Bibliographie de thèse

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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] S. ABACHI & coll.: The D0 Collaboration. « Observation of the top quark ». *Physical Review Letters* 74.14 (avr. 1995), p. 2632-2637. DOI: 10.1103/physrevlett.74.2632. URL: http://dx.doi.org/10.1103/PhysRevLett.74.2632.
- [8] 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].
- [9] F. ABE & coll.: The CDF Collaboration. « Observation of top quark production in p\(\bar{p}\) collisions with the collider detector at Fermilab ». Physical Review Letters 74.14 (avr. 1995), p. 2626-2631. DOI: 10.1103/physrevlett.74.2626. URL: http://dx.doi.org/10.1103/PhysRevLett.74.2626.
- [10] P. A. R. Ade & coll. « Planck 2013 results. I. Overview of products and scientific results ». Astronomy & Astrophysics 571 (oct. 2014). DOI: 10.1051/0004-6361/201321529. URL: http://dx.doi.org/10.1051/0004-6361/201321529.
- [11] Q. R. Ahmad & coll.: SNO Collaboration. « Direct Evidence for Neutrino Flavor Transformation from Neutral-Current Interactions in the Sudbury Neutrino Observatory ». *Physical Review Letters* 89 (1 juin 2002). DOI: 10.1103/PhysRevLett.89.011301. URL: https://link.aps.org/doi/10.1103/PhysRevLett.89.011301.

- [12] 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].
- [13] 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.
- [14] 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].
- [15] B. Andersson & coll. « Parton fragmentation and string dynamics » (avr. 1983). URL: http://cds.cern.ch/record/143980.
- [16] 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).
- [17] G. Arnison & coll. « Experimental observation of isolated large transverse energy electrons with associated missing energy at $\sqrt{s}=540\,\mathrm{GeV}$ ». Physics Letters B 122.1 (1983), p. 103-116. DOI: https://doi.org/10.1016/0370-2693(83)91177-2. URL: http://www.sciencedirect.com/science/article/pii/0370269383911772.
- [18] G. Arnison & coll. « Experimental observation of lepton pairs of invariant mass around $95\,\text{GeV}\cdot c^{-2}$ at the CERN SPS collider ». *Physics Letters B* **126**.5 (1983), p. 398-410. DOI: https://doi.org/10.1016/0370-2693(83)90188-0. URL: http://www.sciencedirect.com/science/article/pii/0370269383901880.
- [19] G. Arnison & coll. « Further evidence for charged intermediate vector bosons at the SPS collider ». *Physics Letters B* **129**.3 (1983), p. 273-282. DOI: https://doi.org/10.1016/0370-2693(83)90860-2. URL: http://www.sciencedirect.com/science/article/pii/0370269383908602.
- [20] P. BAGNAIA & coll. « Evidence for $Z^0 \rightarrow e^+e^-$ at the CERN pp collider ». Physics Letters B 129.1 (1983), p. 130-140. DOI: https://doi.org/10.1016/0370-2693(83)90744-X. URL: http://www.sciencedirect.com/science/article/pii/037026938390744X.
- [21] M. BANNER & coll. « Observation of single isolated electrons of high transverse momentum in events with missing transverse energy at the CERN pp collider ». Physics Letters B 122.5 (1983), p. 476-485. DOI: https://doi.org/10.1016/0370-2693(83)91605-2. URL: http://www.sciencedirect.com/science/article/pii/0370269383916052.
- [22] 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].
- [23] 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.
- [24] 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.
- [25] L. BIANCHINI & coll. « Reconstruction of the Higgs mass in $H \to \tau\tau$ Events by Dynamical Likelihood techniques ». *Journal of Physics : Conference Series* **513**.2 (juin 2014), p. 022035. DOI: 10.1088/1742-6596/513/2/022035. URL: https://doi.org/10.1088%2F1742-6596%2F513%2F2%2F022035.
- [26] N. Cabibbo. «Unitary Symmetry and Leptonic Decays ». Physical Review Letters 10 (12 juin 1963), p. 531-533. DOI: 10.1103/PhysRevLett.10.531. URL: https://link.aps.org/doi/10.1103/PhysRevLett.10.531.
- [27] N. Cabibbo. « Unitary Symmetry and Nonleptonic Decays ». *Physical Review Letters* 12 (2 jan. 1964), p. 62-63. doi: 10.1103/PhysRevLett.12.62. URL: https://link.aps.org/doi/10.1103/PhysRevLett.12.62.

- [28] 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].
- [29] M. CACCIARI, G. P. SALAM & G. SOYEZ. « The Anti- k_T jet clustering algorithm ». *Journal of High Energy Physics* **04** (avr. 2008), p. 63. DOI: 10.1088/1126-6708/2008/04/063. arXiv: 0802.1189 [hep-ph].
- [30] CERN. The World Wide Web Project. 1989. URL: http://info.cern.ch/hypertext/WWW/TheProject.html.
- [31] S. Chatrchyan & coll.: The CMS Collaboration. « Evidence for the 125 GeV Higgs boson decaying to a pair of τ leptons ». *Journal of High Energy Physics* **05** (20 jan. 2014), p. 104. doi: 10.1007/JHEP05(2014)104. arXiv: 1401.5041v2 [hep-ex].
- [32] 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.
- [33] 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.
- [34] 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].
- [35] 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].
- [36] 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].
- [37] 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.
- [38] Dask: Scalable analytics in Python. URL: https://dask.org/.
- [39] A. DAVIDSON & K. C. WALI. « Family mass hierarchy from universal seesaw mechanism ». *Physical Review Letters* **60** (18 mai 1988), p. 1813-1816. DOI: 10.1103/PhysRevLett.60.1813. URL: https://link.aps.org/doi/10.1103/PhysRevLett.60.1813.
- [40] 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].
- [41] S. DÜRR & coll. « Ab Initio Determination of Light Hadron Masses ». *Science* **322**.5905 (nov. 2008), p. 1224-1227. DOI: 10.1126/science.1163233.
- [42] 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.
- [43] J. de Favereau & coll. « Delphes 3 : a modular framework for fast simulation of a generic collider experiment ». *Journal of High Energy Physics* **2** (fév. 2014). DOI: 10.1007/jhep02(2014) 057. URL: http://dx.doi.org/10.1007/JHEP02(2014)057.
- [44] Y. Fukuda & coll.: Super-Kamiokande Collaboration. « Evidence for oscillation of atmospheric neutrinos ». *Physical Review Letters* **81** (8 août 1998), p. 1562-1567. doi: 10.1103/PhysRevLett. 81.1562. URL: https://link.aps.org/doi/10.1103/PhysRevLett.81.1562.
- [45] M. Gell-Mann, P. Ramond & R. Slansky. « Complex Spinors and Unified Theories » (1979). URL: http://cds.cern.ch/record/133618.

