

ATLAS group publications (July 2012–November 2014)

- [1] G. Aad *et al.* (ATLAS Collaboration), “Search for Higgs boson decays to a photon and a Z boson in pp collisions at $\sqrt{s}=7$ and 8 TeV with the ATLAS detector,” *Phys. Lett.* **B732**, 8–27 (2014), [arXiv:1402.3051 \[hep-ex\]](#)
- [2] G. Aad *et al.* (ATLAS Collaboration), “Measurement of the inclusive isolated prompt photon cross section in pp collisions at $\sqrt{s} = 7$ TeV with the ATLAS detector using 4.6 fb^{-1} ,” *Phys. Rev.* **D89**, 052004 (2014), [arXiv:1311.1440 \[hep-ex\]](#)
- [3] G. Aad *et al.* (ATLAS Collaboration), “Search for a Multi-Higgs Boson Cascade in $W^+Wb\bar{b}$ events with the ATLAS detector in pp collisions at $\sqrt{s} = 8$ TeV,” *Phys. Rev.* **D89**, 032002 (2014), [arXiv:1312.1956 \[hep-ex\]](#)
- [4] G. Aad *et al.* (ATLAS Collaboration), “Standalone vertex finding in the ATLAS muon spectrometer,” *JINST* **9**, P02001 (2014), [arXiv:1311.7070 \[physics.ins-det\]](#)
- [5] G. Aad *et al.* (ATLAS Collaboration), “Measurement of the top quark pair production charge asymmetry in proton-proton collisions at $\sqrt{s} = 7$ TeV using the ATLAS detector,” *JHEP* **1402**, 107 (2014), [arXiv:1311.6724 \[hep-ex\]](#)
- [6] G. Aad *et al.* (ATLAS Collaboration), “Search for Quantum Black-Hole Production in High-Invariant-Mass Lepton+Jet Final States Using Proton-Proton Collisions at $\sqrt{s} = 8$ TeV and the ATLAS Detector,” *Phys. Rev. Lett.* **112**, 091804 (2014), [arXiv:1311.2006 \[hep-ex\]](#)
- [7] G. Aad *et al.* (ATLAS Collaboration), “Search for dark matter in events with a hadronically decaying W or Z boson and missing transverse momentum in pp collisions at $\sqrt{s}=8$ TeV with the ATLAS detector,” *Phys. Rev. Lett.* **112**, 041802 (2014), [arXiv:1309.4017 \[hep-ex\]](#)
- [8] G. Aad *et al.* (ATLAS Collaboration), “Measurement of the mass difference between top and anti-top quarks in pp collisions at $\sqrt{s} = 7$ TeV using the ATLAS detector,” *Phys. Lett.* **B728**, 363–379 (2014), [arXiv:1310.6527 \[hep-ex\]](#)
- [9] G. Aad *et al.* (ATLAS Collaboration), “Search for new phenomena in photon+jet events collected in proton–proton collisions at $\sqrt{s} = 8$ TeV with the ATLAS detector,” *Phys. Lett.* **B728**, 562–578 (2014), [arXiv:1309.3230 \[hep-ex\]](#)
- [10] G. Aad *et al.* (ATLAS Collaboration), “Measurement of the distributions of event-by-event flow harmonics in lead-lead collisions at $\sqrt{s} = 2.76$ TeV with the ATLAS detector at the LHC,” *JHEP* **1311**, 183 (2013), [arXiv:1305.2942 \[hep-ex\]](#)
- [11] G. Aad *et al.* (ATLAS Collaboration), “Measurement of the top quark charge in pp collisions at $\sqrt{s} = 7$ TeV with the ATLAS detector,” *JHEP* **1311**, 031 (2013), [arXiv:1307.4568 \[hep-ex\]](#)
- [12] G. Aad *et al.* (ATLAS Collaboration), “Evidence for the spin-0 nature of the Higgs boson using ATLAS data,” *Phys. Lett.* **B726**, 120–144 (2013), [arXiv:1307.1432 \[hep-ex\]](#)
- [13] G. Aad *et al.* (ATLAS Collaboration), “Measurements of Higgs boson production and couplings in diboson final states with the ATLAS detector at the LHC,” *Phys. Lett.* **B726**, 88–119 (2013), [arXiv:1307.1427 \[hep-ex\]](#)
- [14] G. Aad *et al.* (ATLAS Collaboration), “Search for direct third-generation squark pair production in final states with missing transverse momentum and two b -jets in $\sqrt{s} = 8$ TeV pp collisions with the ATLAS detector,” *JHEP* **1310**, 189 (2013), [arXiv:1308.2631 \[hep-ex\]](#)
- [15] G. Aad *et al.* (ATLAS Collaboration), “Search for new phenomena in final states with large jet multiplicities and missing transverse momentum at $\sqrt{s} = 8$ TeV proton-proton collisions using the ATLAS experiment,” *JHEP* **1310**, 130 (2013), [arXiv:1308.1841 \[hep-ex\]](#)
- [16] G. Aad *et al.* (ATLAS Collaboration), “Measurement of the differential cross-section of B^+ meson production in pp collisions at $\sqrt{s} = 7$ TeV at ATLAS,” *JHEP* **1310**, 042 (2013), [arXiv:1307.0126 \[hep-ex\]](#)

- [17] G. Aad *et al.* (ATLAS Collaboration), “Performance of jet substructure techniques for large- R jets in proton-proton collisions at $\sqrt{s} = 7$ TeV using the ATLAS detector,” *JHEP* **1309**, 076 (2013), [arXiv:1306.4945 \[hep-ex\]](#)
- [18] G. Aad *et al.* (ATLAS Collaboration), “Measurement of the production cross section of jets in association with a Z boson in pp collisions at $\sqrt{s} = 7$ TeV with the ATLAS detector,” *JHEP* **1307**, 032 (2013), [arXiv:1304.7098 \[hep-ex\]](#)
- [19] G. Aad *et al.* (ATLAS Collaboration), “Measurement of the cross-section for W boson production in association with b -jets in pp collisions at $\sqrt{s} = 7$ TeV with the ATLAS detector,” *JHEP* **1306**, 084 (2013), [arXiv:1302.2929 \[hep-ex\]](#)
- [20] G. Aad *et al.* (ATLAS Collaboration), “Search for third generation scalar leptoquarks in pp collisions at $\sqrt{s} = 7$ TeV with the ATLAS detector,” *JHEP* **1306**, 033 (2013), [arXiv:1303.0526 \[hep-ex\]](#)
- [21] G. Aad *et al.* (ATLAS Collaboration), “Dynamics of isolated-photon plus jet production in pp collisions at $\sqrt{s} = 7$ TeV with the ATLAS detector,” *Nucl. Phys.* **B875**, 483–535 (2013), [arXiv:1307.6795 \[hep-ex\]](#)
- [22] G. Aad *et al.* (ATLAS Collaboration), “Search for charginos nearly mass-degenerate with the lightest neutralino based on a disappearing-track signature in pp collisions at $\sqrt{s} = 8$ TeV with the ATLAS detector,” *Phys. Rev.* **D88**, 112006 (2013), [arXiv:1310.3675 \[hep-ex\]](#)
- [23] G. Aad *et al.* (ATLAS Collaboration), “Search for long-lived stopped R-hadrons decaying out-of-time with pp collisions using the ATLAS detector,” *Phys. Rev.* **D88**, 112003 (2013), [arXiv:1310.6584 \[hep-ex\]](#)
- [24] G. Aad *et al.* (ATLAS Collaboration), “Search for microscopic black holes in a like-sign dimuon final state using large track multiplicity with the ATLAS detector,” *Phys. Rev.* **D88**, 072001 (2013), [arXiv:1308.4075 \[hep-ex\]](#)
- [25] G. Aad *et al.* (ATLAS Collaboration), “Measurement of charged-particle event shape variables in $\sqrt{s} = 7$ TeV proton-proton interactions with the ATLAS detector,” *Phys. Rev.* **D88**, 032004 (2013), [arXiv:1207.6915 \[hep-ex\]](#)
- [26] G. Aad *et al.* (ATLAS Collaboration), “A search for $t\bar{t}$ resonances in the lepton plus jets final state with ATLAS using 4.7 fb^{-1} of pp collisions at $\sqrt{s} = 7$ TeV,” *Phys. Rev.* **D88**, 012004 (2013), [arXiv:1305.2756 \[hep-ex\]](#)
- [27] G. Aad *et al.* (ATLAS Collaboration), “Search for non-pointing photons in the diphoton and $E_{\text{T}}^{\text{miss}}$ final state in $\sqrt{s} = 7$ TeV proton-proton collisions using the ATLAS detector,” *Phys. Rev.* **D88**, 012001 (2013), [arXiv:1304.6310 \[hep-ex\]](#)
- [28] G. Aad *et al.* (ATLAS Collaboration), “Measurement of the high-mass Drell–Yan differential cross-section in pp collisions at $\sqrt{s} = 7$ TeV with the ATLAS detector,” *Phys. Lett.* **B725**, 223–242 (2013), [arXiv:1305.4192 \[hep-ex\]](#)
- [29] G. Aad *et al.* (ATLAS Collaboration), “Measurement with the ATLAS detector of multi-particle azimuthal correlations in p – Pb collisions at $\sqrt{s_{NN}}=5.02$ TeV,” *Phys. Lett.* **B725**, 60–78 (2013), [arXiv:1303.2084 \[hep-ex\]](#)
- [30] G. Aad *et al.* (ATLAS Collaboration), “Search for a heavy narrow resonance decaying to $e\mu$, $e\tau$, or $\mu\tau$ with the ATLAS detector in $\sqrt{s} = 7$ TeV pp collisions at the LHC,” *Phys. Lett.* **B723**, 15–32 (2013), [arXiv:1212.1272](#)
- [31] G. Aad *et al.* (ATLAS Collaboration), “Measurement of top quark polarization in top-antitop events from proton-proton collisions at $\sqrt{s} = 7$ TeV using the ATLAS detector,” *Phys. Rev. Lett.* **111**, 232002 (2013), [arXiv:1307.6511 \[hep-ex\]](#)
- [32] G. Aad *et al.* (ATLAS Collaboration), “Measurement of the Azimuthal Angle Dependence of Inclusive Jet Yields in Pb+Pb Collisions at $\sqrt{s_{NN}}= 2.76$ TeV with the ATLAS detector,” *Phys. Rev. Lett.* **111**, 152301 (2013), [arXiv:1306.6469 \[hep-ex\]](#)

