

LHCb group publications (July 2012–November 2014)

- [1] Roel Aaij *et al.* (LHCb collaboration), “Precision luminosity measurements at LHCb,” *JINST* **9**, 12005 (2014), [arXiv:1410.0149 \[hep-ex\]](#)
- [2] Roel Aaij *et al.* (LHCb collaboration), “Precision measurement of the mass and lifetime of the Ξ_b^- baryon,” *Phys.Rev.Lett.* **113**, 242002 (2014), [arXiv:1409.8568 \[hep-ex\]](#)
- [3] Roel Aaij *et al.* (LHCb collaboration), “Measurement of the CP -violating phase ϕ_s in $\bar{B}_s^0 \rightarrow D_s^+ D_s^-$ decays,” *Phys.Rev.Lett.* **113**, 211801 (2014), [arXiv:1409.4619 \[hep-ex\]](#)
- [4] Roel Aaij *et al.* (LHCb collaboration), “Measurement of the $\chi_b(3P)$ mass and of the relative rate of $\chi_{b1}(1P)$ and $\chi_{b2}(1P)$ production,” *JHEP* **1410**, 88 (2014), [arXiv:1409.1408 \[hep-ex\]](#)
- [5] Roel Aaij *et al.* (LHCb collaboration), “Measurements of CP violation in the three-body phase space of charmless B^\pm decays,” *Phys.Rev.* **D90**, 112004 (2014), [arXiv:1408.5373 \[hep-ex\]](#)
- [6] Roel Aaij *et al.* (LHCb collaboration), “Measurement of the forward W boson cross-section in pp collisions at $\sqrt{s} = 7$ TeV,” *JHEP* **1412**, 079 (2014), [arXiv:1408.4354 \[hep-ex\]](#)
- [7] Roel Aaij *et al.* (LHCb collaboration), “Measurement of the CKM angle γ using $B^\pm \rightarrow DK^\pm$ with $D \rightarrow K_S^0 \pi^+ \pi^-$, $K_S^0 K^+ K^-$ decays,” *JHEP* **1410**, 97 (2014), [arXiv:1408.2748 \[hep-ex\]](#)
- [8] Roel Aaij *et al.* (LHCb collaboration), “Search for CP violation using T -odd correlations in $D^0 \rightarrow K^+ K^- \pi^+ \pi^-$ decays,” *JHEP* **1410**, 5 (2014), [arXiv:1408.1299 \[hep-ex\]](#)
- [9] Roel Aaij *et al.* (LHCb collaboration), “First observations of the rare decays $B^+ \rightarrow K^+ \pi^+ \pi^- \mu^+ \mu^-$ and $B^+ \rightarrow \phi K^+ \mu^+ \mu^-$,” *JHEP* **1410**, 064 (2014), [arXiv:1408.1137 \[hep-ex\]](#)
- [10] Roel Aaij *et al.* (LHCb collaboration), “Measurement of CP asymmetries in the decays $B^0 \rightarrow K^{*0} \mu^+ \mu^-$ and $B^+ \rightarrow K^+ \mu^+ \mu^-$,” *JHEP* **1409**, 177 (2014), [arXiv:1408.0978 \[hep-ex\]](#)
- [11] Roel Aaij *et al.* (LHCb collaboration), “First observation of a baryonic B_c^+ decay,” *Phys.Rev.Lett.* **113**, 152003 (2014), [arXiv:1408.0971 \[hep-ex\]](#)
- [12] Roel Aaij *et al.* (LHCb collaboration), “Measurement of the $\bar{B}^0 - B^0$ and $\bar{B}_s^0 - B_s^0$ production asymmetries in pp collisions at $\sqrt{s} = 7$ TeV,” *Phys.Lett.* **B739**, 218–228 (2014), [arXiv:1408.0275 \[hep-ex\]](#)
- [13] Roel Aaij *et al.* (LHCb collaboration), “Measurement of CP violation parameters in $B^0 \rightarrow DK^{*0}$ decays,” *Phys.Rev.* **D90**, 112002 (2014), [arXiv:1407.8136 \[hep-ex\]](#)
- [14] Roel Aaij *et al.* (LHCb collaboration), “Study of χ_b meson production in $p p$ collisions at $\sqrt{s} = 7$ and 8 TeV and observation of the decay $\chi_b(3P) \rightarrow \Upsilon(3S)\gamma$,” *Eur.Phys.J.* **C74**, 3092 (2014), [arXiv:1407.7734 \[hep-ex\]](#)
- [15] Roel Aaij *et al.* (LHCb collaboration), “Dalitz plot analysis of $B_s^0 \rightarrow \bar{D}^0 K^- \pi^+$ decays,” *Phys.Rev.* **D90**, 072003 (2014), [arXiv:1407.7712 \[hep-ex\]](#)
