] The ALICE Collaboration. « The ALICE experiment at the CERN LHC. A Large Ion Collider Experiment ». *Journal of Instrumentation* **3**.S08002 (2008). DOI : [10.1088/1748-0221/3/08/S08002](https://doi.org/10.1088/1748-0221/3/08/S08002). URL : <http://cds.cern.ch/record/1129812>.
- [37] The ATLAS Collaboration. « The ATLAS Experiment at the CERN Large Hadron Collider ». *Journal of Instrumentation* **3**.S08003 (2008). DOI : [10.1088/1748-0221/3/08/S08003](https://doi.org/10.1088/1748-0221/3/08/S08003). URL : <http://cds.cern.ch/record/1129811>.
- [38] The CMS Collaboration. « The CMS experiment at the CERN LHC. The Compact Muon Solenoid experiment ». *Journal of Instrumentation* **3**.S08004 (2008). DOI : [10.1088/1748-0221/3/08/S08004](https://doi.org/10.1088/1748-0221/3/08/S08004). URL : <http://cds.cern.ch/record/1129810>.
- [39] The LHCb Collaboration. « The LHCb Detector at the LHC ». *Journal of Instrumentation* **3**.S08005 (2008). DOI : [10.1088/1748-0221/3/08/S08005](https://doi.org/10.1088/1748-0221/3/08/S08005). URL : <http://cds.cern.ch/record/1129809>.