- [33] G. Aad *et al.* (ATLAS Collaboration), “Observation of Associated Near-side and Away-side Long-range Correlations in $\sqrt{s_{NN}}=5.02$ TeV Proton-lead Collisions with the ATLAS Detector,” *Phys. Rev. Lett.* **110**, 182302 (2013), [arXiv:1212.5198 \[hep-ex\]](#)
- [34] G. Aad *et al.* (ATLAS Collaboration), “Measurement of Z boson Production in $Pb - Pb$ Collisions at $\sqrt{s_{NN}} = 2.76$ TeV with the ATLAS Detector,” *Phys. Rev. Lett.* **110**, 022301 (2013), [arXiv:1210.6486 \[hep-ex\]](#)
- [35] G. Aad *et al.* (ATLAS Collaboration), “Search for dark matter candidates and large extra dimensions in events with a photon and missing transverse momentum in pp collision data at $\sqrt{s} = 7$ TeV with the ATLAS detector,” *Phys. Rev. Lett.* **110**, 011802 (2013), [arXiv:1209.4625 \[hep-ex\]](#)
- [36] G. Aad *et al.* (ATLAS Collaboration), “Search for dark matter candidates and large extra dimensions in events with a jet and missing transverse momentum with the ATLAS detector,” *JHEP* **1304**, 075 (2013), [arXiv:1210.4491 \[hep-ex\]](#)
- [37] G. Aad *et al.* (ATLAS Collaboration), “Search for excited electrons and muons in $\sqrt{s}=8$ TeV proton-proton collisions with the ATLAS detector,” *New J.Phys.* **15**, 093011 (2013), [arXiv:1308.1364 \[hep-ex\]](#)
- [38] G. Aad *et al.* (ATLAS Collaboration), “Search for WH production with a light Higgs boson decaying to prompt electron-jets in proton-proton collisions at $\sqrt{s} = 7$ TeV with the ATLAS detector,” *New J. Phys.* **15**, 043009 (2013), [arXiv:1302.4403 \[hep-ex\]](#)
- [39] G. Aad *et al.* (ATLAS Collaboration), “Search for Extra Dimensions in diphoton events using proton-proton collisions recorded at $\sqrt{s} = 7$ TeV with the ATLAS detector at the LHC,” *New J. Phys.* **15**, 043007 (2013), [arXiv:1210.8389 \[hep-ex\]](#)
- [40] G. Aad *et al.* (ATLAS Collaboration), “Measurement of hard double-parton interactions in $W \rightarrow l\nu + 2$ jet events at $\sqrt{s} = 7$ TeV with the ATLAS detector,” *New J. Phys.* **15**, 033038 (2013), [arXiv:1301.6872 \[hep-ex\]](#)
- [41] G. Aad *et al.* (ATLAS Collaboration), “Search for long-lived, multi-charged particles in pp collisions at $\sqrt{s} = 7$ TeV using the ATLAS detector,” *Phys. Lett.* **B722**, 305–323 (2013), [arXiv:1301.5272 \[hep-ex\]](#)
- [42] G. Aad *et al.* (ATLAS Collaboration), “Search for single b^* -quark production with the ATLAS detector at $\sqrt{s} = 7$ TeV,” *Phys. Lett.* **B721**, 171–189 (2013), [arXiv:1301.1583 \[hep-ex\]](#)
- [43] G. Aad *et al.* (ATLAS Collaboration), “Search for displaced muonic lepton jets from light Higgs boson decay in proton-proton collisions at $\sqrt{s} = 7$ TeV with the ATLAS detector,” *Phys. Lett.* **B721**, 32–50 (2013), [arXiv:1210.0435 \[hep-ex\]](#)
- [44] G. Aad *et al.* (ATLAS Collaboration), “Searches for heavy long-lived sleptons and R -hadrons with the ATLAS detector in pp collisions at $\sqrt{s} = 7$ TeV,” *Phys. Lett.* **B720**, 277–308 (2013), [arXiv:1211.1597 \[hep-ex\]](#)
- [45] G. Aad *et al.* (ATLAS Collaboration), “Measurement of angular correlations in Drell-Yan lepton pairs to probe Z/γ^* boson transverse momentum at $\sqrt{s} = 7$ TeV with the ATLAS detector,” *Phys. Lett.* **B720**, 32–51 (2013), [arXiv:1211.6899 \[hep-ex\]](#)
- [46] G. Aad *et al.* (ATLAS Collaboration), “Search for light top squark pair production in final states with leptons and b -jets with the ATLAS detector in $\sqrt{s} = 7$ TeV proton-proton collisions,” *Phys. Lett.* **B720**, 13–31 (2013), [arXiv:1209.2102 \[hep-ex\]](#)
- [47] L. Carminati, G. Costa, D. D’Enterria, I. Koletsou, G. Marchiori, *et al.*, “Sensitivity of the LHC isolated- γ +jet data to the parton distribution functions of the proton,” *EPL* **101**, 61002 (2013), [arXiv:1212.5511 \[hep-ph\]](#)
- [48] G. Aad *et al.* (ATLAS Collaboration), “Search for charged Higgs bosons through the violation of lepton universality in $t\bar{t}$ events using pp collision data at $\sqrt{s} = 7$ TeV with the ATLAS experiment,” *JHEP* **1303**, 076 (2013), [arXiv:1212.3572 \[hep-ex\]](#)