- [46] 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.
- [47] 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.
- [48] 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.
- [49] CMS Collaboration. « Jet energy scale and resolution performance with 13 TeV data collected by CMS in 2016 » (juin 2018). URL: http://cds.cern.ch/record/2622157.
- [50] 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.
- [51] 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].
- [52] 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].
- [53] 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].
- [54] 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. arXiv: 1508.01437 [hep-ex].
- [55] M. Kobayashi & T. Maskawa. « CP-Violation in the Renormalizable Theory of Weak Interaction ». *Progress of Theoretical Physics* **49**.2 (fév. 1973), p. 652-657. doi: 10.1143/PTP.49.652. eprint: https://academic.oup.com/ptp/article-pdf/49/2/652/5257692/49-2-652.pdf. URL: https://doi.org/10.1143/PTP.49.652.
- [56] A. J. LARKOSKI. « An Unorthodox Introduction to QCD » (2017). arXiv: 1709.06195 [hep-ph].
- [57] Z. Maki, M. Nakagawa & S. Sakata. « Remarks on the Unified Model· of Elementary Particles ». Progress of Theoretical Physics 28.5 (nov. 1962), p. 870-880. DOI: 10.1143/PTP.28.870. eprint: https://academic.oup.com/ptp/article-pdf/28/5/870/5258750/28-5-870.pdf. URL: https://doi.org/10.1143/PTP.28.870.
- [58] S. Mele. « The Measurement of the Number of Light Neutrino Species at LEP ». Advanced Series on Directions in High Energy Physics 23 (2015), p. 89-106. DOI: 10.1142/9789814644150_0004. URL: http://cds.cern.ch/record/2103251.
- [59] R. N. Mohapatra & G. Senjanović. « Neutrino Mass and Spontaneous Parity Nonconservation ». *Physical Review Letters* **44** (14 avr. 1980), p. 912-915. doi: 10.1103/PhysRevLett.44.912. URL: https://link.aps.org/doi/10.1103/PhysRevLett.44.912.
- [60] R. N. Mohapatra & G. Senjanović. « Neutrino masses and mixings in gauge models with spontaneous parity violation ». *Physical Review D* 23 (1 jan. 1981), p. 165-180. doi: 10.1103/PhysRevD.23.165. url: https://link.aps.org/doi/10.1103/PhysRevD.23.165.
- [61] K. Olive & coll.: Particle Data Group. « Review of Particle Physics ». *Chinese Physics* C38 (2014). DOI: 10.1088/1674-1137/38/9/090001.
- [62] C. Patrignani & coll.: Particle Data Group. « Review of Particle Physics ». Chinese Physics C40 (2016). DOI: 10.1088/1674-1137/40/10/100001.

- [63] 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.
- [64] G. P. SALAM. Elements of QCD for hadron colliders. 2010. arXiv: 1011.5131 [hep-ph]. URL: https://arxiv.org/pdf/1011.5131.pdf.
- [65] G. P. SALAM & G. SOYEZ. « A practical seedless infrared-safe cone jet algorithm ». *Journal of High Energy Physics* **05** (mai 2007), p. 86. DOI: 10.1088/1126-6708/2007/05/086. URL: http://dx.doi.org/10.1088/1126-6708/2007/05/086.
- [66] 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].
- [67] J. Schechter & J. W. F. Valle. « Neutrino masses in $SU(2) \times U(1)$ theories ». Physical Review D 22 (9 nov. 1980), p. 2227-2235. doi: 10.1103/PhysRevD.22.2227. url: https://link.aps.org/doi/10.1103/PhysRevD.22.2227.
- [68] 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].
- [69] 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.
- [70] 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.
- [71] 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.
- [72] 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].
- [73] M. Tanabashi & coll.: Particle Data Group. « Review of Particle Physics ». *Phys. Rev.* **D98** (août 2018). doi: 10.1103/PhysRevD.98.030001.
- [74] 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.
- [75] 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.
- [76] 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.
- [77] 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.
- [78] S. Weinberg. « A model of leptons ». Physical Review Letters 19 (21 nov. 1967), p. 1264-1266. doi: 10.1103/PhysRevLett.19.1264. url: https://link.aps.org/doi/10.1103/PhysRevLett.19.1264.
- [79] J.-C. WINTER, F. KRAUSS & G. SOFF. « A modified cluster-hadronisation model ». *The European Physical Journal C* **36**.3 (août 2004), p. 381-395. doi: 10.1140/epjc/s2004-01960-8. URL: http://dx.doi.org/10.1140/epjc/s2004-01960-8.