- [16] Roel Aaij *et al.* (LHCb collaboration), “Observation of $B_s^0 \rightarrow K^{*\pm} K^\mp$ and evidence for $B_s^0 \rightarrow K^{*-} \pi^+$ decays,” *New J.Phys.* **16**, 123001 (2014), [arXiv:1407.7704 \[hep-ex\]](#)
- [17] Roel Aaij *et al.* (LHCb collaboration), “Observation of overlapping spin-1 and spin-3 $\bar{D}^0 K^-$ resonances at mass $2.86\text{GeV}/c^2$,” *Phys.Rev.Lett.* **113**, 162001 (2014), [arXiv:1407.7574 \[hep-ex\]](#)
- [18] Roel Aaij *et al.* (LHCb Collaboration), “Measurement of CP violation and constraints on the CKM angle γ in $B^\pm \rightarrow DK^\pm$ with $D \rightarrow K_S^0 \pi^+ \pi^-$ decays,” *Nucl.Phys.* **B888**, 169–193 (2014), [arXiv:1407.6211 \[hep-ex\]](#)
- [19] Roel Aaij *et al.* (LHCb Collaboration), “Measurement of CP asymmetry in $B_s^0 \rightarrow D_s^\mp K^\pm$ decays,” *JHEP* **1411**, 060 (2014), [arXiv:1407.6127 \[hep-ex\]](#)
- [20] R. Aaij *et al.* (LHCb Collaboration), “Observation of charmonium pairs produced exclusively in pp collisions,” *J.Phys.* **G41**, 115002 (2014), [arXiv:1407.5973 \[hep-ex\]](#)

- [21] Roel Aaij *et al.* (LHCb collaboration), “Evidence for CP Violation in $B^+ \rightarrow p\bar{p}K^+$ Decays,” *Phys.Rev.Lett.* **113**, 141801 (2014), [arXiv:1407.5907 \[hep-ex\]](#)
- [22] Roel Aaij *et al.* (LHCb Collaboration), “Measurement of the B_s^0 meson lifetime in $D_s^+\pi^-$ decays,” *Phys.Rev.Lett.* **113**, 172001 (2014), [arXiv:1407.5873 \[hep-ex\]](#)
- [23] Roel Aaij *et al.* (LHCb collaboration), “Measurement of CP violation in $B_s^0 \rightarrow \phi\phi$ decays,” *Phys.Rev.* **D90**, 052011 (2014), [arXiv:1407.2222 \[hep-ex\]](#)
- [24] Roel Aaij *et al.* (LHCb Collaboration), “Measurement of the ratio of B_c^+ branching fractions to $J/\psi\pi^+$ and $J/\psi\mu^+\nu_\mu$,” *Phys.Rev.* **D90**, 032009 (2014), [arXiv:1407.2126 \[hep-ex\]](#)
- [25] R. Aaij *et al.* (LHCb collaboration), “Effective lifetime measurements in the $B_s^0 \rightarrow K^+K^-$, $B^0 \rightarrow K^+K^-$ and $B_s^0 \rightarrow \pi^+K^-$ decays,” *Phys.Lett.* **B736**, 446–454 (2014), [arXiv:1406.7204 \[hep-ex\]](#)
- [26] Roel Aaij *et al.* (LHCb collaboration), “Test of lepton universality using $B^+ \rightarrow K^+\ell^+\ell^-$ decays,” *Phys.Rev.Lett.* **113**, 151601 (2014), [arXiv:1406.6482 \[hep-ex\]](#)
- [27] Roel Aaij *et al.* (LHCb collaboration), “First measurement of the charge asymmetry in beauty-quark pair production,” *Phys.Rev.Lett.* **113**, 082003 (2014), [arXiv:1406.4789 \[hep-ex\]](#)
- [28] R. Aaij *et al.* (LHCb Collaboration), “Observation of Z production in proton-lead collisions at LHCb,” *JHEP* **1409**, 030 (2014), [arXiv:1406.2885 \[hep-ex\]](#)
- [29] R. Aaij *et al.* (LHCb Collaboration), “Search for CP violation in $D^\pm \rightarrow K_S^0 K^\pm$ and $D_s^\pm \rightarrow K_S^0 \pi^\pm$ decays,” *JHEP* **1410**, 25 (2014), [arXiv:1406.2624 \[hep-ex\]](#)
- [30] Roel Aaij *et al.* (LHCb collaboration), “Observation of the $\Lambda_b^0 \rightarrow J/\psi p \pi^-$ decay,” *JHEP* **1407**, 103 (2014), [arXiv:1406.0755 \[hep-ex\]](#)
- [31] Roel Aaij *et al.* (LHCb collaboration), “Precision measurement of the mass and lifetime of the Ξ_b^0 baryon,” *Phys.Rev.Lett.* **113**, 032001 (2014), [arXiv:1405.7223 \[hep-ex\]](#)