- [49] G. Aad *et al.* (ATLAS Collaboration), “Measurement of ZZ production in pp collisions at $\sqrt{s} = 7$ TeV and limits on anomalous ZZZ and $ZZ\gamma$ couplings with the ATLAS detector,” *JHEP* **1303**, 128 (2013), [arXiv:1211.6096 \[hep-ex\]](#)
- [50] M. Bomben, A. Bagolini, M. Boscardin, *et al.*, “Development of edgeless n-on-p planar pixel sensors for future ATLAS upgrades,” *Nucl. Instrum. Meth. Phys. Res. Sect. A* **712**, 41 (2013), ISSN 0168-9002
- [51] G. Aad *et al.* (ATLAS Collaboration), “Measurement of jet shapes in top-quark pair events at $\sqrt{s} = 7$ TeV using the ATLAS detector,” *Eur.Phys.J.* **C73**, 2676 (2013), [arXiv:1307.5749 \[hep-ex\]](#)
- [52] G. Aad *et al.* (ATLAS Collaboration), “Improved luminosity determination in pp collisions at $\sqrt{s} = 7$ TeV using the ATLAS detector at the LHC,” *Eur. Phys. J.* **C73**, 2518 (2013), [arXiv:1302.4393 \[hep-ex\]](#)
- [53] G. Aad *et al.* (ATLAS Collaboration), “Measurement of the inclusive jet cross section in pp collisions at $\sqrt{s} = 2.76$ TeV and comparison to the inclusive jet cross section at $\sqrt{s} = 7$ TeV using the ATLAS detector,” *Eur. Phys. J.* **C73**, 2509 (2013), [arXiv:1304.4739 \[hep-ex\]](#)
- [54] G. Aad *et al.* (ATLAS Collaboration), “Search for a light charged Higgs boson in the decay channel $H^+ \rightarrow c\bar{s}$ in $t\bar{t}$ events using pp collisions at $\sqrt{s} = 7$ TeV with the ATLAS detector,” *Eur. Phys. J.* **C73**, 2465 (2013), [arXiv:1302.3694 \[hep-ex\]](#)
- [55] G. Aad *et al.* (ATLAS Collaboration), “Measurement of k_T splitting scales in $W \rightarrow l\nu$ events at $\sqrt{s} = 7$ TeV with the ATLAS detector,” *Eur. Phys. J.* **C73**, 2432 (2013), [arXiv:1302.1415 \[hep-ex\]](#)
- [56] G. Aad *et al.* (ATLAS Collaboration), “Multi-channel search for squarks and gluinos in $\sqrt{s} = 7$ TeV pp collisions with the ATLAS detector,” *Eur. Phys. J.* **C73**, 2362 (2013), [arXiv:1212.6149 \[hep-ex\]](#)
- [57] G. Aad *et al.* (ATLAS Collaboration), “Measurement of the $t\bar{t}$ production cross section in the τ -jets channel using the ATLAS detector,” *Eur. Phys. J.* **C73**, 2328 (2013), [arXiv:1211.7205 \[hep-ex\]](#)
- [58] G. Aad *et al.* (ATLAS Collaboration), “Jet energy resolution in proton-proton collisions at $\sqrt{s} = 7$ TeV recorded in 2010 with the ATLAS detector,” *Eur. Phys. J.* **C73**, 2306 (2013), [arXiv:1210.6210 \[hep-ex\]](#)
- [59] G. Aad *et al.* (ATLAS Collaboration), “Single hadron response measurement and calorimeter jet energy scale uncertainty with the ATLAS detector at the LHC,” *Eur. Phys. J.* **C73**, 2305 (2013), [arXiv:1203.1302 \[hep-ex\]](#)
- [60] G. Aad *et al.* (ATLAS Collaboration), “Jet energy measurement with the ATLAS detector in proton-proton collisions at $\sqrt{s} = 7$ TeV,” *Eur. Phys. J.* **C73**, 2304 (2013), [arXiv:1112.6426 \[hep-ex\]](#)
- [61] G. Aad *et al.* (ATLAS Collaboration), “Measurement of the flavour composition of dijet events in pp collisions at $\sqrt{s} = 7$ TeV with the ATLAS detector,” *Eur. Phys. J.* **C73**, 2301 (2013), [arXiv:1210.0441 \[hep-ex\]](#)
- [62] G. Aad *et al.* (ATLAS Collaboration), “Search for pair-produced massive coloured scalars in four-jet final states with the ATLAS detector in proton-proton collisions at $\sqrt{s} = 7$ TeV,” *Eur. Phys. J.* **C73**, 2263 (2013), [arXiv:1210.4826 \[hep-ex\]](#)
- [63] G. Aad *et al.* (ATLAS Collaboration), “Measurements of top quark pair relative differential cross-sections with ATLAS in pp collisions at $\sqrt{s} = 7$ TeV,” *Eur. Phys. J.* **C73**, 2261 (2013), [arXiv:1207.5644 \[hep-ex\]](#)
- [64] G. Aad *et al.* (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,” *JHEP* **1302**, 095 (2013), [arXiv:1211.6956 \[hep-ex\]](#)

- [65] G. Aad *et al.* (ATLAS Collaboration), “Measurement of isolated-photon pair production in pp collisions at $\sqrt{s} = 7$ TeV with the ATLAS detector,” *JHEP* **1301**, 086 (2013), [arXiv:1211.1913 \[hep-ex\]](#)
- [66] G. Aad *et al.* (ATLAS Collaboration), “Search for direct chargino production in anomaly-mediated supersymmetry breaking models based on a disappearing-track signature in pp collisions at $\sqrt{s} = 7$ TeV with the ATLAS detector,” *JHEP* **1301**, 131 (2013), [arXiv:1210.2852 \[hep-ex\]](#)
- [67] G. Aad *et al.* (ATLAS Collaboration), “Search for resonances decaying into top-quark pairs using fully hadronic decays in pp collisions with ATLAS at $\sqrt{s} = 7$ TeV,” *JHEP* **1301**, 116 (2013), [arXiv:1211.2202 \[hep-ex\]](#)
- [68] G. Aad *et al.* (ATLAS Collaboration), “ATLAS search for new phenomena in dijet mass and angular distributions using pp collisions at $\sqrt{s} = 7$ TeV,” *JHEP* **1301**, 029 (2013), [arXiv:1210.1718 \[hep-ex\]](#)
- [69] G. Aad *et al.* (ATLAS Collaboration), “Search for resonant diboson production in the $lvjj$ decay channels with the ATLAS detector at 7 TeV,” *Phys. Rev.* **D87**, 112006 (2013), [arXiv:1305.0125 \[hep-ex\]](#)
- [70] G. Aad *et al.* (ATLAS Collaboration), “Measurements of $W\gamma$ and $Z\gamma$ production in pp collisions at $\sqrt{s} = 7$ TeV with the ATLAS detector at the LHC,” *Phys. Rev.* **D87**, 112003 (2013), [arXiv:1302.1283 \[hep-ex\]](#)
- [71] G. Aad *et al.* (ATLAS Collaboration), “Measurement of W^+W^- production in pp collisions at $\sqrt{s} = 7$ TeV with the ATLAS detector and limits on anomalous WWZ and $WW\gamma$ couplings,” *Phys. Rev.* **D87**, 112001 (2013), [arXiv:1210.2979 \[hep-ex\]](#)
- [72] G. Aad *et al.* (ATLAS Collaboration), “Measurement of Υ production in 7 TeV pp collisions at ATLAS,” *Phys. Rev.* **D87**, 052004 (2013), [arXiv:1211.7255 \[hep-ex\]](#)
- [73] G. Aad *et al.* (ATLAS Collaboration), “Search for new phenomena in events with three charged leptons at a center-of-mass energy of 7 TeV with the ATLAS detector,” *Phys. Rev.* **D87**, 052002 (2013), [arXiv:1211.6312 \[hep-ex\]](#)
- [74] G. Aad *et al.* (ATLAS Collaboration), “Measurement of the Λ_b lifetime and mass in the ATLAS experiment,” *Phys. Rev.* **D87**, 032002 (2013), [arXiv:1207.2284 \[hep-ex\]](#)
- [75] G. Aad *et al.* (ATLAS Collaboration), “Search for contact interactions and large extra dimensions in dilepton events from pp collisions at $\sqrt{s} = 7$ TeV with the ATLAS detector,” *Phys. Rev.* **D87**, 015010 (2013), [arXiv:1211.1150 \[hep-ex\]](#)
- [76] G. Aad *et al.* (ATLAS Collaboration), “Search for squarks and gluinos with the ATLAS detector in final states with jets and missing transverse momentum using 4.7 fb^{-1} of $\sqrt{s} = 7$ TeV proton-proton collision data,” *Phys. Rev.* **D87**, 012008 (2013), [arXiv:1208.0949 \[hep-ex\]](#)
- [77] G. Aad *et al.* (ATLAS Collaboration), “A search for prompt lepton-jets in pp collisions at $\sqrt{s} = 7$ TeV with the ATLAS detector,” *Phys. Lett.* **B719**, 299–317 (2013), [arXiv:1212.5409 \[hep-ex\]](#)
- [78] G. Aad *et al.* (ATLAS Collaboration), “Search for long-lived, heavy particles in final states with a muon and multi-track displaced vertex in proton-proton collisions at $\sqrt{s} = 7$ TeV with the ATLAS detector,” *Phys. Lett.* **B719**, 280–298 (2013), [arXiv:1210.7451 \[hep-ex\]](#)
- [79] G. Aad *et al.* (ATLAS Collaboration), “Search for supersymmetry in events with photons, bottom quarks, and missing transverse momentum in proton-proton collisions at a centre-of-mass energy of 7 TeV with the ATLAS detector,” *Phys. Lett.* **B719**, 261–279 (2013), [arXiv:1211.1167 \[hep-ex\]](#)
- [80] G. Aad *et al.* (ATLAS Collaboration), “A search for high-mass resonances decaying to $\tau^+\tau^-$ in pp collisions at $\sqrt{s} = 7$ TeV with the ATLAS detector,” *Phys. Lett.* **B719**, 242–260 (2013), [arXiv:1210.6604 \[hep-ex\]](#)

