## Bibliographie de thèse

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Lucas TORTEROTOT 28 février 2020

## Références

- [1] M. Aaboud & coll. « Search for additional heavy neutral Higgs and gauge bosons in the ditau final state produced in  $36\,\mathrm{fb^{-1}}$  of pp collisions at  $\sqrt{s}=13\,\mathrm{TeV}$  with the ATLAS detector ». Journal of High Energy Physics 2018.1 (jan. 2018). DOI: 10.1007/jhep01(2018)055. URL: http://dx.doi.org/10.1007/JHEP01(2018)055.
- [2] G. AAD & coll. « Combined measurement of the Higgs boson mass in pp collisions at  $\sqrt{s} = 7$  and 8 TeV with the ATLAS and CMS Experiments ». Physical Review Letters 114.19 (mai 2015). DOI: 10.1103/physrevlett.114.191803. URL: http://dx.doi.org/10.1103/PhysRevLett.114.191803.
- [3] G. AAD & coll. « Measurements of the Higgs boson production and decay rates and constraints on its couplings from a combined ATLAS and CMS analysis of the LHC pp collision data at  $\sqrt{s} = 7$  and 8 TeV ». *Journal of High Energy Physics* **08** (août 2016). DOI: 10.1007/jhep08(2016) 045. URL: http://dx.doi.org/10.1007/JHEP08(2016)045.
- [4] 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* **B716.1** (2012), p. 1-29. DOI: https://doi.org/10.1016/j.physletb.2012.08.020. URL: http://www.sciencedirect.com/science/article/pii/S037026931200857X.
- [5] G. AAD & coll.: The ATLAS Collaboration. « Search for the neutral Higgs bosons of the Minimal Supersymmetric Standard Model in pp collisions at  $\sqrt{s} = 7 \,\text{TeV}$  with the ATLAS detector ». Journal of High Energy Physics **02** (2013), p. 095. DOI: 10.1007/JHEP02(2013)095. arXiv: 1211.6956 [hep-ex].
- [6] 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  $p\bar{p}$  collisions ». *Physical Review Letters* **103** (2009), p. 201801. DOI: 10.1103/PhysRevLett.103.201801. arXiv: 0906.1014 [hep-ex].
- [7] V. M. Abazov & coll.: The DØ Collaboration. « Search for Higgs bosons decaying to  $\tau\tau$  pairs in  $p\bar{p}$  collisions at  $\sqrt{s}=1,96\,\text{TeV}$  ». Physics Letters B707 (2012), p. 323-329. DOI: 10.1016/j. physletb.2011.12.050. arXiv: 1106.4555 [hep-ex].
- [8] 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. arXiv: 1002.2581 [hep-ph].
- [9] 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.
- [10] J. Alwall & coll. « MadGraph 5 : Going Beyond ». Journal of High Energy Physics 06 (2011), p. 128. DOI: 10.1007/jhep06(2011)128. arXiv: 1106.0522 [hep-ph].
- [11] 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).
- [12] 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* **B565** (2003), p. 61-75. DOI: 10.1016/S0370-2693(03)00614-2. arXiv: hep-ex/0306033 [hep-ex].
- [13] 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.