- [32] R. Aaij *et al.* (LHCb Collaboration), “Study of the kinematic dependences of Λ_b^0 production in pp collisions and a measurement of the $\Lambda_b^0 \rightarrow \Lambda_c^+ \pi^-$ branching fraction,” *JHEP* **1408**, 143 (2014), [arXiv:1405.6842 \[hep-ex\]](#)
- [33] Roel Aaij *et al.* (LHCb collaboration), “Study of Υ production and cold nuclear matter effects in pPb collisions at $\sqrt{s_{NN}}=5$ TeV,” *JHEP* **1407**, 094 (2014), [arXiv:1405.5152 \[nucl-ex\]](#)
- [34] Roel Aaij *et al.* (LHCb collaboration), “Measurement of the CP-violating phase ϕ_s in $\bar{B}_s^0 \rightarrow J/\psi\pi^+\pi^-$ decays,” *Phys.Lett.* **B736**, 186 (2014), [arXiv:1405.4140 \[hep-ex\]](#)
- [35] Roel Aaij *et al.* (LHCb collaboration), “Observation of the $B_s^0 \rightarrow J/\psi K_S^0 K^\pm \pi^\mp$ decay,” *JHEP* **1407**, 140 (2014), [arXiv:1405.3219 \[hep-ex\]](#)
- [36] Roel Aaij *et al.* (LHCb collaboration), “Measurement of CP asymmetry in $D^0 \rightarrow K^-K^+$ and $D^0 \rightarrow \pi^-\pi^+$ decays,” *JHEP* **1407**, 041 (2014), [arXiv:1405.2797 \[hep-ex\]](#)
- [37] Roel Aaij *et al.* (LHCb collaboration), “Measurement of the Ξ_b^- and Ω_b^- baryon lifetimes,” *Phys.Lett.* **B736**, 154–162 (2014), [arXiv:1405.1543 \[hep-ex\]](#)
- [38] Roel Aaij *et al.* (LHCb Collaboration), “Measurement of the resonant and CP components in $\bar{B}^0 \rightarrow J/\psi\pi^+\pi^-$ decays,” *Phys.Rev.* **D90**, 012003 (2014), [arXiv:1404.5673 \[hep-ex\]](#)
- [39] Roel Aaij *et al.* (LHCb collaboration), “Observation of the resonant character of the $Z(4430)^-$ state,” *Phys.Rev.Lett.* **112**, 222002 (2014), [arXiv:1404.1903 \[hep-ex\]](#)
- [40] Roel Aaij *et al.* (LHCb collaboration), “Evidence for the decay $B_c^+ \rightarrow J/\psi 3\pi^+ 2\pi^-$,” *JHEP* **1405**, 148 (2014), [arXiv:1404.0287 \[hep-ex\]](#)
- [41] Roel Aaij *et al.* (LHCb collaboration), “Evidence for the decay $X(3872) \rightarrow \psi(2S)\gamma$,” *Nucl.Phys.* **B886**, 665–680 (2014), [arXiv:1404.0275 \[hep-ex\]](#)

- [42] Roel Aaij *et al.* (LHCb collaboration), “Angular analysis of charged and neutral $B \rightarrow K\mu^+\mu^-$ decays,” *JHEP* **1405**, 082 (2014), [arXiv:1403.8045 \[hep-ex\]](#)
- [43] R. Aaij *et al.* (LHCb collaboration), “Differential branching fractions and isospin asymmetries of $B \rightarrow K^{(*)}\mu^+\mu^-$ decays,” *JHEP* **1406**, 133 (2014), [arXiv:1403.8044 \[hep-ex\]](#)
- [44] Roel Aaij *et al.* (LHCb collaboration), “Study of beauty hadron decays into pairs of charm hadrons,” *Phys.Rev.Lett.* **112**, 202001 (2014), [arXiv:1403.3606 \[hep-ex\]](#)
- [45] Roel Aaij *et al.* (LHCb collaboration), “Measurement of polarization amplitudes and CP asymmetries in $B^0 \rightarrow \phi K^*(892)^0$,” *JHEP* **1405**, 069 (2014), [arXiv:1403.2888 \[hep-ex\]](#)
- [46] Roel Aaij *et al.* (LHCb collaboration), “Measurement of $\psi(2S)$ polarisation in pp collisions at $\sqrt{s} = 7$ TeV,” *Eur.Phys.J.* **C74**, 2872 (2014), [arXiv:1403.1339 \[hep-ex\]](#)
- [47] Roel Aaij *et al.* (LHCb Collaboration), “Observation of Photon Polarization in the $b \rightarrow s\gamma$ Transition,” *Phys.Rev.Lett.* **112**, 161801 (2014), [arXiv:1402.6852 \[hep-ex\]](#)