- [81] G. Aad *et al.* (ATLAS Collaboration), “Measurement of the jet radius and transverse momentum dependence of inclusive jet suppression in lead-lead collisions at $\sqrt{s_{NN}} = 2.76$ TeV with the ATLAS detector,” *Phys. Lett.* **B719**, 220–241 (2013), [arXiv:1208.1967 \[hep-ex\]](#)
- [82] G. Aad *et al.* (ATLAS Collaboration), “Search for pair production of heavy top-like quarks decaying to a high-pT W boson and a b quark in the lepton plus jets final state at $\sqrt{s} = 7$ TeV with the ATLAS detector,” *Phys. Lett.* **B718**, 1284–1302 (2013), [arXiv:1210.5468 \[hep-ex\]](#)
- [83] G. Aad *et al.* (ATLAS Collaboration), “Search for direct slepton and gaugino production in final states with two leptons and missing transverse momentum with the ATLAS detector in pp collisions at $\sqrt{s} = 7$ TeV,” *Phys. Lett.* **B718**, 879–901 (2013), [arXiv:1208.2884 \[hep-ex\]](#)
- [84] G. Aad *et al.* (ATLAS Collaboration), “Search for new phenomena in the WW to $\ell\nu\ell'\nu'$ final state in pp collisions at $\sqrt{s} = 7$ TeV with the ATLAS detector,” *Phys. Lett.* **B718**, 860–878 (2013), [arXiv:1208.2880 \[hep-ex\]](#)
- [85] G. Aad *et al.* (ATLAS Collaboration), “Search for direct production of charginos and neutralinos in events with three leptons and missing transverse momentum in $\sqrt{s} = 7$ TeV pp collisions with the ATLAS detector,” *Phys. Lett.* **B718**, 841–859 (2013), [arXiv:1208.3144 \[hep-ex\]](#)
- [86] R. Nagai, J. Idarraga, C. Gallrapp, Y. Unno, A. Lounis, *et al.*, “Evaluation of novel KEK/HPK n-in-p pixel sensors for ATLAS upgrade with testbeam,” *Nucl. Instrum. Meth.* **A699**, 78–83 (2013)
- [87] G. Aad *et al.* (ATLAS Collaboration), “Triggers for displaced decays of long-lived neutral particles in the ATLAS detector,” *JINST* **1307**, P07015 (2013), [arXiv:1305.2284 \[hep-ex\]](#)
- [88] G. Aad *et al.* (ATLAS Collaboration), “Characterisation and mitigation of beam-induced backgrounds observed in the ATLAS detector during the 2011 proton-proton run,” *JINST* **1307**, P07004 (2013), [arXiv:1303.0223 \[hep-ex\]](#)
- [89] G. Aad *et al.* (ATLAS Collaboration), “A Particle Consistent with the Higgs Boson Observed with the ATLAS Detector at the Large Hadron Collider,” *Science* **338**, 1576 (2012)
- [90] G. Aad *et al.* (ATLAS Collaboration), “Measurement of the azimuthal anisotropy for charged particle production in $\sqrt{s_{NN}} = 2.76$ TeV lead-lead collisions with the ATLAS detector,” *Phys. Rev.* **C86**, 014907 (2012), [arXiv:1203.3087 \[hep-ex\]](#)
- [91] G. Aad *et al.* (ATLAS Collaboration), “Search for R -parity-violating supersymmetry in events with four or more leptons in $\sqrt{s} = 7$ TeV pp collisions with the ATLAS detector,” *JHEP* **1212**, 124 (2012), [arXiv:1210.4457 \[hep-ex\]](#)
- [92] G. Aad *et al.* (ATLAS Collaboration), “Search for pair production of massive particles decaying into three quarks with the ATLAS detector in $\sqrt{s} = 7$ TeV pp collisions at the LHC,” *JHEP* **1212**, 086 (2012), [arXiv:1210.4813 \[hep-ex\]](#)
- [93] G. Aad *et al.* (ATLAS Collaboration), “Search for anomalous production of prompt like-sign lepton pairs at $\sqrt{s} = 7$ TeV with the ATLAS detector,” *JHEP* **1212**, 007 (2012), [arXiv:1210.4538 \[hep-ex\]](#)
- [94] G. Aad *et al.* (ATLAS Collaboration), “Search for high-mass resonances decaying to dilepton final states in pp collisions at $\sqrt{s} = 7$ TeV with the ATLAS detector,” *JHEP* **1211**, 138 (2012), [arXiv:1209.2535 \[hep-ex\]](#)
- [95] G. Aad *et al.* (ATLAS Collaboration), “Search for a heavy top-quark partner in final states with two leptons with the ATLAS detector at the LHC,” *JHEP* **1211**, 094 (2012), [arXiv:1209.4186 \[hep-ex\]](#)
- [96] G. Aad *et al.* (ATLAS Collaboration), “Measurements of the pseudorapidity dependence of the total transverse energy in proton-proton collisions at $\sqrt{s} = 7$ TeV with ATLAS,” *JHEP* **1211**, 033 (2012), [arXiv:1208.6256 \[hep-ex\]](#)

- [97] G. Aad *et al.* (ATLAS Collaboration), “Search for diphoton events with large missing transverse momentum in 7 TeV proton-proton collision data with the ATLAS detector,” *Phys. Lett.* **B718**, 411–430 (2012), [arXiv:1209.0753 \[hep-ex\]](#)
- [98] G. Aad *et al.* (ATLAS Collaboration), “Search for the Higgs boson in the $H \rightarrow WW \rightarrow l\nu jj$ decay channel at $\sqrt{s} = 7$ TeV with the ATLAS detector,” *Phys. Lett.* **B718**, 391–410 (2012), [arXiv:1206.6074 \[hep-ex\]](#)
- [99] G. Aad *et al.* (ATLAS Collaboration), “Search for the Standard Model Higgs boson produced in association with a vector boson and decaying to a b -quark pair with the ATLAS detector,” *Phys. Lett.* **B718**, 369–390 (2012), [arXiv:1207.0210 \[hep-ex\]](#)
- [100] G. Aad *et al.* (ATLAS Collaboration), “Further search for supersymmetry at $\sqrt{s} = 7$ TeV in final states with jets, missing transverse momentum and isolated leptons with the ATLAS detector,” *Phys. Rev.* **D86**, 092002 (2012), [arXiv:1208.4688 \[hep-ex\]](#)
- [101] G. Aad *et al.* (ATLAS Collaboration), “Search for resonant top plus jet production in $t\bar{t}$ + jets events with the ATLAS detector in pp collisions at $\sqrt{s} = 7$ TeV,” *Phys. Rev.* **D86**, 091103 (2012), [arXiv:1209.6593 \[hep-ex\]](#)
- [102] G. Aad *et al.* (ATLAS Collaboration), “ATLAS measurements of the properties of jets for boosted particle searches,” *Phys. Rev.* **D86**, 072006 (2012), [arXiv:1206.5369 \[hep-ex\]](#)
- [103] G. Aad *et al.* (ATLAS Collaboration), “Underlying event characteristics and their dependence on jet size of charged-particle jet events in pp collisions at $\sqrt{s} = 7$ TeV with the ATLAS detector,” *Phys. Rev.* **D86**, 072004 (2012), [arXiv:1208.0563 \[hep-ex\]](#)
- [104] G. Aad *et al.* (ATLAS Collaboration), “Measurement of the azimuthal ordering of charged hadrons with the ATLAS detector,” *Phys. Rev.* **D86**, 052005 (2012), [arXiv:1203.0419 \[hep-ex\]](#)
- [105] G. Aad *et al.* (ATLAS Collaboration), “Combined search for the Standard Model Higgs boson in pp collisions at $\sqrt{s} = 7$ TeV with the ATLAS detector,” *Phys. Rev.* **D86**, 032003 (2012), [arXiv:1207.0319 \[hep-ex\]](#)
- [106] G. Aad *et al.* (ATLAS Collaboration), “Measurement of inclusive jet and dijet production in pp collisions at $\sqrt{s} = 7$ TeV using the ATLAS detector,” *Phys. Rev.* **D86**, 014022 (2012), [arXiv:1112.6297 \[hep-ex\]](#)
- [107] G. Aad *et al.* (ATLAS Collaboration), “Search for pair-produced heavy quarks decaying to Wq in the two-lepton channel at $\sqrt{s} = 7$ TeV with the ATLAS detector,” *Phys. Rev.* **D86**, 012007 (2012), [arXiv:1202.3389 \[hep-ex\]](#)
- [108] G. Aad *et al.* (ATLAS Collaboration), “Measurement of the t -channel single top-quark production cross section in pp collisions at $\sqrt{s} = 7$ TeV with the ATLAS detector,” *Phys. Lett.* **B717**, 330–350 (2012), [arXiv:1205.3130 \[hep-ex\]](#)
- [109] G. Aad *et al.* (ATLAS Collaboration), “Measurement of the top quark pair cross section with ATLAS in pp collisions at $\sqrt{s} = 7$ TeV using final states with an electron or a muon and a hadronically decaying τ lepton,” *Phys. Lett.* **B717**, 89–108 (2012), [arXiv:1205.2067 \[hep-ex\]](#)
- [110] G. Aad *et al.* (ATLAS Collaboration), “Search for a standard model Higgs boson in the mass range 200 – 600 GeV in the $H \rightarrow ZZ \rightarrow \ell^+ \ell^- q\bar{q}$ decay channel with the ATLAS detector,” *Phys. Lett.* **B717**, 70–88 (2012), [arXiv:1206.2443 \[hep-ex\]](#)
- [111] G. Aad *et al.* (ATLAS Collaboration), “Measurement of $W\gamma$ and $Z\gamma$ production cross sections in pp collisions at $\sqrt{s} = 7$ TeV and limits on anomalous triple gauge couplings with the ATLAS detector,” *Phys. Lett.* **B717**, 49–69 (2012), [arXiv:1205.2531 \[hep-ex\]](#)
- [112] G. Aad *et al.* (ATLAS Collaboration), “Search for a Standard Model Higgs boson in the $H \rightarrow ZZ \rightarrow l^+ l^- \nu\bar{\nu}$ decay channel using 4.7 fb^{-1} of $\sqrt{s} = 7$ TeV data with the ATLAS detector,” *Phys. Lett.* **B717**, 29–48 (2012), [arXiv:1205.6744 \[hep-ex\]](#)