- [14] C. Bernet. « Reconstruction du flux de particules et mise en évidence de la désintégration du boson de Higgs en paire de τ avec CMS ». Thèse d'HDR (2017). URL: https://drive.google.com/open?id=0B3nnTYQibadjVkVvUi03cGRiYlk.
- [15] M. CACCIARI, G. P. SALAM & G. SOYEZ. « FastJet user manual ». European Physical Journal C72 (nov. 2012), p. 1896. DOI: 10.1140/epjc/s10052-012-1896-2. arXiv: 1111.6097 [hep-ph].
- [16] 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. arXiv: 0802.1189 [hep-ph].
- [17] CERN. The World Wide Web Project. 1989. URL: http://info.cern.ch/hypertext/WWW/TheProject.html.
- [18] 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. arXiv: 1401.5041v2 [hep-ex].
- [19] 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.
- [20] S. Chatrchyan & coll.: The CMS collaboration. « Observation of a new boson with mass near 125 GeV in pp collisions at  $\sqrt{s}=7$  and  $8\,\text{TeV}$  ». Journal of High Energy Physics **06** (juin 2013). DOI: 10.1007/jhep06(2013)081.
- [21] 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. arXiv: 1302.2892 [hep-ex].
- [22] S. CHATRCHYAN & coll.: The CMS Collaboration. « Search for neutral Higgs bosons decaying to tau pairs in pp collisions at  $\sqrt{s} = 7 \,\text{TeV}$  ». Physics Letters **B713** (2012), p. 68-90. Doi: 10.1016/j.physletb.2012.05.028. arXiv:1202.4083 [hep-ex].
- [23] 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. arXiv: 1203.3207 [hep-ph].
- [24] D. CLOWE & coll. « A Direct Empirical Proof of the Existence of Dark Matter ». *The Astrophysical Journal* **648.2** (août 2006). DOI: 10.1086/508162. URL: http://dx.doi.org/10.1086/508162.
- [25] Dask: Scalable analytics in Python. url: https://dask.org/.
- [26] 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. arXiv: 1307.5205v1 [hep-ph].
- [27] F. ENGLERT & R. BROUT. « Broken symmetry and the mass of gauge vector mesons ». *Physical Review Letters* 13.9 (9 août 1964), p. 321-323. DOI: 10.1103/PhysRevLett.13.321. URL: https://link.aps.org/doi/10.1103/PhysRevLett.13.321.
- [28] G. S. Guralnik, C. R. Hagen & T. W. B. Kibble. «Global Conservation Laws and Massless Particles ». *Physical Review Letters* **13**.20 (20 nov. 1964), p. 585-587. doi:10.1103/PhysRevLett. 13.585. url:https://link.aps.org/doi/10.1103/PhysRevLett.13.585.
- [29] P. W. Higgs. « Broken symmetries and the masses of gauge bosons ». *Physics Letters* **13**.16 (oct. 1964), p. 132-133. DOI: 10.1103/physrevlett.13.508.
- [30] P. W. Higgs. « Broken symmetries, massless particles and gauge fields ». *Physics Letters* 12.2 (sept. 1964), p. 132-133. DOI: 10.1016/0031-9163(64)91136-9. URL: https://cds.cern.ch/record/641590.
- [31] V. KHACHATRYAN & coll. « Search for neutral MSSM Higgs bosons decaying to a pair of tau leptons in *pp* collisions ». *Journal of High Energy Physics* **10** (oct. 2014). DOI: 10.1007/jhep10(2014)160. URL: http://dx.doi.org/10.1007/JHEP10(2014)160.

- [32] 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. arXiv: 1512.00815 [hep-ex].
- [33] 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. arXiv: 1510.07488 [physics.ins-det].
- [34] 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. arXiv: 1506.08329 [hep-ex].
- [35] V. Khachatryan & coll.: The CMS Collaboration. « Search for neutral MSSM Higgs bosons decaying to  $\mu^+\mu^-$  in pp collisions at  $\sqrt{s}=7$  and  $8\,\text{TeV}$  ». Physics Letters **B752** (2016), p. 221-246. DOI: 10.1016/j.physletb.2015.11.042. arXiv: 1508.01437 [hep-ex].
- [36] K. Olive & coll.: Particle Data Group. « Review of Particle Physics ». *Chinese Physics* C38 (2014). DOI: 10.1088/1674-1137/38/9/090001.
- [37] C. Patrignani & coll.: Particle Data Group. « Review of Particle Physics ». *Chinese Physics* C40 (2016). DOI: 10.1088/1674-1137/40/10/100001.
- [38] 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.
- [39] S. Schael & 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. arXiv: hep-ex/0602042 [hep-ex].
- [40] ATLAS Collaboration. « Search for heavy Higgs bosons decaying into two tau leptons with the ATLAS detector using pp collisions at  $\sqrt{s} = 13 \text{ TeV}$  » (2020). arXiv : 2002.12223 [hep-ex].
- [41] 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. arXiv: 1706.04965v2 [physics.ins-det]. URL: http://stacks.iop.org/1748-0221/12/i=10/a=P10003.
- [42] A. SIRUNYAN & coll.: The CMS Collaboration. « Search for additional neutral MSSM Higgs bosons in the di-tau final state in pp collisions at  $\sqrt{s} = 13 \,\text{TeV}$  ». Journal of High Energy Physics **09**.007 (sept. 2018). Doi: 10.1007/JHEP09(2018)007.
- [43] 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.
- [44] 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. arXiv: 1410.3012 [hep-ph].
- [45] M. Tanabashi & coll.: Particle Data Group. « Review of Particle Physics ». *Phys. Rev.* **D98** (août 2018). doi: 10.1103/PhysRevD.98.030001.
- [46] 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. URL: http://cds.cern.ch/record/1129812.
- [47] 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. URL: http://cds.cern.ch/record/1129811.
- [48] 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. URL: http://cds.cern.ch/record/1129810.

[49] The LHCb Collaboration. « The LHCb Detector at the LHC ». Journal of Instrumentation 3.S08005 (2008). DOI: 10.1088/1748-0221/3/08/S08005. URL: http://cds.cern.ch/record/1129809.