- [113] G. Aad *et al.* (ATLAS Collaboration), “Evidence for the associated production of a W boson and a top quark in ATLAS at $\sqrt{s} = 7$ TeV,” *Phys. Lett.* **B716**, 142–159 (2012), [arXiv:1205.5764 \[hep-ex\]](#)
- [114] G. Aad *et al.* (ATLAS Collaboration), “Search for TeV-scale gravity signatures in final states with leptons and jets with the ATLAS detector at $\sqrt{s} = 7$ TeV,” *Phys. Lett.* **B716**, 122–141 (2012), [arXiv:1204.4646 \[hep-ex\]](#)
- [115] G. Aad *et al.* (ATLAS Collaboration), “Search for the Standard Model Higgs boson in the $H \rightarrow WW^{(*)} \rightarrow \ell\nu\ell\nu$ decay mode with 4.7 fb^{-1} of ATLAS data at $\sqrt{s} = 7$ TeV,” *Phys. Lett.* **B716**, 62–81 (2012), [arXiv:1206.0756 \[hep-ex\]](#)
- [116] G. Aad *et al.* (ATLAS Collaboration), “Observation of a new particle in the search for the Standard Model Higgs boson with the ATLAS detector at the LHC,” *Phys. Lett.* **B716**, 1–29 (2012), [arXiv:1207.7214 \[hep-ex\]](#)
- [117] G. Aad *et al.* (ATLAS Collaboration), “Search for scalar top quark pair production in natural gauge mediated supersymmetry models with the ATLAS detector in pp collisions at $\sqrt{s} = 7$ TeV,” *Phys. Lett.* **B715**, 44–60 (2012), [arXiv:1204.6736 \[hep-ex\]](#)
- [118] G. Aad *et al.* (ATLAS Collaboration), “Search for supersymmetry with jets, missing transverse momentum and at least one hadronically decaying τ lepton in proton-proton collisions at $\sqrt{s} = 7$ TeV with the ATLAS detector,” *Phys. Lett.* **B714**, 197–214 (2012), [arXiv:1204.3852 \[hep-ex\]](#)
- [119] G. Aad *et al.* (ATLAS Collaboration), “Search for events with large missing transverse momentum, jets, and at least two τ leptons in 7 TeV proton-proton collision data with the ATLAS detector,” *Phys. Lett.* **B714**, 180–196 (2012), [arXiv:1203.6580 \[hep-ex\]](#)
- [120] G. Aad *et al.* (ATLAS Collaboration), “Search for the decay $B_s^0 \rightarrow \mu\mu$ with the ATLAS detector,” *Phys. Lett.* **B713**, 387–407 (2012), [arXiv:1204.0735 \[hep-ex\]](#)
- [121] G. Aad *et al.* (ATLAS Collaboration), “Search for magnetic monopoles in $\sqrt{s} = 7$ TeV pp collisions with the ATLAS detector,” *Phys. Rev. Lett.* **109**, 261803 (2012), [arXiv:1207.6411 \[hep-ex\]](#)
- [122] G. Aad *et al.* (ATLAS Collaboration), “Search for direct top squark pair production in final states with one isolated lepton, jets, and missing transverse momentum in $\sqrt{s} = 7$ TeV pp collisions using 4.7 fb^{-1} of ATLAS data,” *Phys. Rev. Lett.* **109**, 211803 (2012), [arXiv:1208.2590 \[hep-ex\]](#)
- [123] G. Aad *et al.* (ATLAS Collaboration), “Search for a supersymmetric partner to the top quark in final states with jets and missing transverse momentum at $\sqrt{s} = 7$ TeV with the ATLAS detector,” *Phys. Rev. Lett.* **109**, 211802 (2012), [arXiv:1208.1447 \[hep-ex\]](#)
- [124] G. Aad *et al.* (ATLAS Collaboration), “Search for tb resonances in proton-proton collisions at $\sqrt{s} = 7$ TeV with the ATLAS detector,” *Phys. Rev. Lett.* **109**, 081801 (2012), [arXiv:1205.1016 \[hep-ex\]](#)
- [125] G. Aad *et al.* (ATLAS Collaboration), “Search for pair production of a new quark that decays to a Z boson and a bottom quark with the ATLAS detector,” *Phys. Rev. Lett.* **109**, 071801 (2012), [arXiv:1204.1265 \[hep-ex\]](#)
- [126] G. Aad *et al.* (ATLAS Collaboration), “Search for down-type fourth generation quarks with the ATLAS detector in events with one lepton and hadronically decaying W bosons,” *Phys. Rev. Lett.* **109**, 032001 (2012), [arXiv:1202.6540 \[hep-ex\]](#)
- [127] G. Aad *et al.* (ATLAS Collaboration), “Determination of the strange quark density of the proton from ATLAS measurements of the $W \rightarrow l\nu$ and $Z \rightarrow ll$ cross sections,” *Phys. Rev. Lett.* **109**, 012001 (2012), [arXiv:1203.4051 \[hep-ex\]](#)
- [128] G. Aad *et al.* (ATLAS Collaboration), “A search for flavour changing neutral currents in top-quark decays in pp collision data collected with the ATLAS detector at $\sqrt{s} = 7$ TeV,” *JHEP* **1209**, 139 (2012), [arXiv:1206.0257 \[hep-ex\]](#)

- [129] G. Aad *et al.* (ATLAS Collaboration), “Search for the Standard Model Higgs boson in the $H \rightarrow \tau^+\tau^-$ decay mode in $\sqrt{s} = 7$ TeV pp collisions with ATLAS,” *JHEP* **1209**, 070 (2012), [arXiv:1206.5971 \[hep-ex\]](#)
- [130] G. Aad *et al.* (ATLAS Collaboration), “A search for $t\bar{t}$ resonances in lepton+jets events with highly boosted top quarks collected in pp collisions at $\sqrt{s} = 7$ TeV with the ATLAS detector,” *JHEP* **1209**, 041 (2012), [arXiv:1207.2409 \[hep-ex\]](#)
- [131] G. Aad *et al.* (ATLAS Collaboration), “Measurement of the b-hadron production cross section using decays to $D^*\mu^-X$ final states in pp collisions at $\sqrt{s} = 7$ TeV with the ATLAS detector,” *Nucl. Phys.* **B864**, 341–381 (2012), [arXiv:1206.3122 \[hep-ex\]](#)
- [132] G. Aad *et al.* (ATLAS Collaboration), “Hunt for new phenomena using large jet multiplicities and missing transverse momentum with ATLAS in 4.7 fb^{-1} of $\sqrt{s} = 7$ TeV proton-proton collisions,” *JHEP* **1207**, 167 (2012), [arXiv:1206.1760 \[hep-ex\]](#)
- [133] G. Aad *et al.* (ATLAS Collaboration), “Forward-backward correlations and charged-particle azimuthal distributions in pp interactions using the ATLAS detector,” *JHEP* **1207**, 019 (2012), [arXiv:1203.3100 \[hep-ex\]](#)
- [134] J Albert *et al.* (ATLAS IBL Collaboration), “Prototype ATLAS IBL Modules using the FE-I4A Front-End Readout Chip,” *JINST* **7**, P11010 (2012), [arXiv:1209.1906 \[physics.ins-det\]](#)
- [135] J. Weingarten, S. Altenheiner, M. Beimforde, M. Benoit, M. Bomben, *et al.*, “Planar Pixel Sensors for the ATLAS Upgrade: Beam Tests results,” *JINST* **7**, P10028 (2012), [arXiv:1204.1266 \[physics.ins-det\]](#)
- [136] G. Aad *et al.* (ATLAS Collaboration), “A study of the material in the ATLAS inner detector using secondary hadronic interactions,” *JINST* **7**, P01013 (2012), [arXiv:1110.6191 \[hep-ex\]](#)
- [137] G. Aad *et al.* (ATLAS Collaboration), “Measurement of the W boson polarization in top quark decays with the ATLAS detector,” *JHEP* **1206**, 088 (2012), [arXiv:1205.2484 \[hep-ex\]](#)
- [138] G. Aad *et al.* (ATLAS Collaboration), “Search for charged Higgs bosons decaying via $H^+ \rightarrow \tau\nu$ in top quark pair events using pp collision data at $\sqrt{s} = 7$ TeV with the ATLAS detector,” *JHEP* **1206**, 039 (2012), [arXiv:1204.2760 \[hep-ex\]](#)
- [139] G. Aad *et al.* (ATLAS Collaboration), “Search for FCNC single top-quark production at $\sqrt{s} = 7$ TeV with the ATLAS detector,” *Phys. Lett.* **B712**, 351–369 (2012), [arXiv:1203.0529 \[hep-ex\]](#)
- [140] G. Aad *et al.* (ATLAS Collaboration), “Search for new particles decaying to ZZ using final states with leptons and jets with the ATLAS detector in $\sqrt{s} = 7$ TeV proton-proton collisions,” *Phys. Lett.* **B712**, 331–350 (2012), [arXiv:1203.0718 \[hep-ex\]](#)
- [141] G. Aad *et al.* (ATLAS Collaboration), “Measurement of the WW cross section in $\sqrt{s} = 7$ TeV pp collisions with the ATLAS detector and limits on anomalous gauge couplings,” *Phys. Lett.* **B712**, 289–308 (2012), [arXiv:1203.6232 \[hep-ex\]](#)
- [142] G. Aad *et al.* (ATLAS Collaboration), “Search for contact interactions in dilepton events from pp collisions at $\sqrt{s} = 7$ TeV with the ATLAS detector,” *Phys. Lett.* **B712**, 40–58 (2012), [arXiv:1112.4462 \[hep-ex\]](#)
- [143] G. Aad *et al.* (ATLAS Collaboration), “Search for heavy vector-like quarks coupling to light quarks in proton-proton collisions at $\sqrt{s} = 7$ TeV with the ATLAS detector,” *Phys. Lett.* **B712**, 22–39 (2012), [arXiv:1112.5755 \[hep-ex\]](#)
- [144] G. Aad *et al.* (ATLAS Collaboration), “Measurement of inclusive two-particle angular correlations in pp collisions with the ATLAS detector at the LHC,” *JHEP* **1205**, 157 (2012), [arXiv:1203.3549 \[hep-ex\]](#)
- [145] G. Aad *et al.* (ATLAS Collaboration), “Jet mass and substructure of inclusive jets in $\sqrt{s} = 7$ TeV pp collisions with the ATLAS experiment,” *JHEP* **1205**, 128 (2012), [arXiv:1203.4606 \[hep-ex\]](#)

- [146] G. Aad *et al.* (ATLAS Collaboration), “Measurement of the cross section for top-quark pair production in pp collisions at $\sqrt{s} = 7$ TeV with the ATLAS detector using final states with two high- p_T leptons,” *JHEP* **1205**, 059 (2012), [arXiv:1202.4892 \[hep-ex\]](#)
- [147] G. Aad *et al.* (ATLAS Collaboration), “Search for same-sign top-quark production and fourth-generation down-type quarks in pp collisions at $\sqrt{s} = 7$ TeV with the ATLAS detector,” *JHEP* **1204**, 069 (2012), [arXiv:1202.5520 \[hep-ex\]](#)
- [148] G. Aad *et al.* (ATLAS Collaboration), “Search for supersymmetry in events with three leptons and missing transverse momentum in $\sqrt{s} = 7$ TeV pp collisions with the ATLAS detector,” *Phys. Rev. Lett.* **108**, 261804 (2012), [arXiv:1204.5638 \[hep-ex\]](#)
- [149] G. Aad *et al.* (ATLAS Collaboration), “Search for pair production of a heavy up-type quark decaying to a W boson and a b quark in the lepton+jets channel with the ATLAS detector,” *Phys. Rev. Lett.* **108**, 261802 (2012), [arXiv:1202.3076 \[hep-ex\]](#)
- [150] G. Aad *et al.* (ATLAS Collaboration), “Search for a light Higgs boson decaying to long-lived weakly-interacting particles in proton-proton collisions at $\sqrt{s} = 7$ TeV with the ATLAS detector,” *Phys. Rev. Lett.* **108**, 251801 (2012), [arXiv:1203.1303 \[hep-ex\]](#)
- [151] G. Aad *et al.* (ATLAS Collaboration), “Search for gluinos in events with two same-sign leptons, jets and missing transverse momentum with the ATLAS detector in pp collisions at $\sqrt{s} = 7$ TeV,” *Phys. Rev. Lett.* **108**, 241802 (2012), [arXiv:1203.5763 \[hep-ex\]](#)
- [152] G. Aad *et al.* (ATLAS Collaboration), “Observation of spin correlation in $t\bar{t}$ events from pp collisions at $\sqrt{s} = 7$ TeV using the ATLAS detector,” *Phys. Rev. Lett.* **108**, 212001 (2012), [arXiv:1203.4081 \[hep-ex\]](#)
- [153] G. Aad *et al.* (ATLAS Collaboration), “Search for production of resonant states in the photon-jet mass distribution using pp collisions at $\sqrt{s} = 7$ TeV collected by the ATLAS detector,” *Phys. Rev. Lett.* **108**, 211802 (2012), [arXiv:1112.3580 \[hep-ex\]](#)
- [154] G. Aad *et al.* (ATLAS Collaboration), “Search for scalar bottom pair production with the ATLAS detector in pp Collisions at $\sqrt{s} = 7$ TeV,” *Phys. Rev. Lett.* **108**, 181802 (2012), [arXiv:1112.3832 \[hep-ex\]](#)
- [155] G. Aad *et al.* (ATLAS Collaboration), “Observation of a new χ_b state in radiative transitions to $\Upsilon(1S)$ and $\Upsilon(2S)$ at ATLAS,” *Phys. Rev. Lett.* **108**, 152001 (2012), [arXiv:1112.5154 \[hep-ex\]](#)
- [156] G. Aad *et al.* (ATLAS Collaboration), “Search for the Standard Model Higgs boson in the diphoton decay channel with 4.9 fb^{-1} of pp collisions at $\sqrt{s} = 7$ TeV with ATLAS,” *Phys. Rev. Lett.* **108**, 111803 (2012), [arXiv:1202.1414 \[hep-ex\]](#)
- [157] G. Aad *et al.* (ATLAS Collaboration), “Search for the Higgs boson in the $H \rightarrow WW^{(*)} \rightarrow l\nu l\nu$ decay channel in pp collisions at $\sqrt{s} = 7$ TeV with the ATLAS detector,” *Phys. Rev. Lett.* **108**, 111802 (2012), [arXiv:1112.2577 \[hep-ex\]](#)
- [158] G. Aad *et al.* (ATLAS Collaboration), “Search for New Phenomena in $t\bar{t}$ Events With Large Missing Transverse Momentum in Proton-Proton Collisions at $\sqrt{s} = 7$ TeV with the ATLAS Detector,” *Phys. Rev. Lett.* **108**, 041805 (2012), [arXiv:1109.4725 \[hep-ex\]](#)
- [159] G. Aad *et al.* (ATLAS Collaboration), “Measurement of the ZZ production cross section and limits on anomalous neutral triple gauge couplings in proton-proton collisions at $\sqrt{s} = 7$ TeV with the ATLAS detector,” *Phys. Rev. Lett.* **108**, 041804 (2012), [arXiv:1110.5016 \[hep-ex\]](#)
- [160] G. Aad *et al.* (ATLAS Collaboration), “Measurement of the top quark pair production cross-section with ATLAS in the single lepton channel,” *Phys. Lett.* **B711**, 244–263 (2012), [arXiv:1201.1889 \[hep-ex\]](#)
- [161] G. Aad *et al.* (ATLAS Collaboration), “Search for Extra Dimensions using diphoton events in 7 TeV proton-proton collisions with the ATLAS detector,” *Phys. Lett.* **B710**, 538–556 (2012), [arXiv:1112.2194 \[hep-ex\]](#)

- [162] G. Aad *et al.* (ATLAS Collaboration), “Search for Diphoton Events with Large Missing Transverse Momentum in 1 fb^{-1} of 7 TeV Proton-Proton Collision Data with the ATLAS Detector,” *Phys. Lett.* **B710**, 519–537 (2012), [arXiv:1111.4116 \[hep-ex\]](#)
- [163] G. Aad *et al.* (ATLAS Collaboration), “Search for the Standard Model Higgs boson in the decay channel $H \rightarrow ZZ^{(*)} \rightarrow 4l$ with 4.8 fb^{-1} of pp collision data at $\sqrt{s} = 7 \text{ TeV}$ with ATLAS,” *Phys. Lett.* **B710**, 383–402 (2012), [arXiv:1202.1415 \[hep-ex\]](#)
- [164] G. Aad *et al.* (ATLAS Collaboration), “Measurement of the centrality dependence of the charged particle pseudorapidity distribution in lead-lead collisions at $\sqrt{s_{NN}} = 2.76 \text{ TeV}$ with the ATLAS detector,” *Phys. Lett.* **B710**, 363–382 (2012), [arXiv:1108.6027 \[hep-ex\]](#)
- [165] G. Aad *et al.* (ATLAS Collaboration), “Search for squarks and gluinos using final states with jets and missing transverse momentum with the ATLAS detector in $\sqrt{s} = 7 \text{ TeV}$ proton-proton collisions,” *Phys. Lett.* **B710**, 67–85 (2012), [arXiv:1109.6572 \[hep-ex\]](#)
- [166] G. Aad *et al.* (ATLAS Collaboration), “Combined search for the Standard Model Higgs boson using up to 4.9 fb^{-1} of pp collision data at $\sqrt{s} = 7 \text{ TeV}$ with the ATLAS detector at the LHC,” *Phys. Lett.* **B710**, 49–66 (2012), [arXiv:1202.1408 \[hep-ex\]](#)
- [167] G. Aad *et al.* (ATLAS Collaboration), “Measurement of the WZ production cross section and limits on anomalous triple gauge couplings in proton-proton collisions at $\sqrt{s} = 7 \text{ TeV}$ with the ATLAS detector,” *Phys. Lett.* **B709**, 341–357 (2012), [arXiv:1111.5570 \[hep-ex\]](#)
- [168] G. Aad *et al.* (ATLAS Collaboration), “Search for strong gravity signatures in same-sign dimuon final states using the ATLAS detector at the LHC,” *Phys. Lett.* **B709**, 322–340 (2012), [arXiv:1111.0080 \[hep-ex\]](#)
- [169] G. Aad *et al.* (ATLAS Collaboration), “Search for first generation scalar leptoquarks in pp collisions at $\sqrt{s} = 7 \text{ TeV}$ with the ATLAS detector,” *Phys. Lett.* **B709**, 158–176 (2012), [arXiv:1112.4828 \[hep-ex\]](#)
- [170] G. Aad *et al.* (ATLAS Collaboration), “Searches for supersymmetry with the ATLAS detector using final states with two leptons and missing transverse momentum in $\sqrt{s} = 7 \text{ TeV}$ proton-proton collisions,” *Phys. Lett.* **B709**, 137–157 (2012), [arXiv:1110.6189 \[hep-ex\]](#)
- [171] G. Aad *et al.* (ATLAS Collaboration), “A measurement of the ratio of the W and Z cross sections with exactly one associated jet in pp collisions at $\sqrt{s} = 7 \text{ TeV}$ with ATLAS,” *Phys. Lett.* **B708**, 221–240 (2012), [arXiv:1108.4908 \[hep-ex\]](#)
- [172] G. Aad *et al.* (ATLAS Collaboration), “Search for New Physics in the Dijet Mass Distribution using 1 fb^{-1} of pp Collision Data at $\sqrt{s} = 7 \text{ TeV}$ collected by the ATLAS Detector,” *Phys. Lett.* **B708**, 37–54 (2012), [arXiv:1108.6311 \[hep-ex\]](#)
- [173] G. Aad *et al.* (ATLAS Collaboration), “Search for resonant WZ production in the $WZ \rightarrow \ell\nu\ell'\ell'$ channel in $\sqrt{s} = 7 \text{ TeV}$ pp collisions with the ATLAS detector,” *Phys. Rev.* **D85**, 112012 (2012), [arXiv:1204.1648 \[hep-ex\]](#)
- [174] G. Aad *et al.* (ATLAS Collaboration), “Search for supersymmetry in pp collisions at $\sqrt{s} = 7 \text{ TeV}$ in final states with missing transverse momentum and b -jets with the ATLAS detector,” *Phys. Rev.* **D85**, 112006 (2012), [arXiv:1203.6193 \[hep-ex\]](#)
- [175] G. Aad *et al.* (ATLAS Collaboration), “Measurement of the production cross section of an isolated photon associated with jets in proton-proton collisions at $\sqrt{s} = 7 \text{ TeV}$ with the ATLAS detector,” *Phys. Rev.* **D85**, 092014 (2012), [arXiv:1203.3161 \[hep-ex\]](#)
- [176] G. Aad *et al.* (ATLAS Collaboration), “Study of jets produced in association with a W boson in pp collisions at $\sqrt{s} = 7 \text{ TeV}$ with the ATLAS detector,” *Phys. Rev.* **D85**, 092002 (2012), [arXiv:1201.1276 \[hep-ex\]](#)
- [177] G. Aad *et al.* (ATLAS Collaboration), “Measurement of the inclusive W^{\pm} and Z/γ cross sections in the electron and muon decay channels in pp collisions at $\sqrt{s} = 7 \text{ TeV}$ with the ATLAS detector,” *Phys. Rev.* **D85**, 072004 (2012), [arXiv:1109.5141 \[hep-ex\]](#)

- [178] G. Aad *et al.* (ATLAS Collaboration), “Search for excited leptons in proton-proton collisions at $\sqrt{s} = 7$ TeV with the ATLAS detector,” *Phys. Rev.* **D85**, 072003 (2012), [arXiv:1201.3293 \[hep-ex\]](#)
- [179] G. Aad *et al.* (ATLAS Collaboration), “Measurement of $D^{*\pm}$ meson production in jets from pp collisions at $\sqrt{s} = 7$ TeV with the ATLAS detector,” *Phys. Rev.* **D85**, 052005 (2012), [arXiv:1112.4432 \[hep-ex\]](#)
- [180] G. Aad *et al.* (ATLAS Collaboration), “Measurement of the production cross section for Z/γ^* in association with jets in pp collisions at $\sqrt{s} = 7$ TeV with the ATLAS detector,” *Phys. Rev.* **D85**, 032009 (2012), [arXiv:1111.2690 \[hep-ex\]](#)
- [181] G. Aad *et al.* (ATLAS Collaboration), “Search for anomalous production of prompt like-sign muon pairs and constraints on physics beyond the Standard Model with the ATLAS detector,” *Phys. Rev.* **D85**, 032004 (2012), [arXiv:1201.1091 \[hep-ex\]](#)
- [182] G. Aad *et al.* (ATLAS Collaboration), “Search for supersymmetry in final states with jets, missing transverse momentum and one isolated lepton in $\sqrt{s} = 7$ TeV pp collisions using 1 fb^{-1} of ATLAS data,” *Phys. Rev.* **D85**, 012006 (2012), [arXiv:1109.6606 \[hep-ex\]](#)
- [183] G. Aad *et al.* (ATLAS Collaboration), “Measurement of the Transverse Momentum Distribution of W Bosons in pp Collisions at $\sqrt{s} = 7$ TeV with the ATLAS Detector,” *Phys. Rev.* **D85**, 012005 (2012), [arXiv:1108.6308 \[hep-ex\]](#)
- [184] G. Aad *et al.* (ATLAS Collaboration), “Measurement of the isolated di-photon cross-section in pp collisions at $\sqrt{s} = 7$ TeV with the ATLAS detector,” *Phys. Rev.* **D85**, 012003 (2012), [arXiv:1107.0581 \[hep-ex\]](#)
- [185] G. Aad *et al.* (ATLAS Collaboration), “ K_S and Λ production in pp interactions at $\sqrt{s} = 0.9$ and 7 TeV measured with the ATLAS detector at the LHC,” *Phys. Rev.* **D85**, 012001 (2012), [arXiv:1111.1297 \[hep-ex\]](#)
- [186] G. Aad *et al.* (ATLAS Collaboration), “Search for doubly-charged Higgs bosons in like-sign dilepton final states at $\sqrt{s} = 7$ TeV with the ATLAS detector,” *Eur. Phys. J.* **C72**, 2244 (2012), [arXiv:1210.5070 \[hep-ex\]](#)
- [187] G. Aad *et al.* (ATLAS Collaboration), “ATLAS search for a heavy gauge boson decaying to a charged lepton and a neutrino in pp collisions at $\sqrt{s} = 7$ TeV,” *Eur. Phys. J.* **C72**, 2241 (2012), [arXiv:1209.4446 \[hep-ex\]](#)
- [188] G. Aad *et al.* (ATLAS Collaboration), “Search for light scalar top quark pair production in final states with two leptons with the ATLAS detector in $\sqrt{s} = 7$ TeV proton-proton collisions,” *Eur. Phys. J.* **C72**, 2237 (2012), [arXiv:1208.4305 \[hep-ex\]](#)
- [189] G. Aad *et al.* (ATLAS Collaboration), “Search for Supersymmetry in Events with Large Missing Transverse Momentum, Jets, and at Least One Tau Lepton in 7 TeV Proton-Proton Collision Data with the ATLAS Detector,” *Eur. Phys. J.* **C72**, 2215 (2012), [arXiv:1210.1314 \[hep-ex\]](#)
- [190] G. Aad *et al.* (ATLAS Collaboration), “Measurement of event shapes at large momentum transfer with the ATLAS detector in pp collisions at $\sqrt{s} = 7$ TeV,” *Eur. Phys. J.* **C72**, 2211 (2012), [arXiv:1206.2135 \[hep-ex\]](#)
- [191] G. Aad *et al.* (ATLAS Collaboration), “Search for top and bottom squarks from gluino pair production in final states with missing transverse energy and at least three b-jets with the ATLAS detector,” *Eur. Phys. J.* **C72**, 2174 (2012), [arXiv:1207.4686 \[hep-ex\]](#)
- [192] G. Aad *et al.* (ATLAS Collaboration), “Measurement of WZ production in proton-proton collisions at $\sqrt{s} = 7$ TeV with the ATLAS detector,” *Eur. Phys. J.* **C72**, 2173 (2012), [arXiv:1208.1390 \[hep-ex\]](#)
- [193] G. Aad *et al.* (ATLAS Collaboration), “Search for a fermiophobic Higgs boson in the diphoton decay channel with the ATLAS detector,” *Eur. Phys. J.* **C72**, 2157 (2012), [arXiv:1205.0701 \[hep-ex\]](#)

- [194] G. Aad *et al.* (ATLAS Collaboration), “Search for second generation scalar leptoquarks in pp collisions at $\sqrt{s} = 7$ TeV with the ATLAS detector,” *Eur. Phys. J.* **C72**, 2151 (2012), [arXiv:1203.3172 \[hep-ex\]](#)
- [195] G. Aad *et al.* (ATLAS Collaboration), “A search for $t\bar{t}$ resonances with the ATLAS detector in 2.05 fb^{-1} of proton-proton collisions at $\sqrt{s} = 7$ TeV,” *Eur. Phys. J.* **C72**, 2083 (2012), [arXiv:1205.5371 \[hep-ex\]](#)
- [196] G. Aad *et al.* (ATLAS Collaboration), “Measurement of τ polarization in $W \rightarrow \tau\nu$ decays with the ATLAS detector in pp collisions at $\sqrt{s} = 7$ TeV,” *Eur. Phys. J.* **C72**, 2062 (2012), [arXiv:1204.6720 \[hep-ex\]](#)
- [197] G. Aad *et al.* (ATLAS Collaboration), “Search for heavy neutrinos and right-handed W bosons in events with two leptons and jets in pp collisions at $\sqrt{s} = 7$ TeV with the ATLAS detector,” *Eur. Phys. J.* **C72**, 2056 (2012), [arXiv:1203.5420 \[hep-ex\]](#)
- [198] G. Aad *et al.* (ATLAS Collaboration), “Measurement of the top quark mass with the template method in the $t\bar{t} \rightarrow \ell + \text{jets}$ channel using ATLAS data,” *Eur. Phys. J.* **C72**, 2046 (2012), [arXiv:1203.5755 \[hep-ex\]](#)
- [199] G. Aad *et al.* (ATLAS Collaboration), “Measurement of $t\bar{t}$ production with a veto on additional central jet activity in pp collisions at $\sqrt{s} = 7$ TeV using the ATLAS detector,” *Eur. Phys. J.* **C72**, 2043 (2012), [arXiv:1203.5015 \[hep-ex\]](#)
- [200] G. Aad *et al.* (ATLAS Collaboration), “Search for lepton flavour violation in the $e\mu$ continuum with the ATLAS detector in $\sqrt{s} = 7$ TeV pp collisions at the LHC,” *Eur. Phys. J.* **C72**, 2040 (2012), [arXiv:1205.0725 \[hep-ex\]](#)
- [201] G. Aad *et al.* (ATLAS Collaboration), “Measurement of the charge asymmetry in top quark pair production in pp collisions at $\sqrt{s} = 7$ TeV using the ATLAS detector,” *Eur. Phys. J.* **C72**, 2039 (2012), [arXiv:1203.4211 \[hep-ex\]](#)
- [202] G. Aad *et al.* (ATLAS Collaboration), “Measurement of the polarisation of W bosons produced with large transverse momentum in pp collisions at $\sqrt{s} = 7$ TeV with the ATLAS experiment,” *Eur. Phys. J.* **C72**, 2001 (2012), [arXiv:1203.2165 \[hep-ex\]](#)
- [203] G. Aad *et al.* (ATLAS Collaboration), “Search for anomaly-mediated supersymmetry breaking with the ATLAS detector based on a disappearing-track signature in pp collisions at $\sqrt{s} = 7$ TeV,” *Eur. Phys. J.* **C72**, 1993 (2012), [arXiv:1202.4847 \[hep-ex\]](#)
- [204] G. Aad *et al.* (ATLAS Collaboration), “Search for decays of stopped, long-lived particles from 7 TeV pp collisions with the ATLAS detector,” *Eur. Phys. J.* **C72**, 1965 (2012), [arXiv:1201.5595 \[hep-ex\]](#)
- [205] G. Aad *et al.* (ATLAS Collaboration), “Rapidity gap cross sections measured with the ATLAS detector in pp collisions at $\sqrt{s} = 7$ TeV,” *Eur. Phys. J.* **C72**, 1926 (2012), [arXiv:1201.2808 \[hep-ex\]](#)
- [206] G. Aad *et al.* (ATLAS Collaboration), “Electron performance measurements with the ATLAS detector using the 2010 LHC proton-proton collision data,” *Eur. Phys. J.* **C72**, 1909 (2012), [arXiv:1110.3174 \[hep-ex\]](#)
- [207] G. Aad *et al.* (ATLAS Collaboration), “Performance of the ATLAS Trigger System in 2010,” *Eur. Phys. J.* **C72**, 1849 (2012), [arXiv:1110.1530 \[hep-ex\]](#)
- [208] G. Aad *et al.* (ATLAS Collaboration), “Performance of Missing Transverse Momentum Reconstruction in Proton-Proton Collisions at 7 TeV with ATLAS,” *Eur. Phys. J.* **C72**, 1844 (2012), [arXiv:1108.5602 \[hep-ex\]](#)
- [209] G. Aad *et al.* (ATLAS Collaboration), “Search for displaced vertices arising from decays of new heavy particles in 7 TeV pp collisions at ATLAS,” *Phys. Lett.* **B707**, 478–496 (2012), [arXiv:1109.2242 \[hep-ex\]](#)

- [210] G. Aad *et al.* (ATLAS Collaboration), “Measurement of the top quark pair production cross section in pp collisions at $\sqrt{s} = 7$ TeV in dilepton final states with ATLAS,” *Phys. Lett.* **B707**, 459–477 (2012), [arXiv:1108.3699 \[hep-ex\]](#)
- [211] G. Aad *et al.* (ATLAS Collaboration), “Measurements of the electron and muon inclusive cross-sections in proton-proton collisions at $\sqrt{s} = 7$ TeV with the ATLAS detector,” *Phys. Lett.* **B707**, 438–458 (2012), [arXiv:1109.0525 \[hep-ex\]](#)
- [212] G. Aad *et al.* (ATLAS Collaboration), “Measurement of the cross section for the production of a W boson in association with b -jets in pp collisions at $\sqrt{s} = 7$ TeV with the ATLAS detector,” *Phys. Lett.* **B707**, 418–437 (2012), [arXiv:1109.1470 \[hep-ex\]](#)
- [213] G. Aad *et al.* (ATLAS Collaboration), “Measurement of the pseudorapidity and transverse momentum dependence of the elliptic flow of charged particles in lead-lead collisions at $\sqrt{s_{NN}} = 2.76$ TeV with the ATLAS detector,” *Phys. Lett.* **B707**, 330–348 (2012), [arXiv:1108.6018 \[hep-ex\]](#)
- [214] G. Aad *et al.* (ATLAS Collaboration), “Search for a heavy Standard Model Higgs boson in the channel $H \rightarrow ZZ \rightarrow llqq$ using the ATLAS detector,” *Phys. Lett.* **B707**, 27–45 (2012), [arXiv:1108.5064 \[hep-ex\]](#)
- [215] G. Aad *et al.* (ATLAS Collaboration), “Measurement of the cross-section for b -jets produced in association with a Z boson at $\sqrt{s} = 7$ TeV with the ATLAS detector,” *Phys. Lett.* **B706**, 295–313 (2012), [arXiv:1109.1403 \[hep-ex\]](#)
- [216] G. Aad *et al.* (ATLAS Collaboration), “Measurement of the $W \rightarrow \tau\nu$ Cross Section in pp Collisions at $\sqrt{s} = 7$ TeV with the ATLAS experiment,” *Phys. Lett.* **B706**, 276–294 (2012), [arXiv:1108.4101 \[hep-ex\]](#)