- [48] Roel Aaij *et al.* (LHCb Collaboration), “Measurement of resonant and CP components in $\bar{B}_s^0 \rightarrow J/\psi\pi^+\pi^-$ decays,” *Phys.Rev.* **D89**, 092006 (2014), [arXiv:1402.6248 \[hep-ex\]](#)
- [49] Roel Aaij *et al.* (LHCb Collaboration), “Precision measurement of the ratio of the Λ_b^0 to \bar{B}^0 lifetimes,” *Phys.Lett.* **B734**, 122 (2014), [arXiv:1402.6242 \[hep-ex\]](#)
- [50] Roel Aaij *et al.* (LHCb collaboration), “Measurement of charged particle multiplicities and densities in pp collisions at $\sqrt{s} = 7$ TeV in the forward region,” *Eur.Phys.J.* **C74**, 2888 (2014), [arXiv:1402.4430 \[hep-ex\]](#)
- [51] Roel Aaij *et al.* (LHCb collaboration), “A study of CP violation in $B^\pm \rightarrow DK^\pm$ and $B^\pm \rightarrow D\pi^\pm$ decays with $D \rightarrow K_S^0 K^\pm \pi^\mp$ final states,” *Phys.Lett.* **B733**, 36–45 (2014), [arXiv:1402.2982 \[hep-ex\]](#)
- [52] Roel Aaij *et al.* (LHCb collaboration), “Measurements of the B^+ , B^0 , B_s^0 meson and Λ_b^0 baryon lifetimes,” *JHEP* **1404**, 114 (2014), [arXiv:1402.2554 \[hep-ex\]](#)
- [53] Roel Aaij *et al.* (LHCb collaboration), “Measurement of Υ production in pp collisions at $\sqrt{s} = 2.76$ TeV,” *Eur.Phys.J.* **C74**, 2835 (2014), [arXiv:1402.2539 \[hep-ex\]](#)
- [54] Roel Aaij *et al.* (LHCb collaboration), “Searches for Λ_b^0 and Ξ_b^0 decays to $K_S^0 p\pi^-$ and $K_S^0 pK^-$ final states with first observation of the $\Lambda_b^0 \rightarrow K_S^0 p\pi^-$ decay,” *JHEP* **1404**, 087 (2014), [arXiv:1402.0770 \[hep-ex\]](#)
- [55] Roel Aaij *et al.* (LHCb collaboration), “Measurement of the B_c^+ meson lifetime using $B_c^+ \rightarrow J/\psi\mu^+\nu_\mu X$ decays,” *Eur.Phys.J.* **C74**, 2839 (2014), [arXiv:1401.6932 \[hep-ex\]](#)
- [56] Roel Aaij *et al.* (LHCb collaboration), “Search for Majorana neutrinos in $B^- \rightarrow \pi^+\mu^-\mu^-$ decays,” *Phys.Rev.Lett.* **112**, 131802 (2014), [arXiv:1401.5361 \[hep-ex\]](#)
- [57] Roel Aaij *et al.* (LHCb collaboration), “Updated measurements of exclusive J/ψ and $\psi(2S)$ production cross-sections in pp collisions at $\sqrt{s} = 7$ TeV,” *J.Phys.* **G41**, 055002 (2014), [arXiv:1401.3288 \[hep-ex\]](#)
- [58] Roel Aaij *et al.* (LHCb collaboration), “Observation of associated production of a Z boson with a D meson in the forward region,” *JHEP* **1404**, 091 (2014), [arXiv:1401.3245 \[hep-ex\]](#)
- [59] R. Aaij *et al.* (LHCb Collaboration), “Measurement of the $\bar{B}_s^0 \rightarrow D_s^- D_s^+$ and $\bar{B}_s^0 \rightarrow D^- D_s^+$ effective lifetimes,” *Phys.Rev.Lett.* **112**, 111802 (2014), [arXiv:1312.1217 \[hep-ex\]](#)
- [60] Roel Aaij *et al.* (LHCb collaboration), “Studies of beauty baryon decays to $D^0 p h^-$ and $\Lambda_c^+ h^-$ final states,” *Phys.Rev.* **D89**, 032001 (2014), [arXiv:1311.4823 \[hep-ex\]](#)
- [61] Roel Aaij *et al.* (LHCb collaboration), “Study of forward Z + jet production in pp collisions at $\sqrt{s} = 7$ TeV,” *JHEP* **1401**, 033 (2014), [arXiv:1310.8197 \[hep-ex\]](#)

- [62] R Aaij *et al.* (LHCb collaboration), “Search for CP violation in the decay $D^+ \rightarrow \pi^- \pi^+ \pi^+$,” *Phys.Lett.* **B728**, 585–595 (2014), [arXiv:1310.7953 \[hep-ex\]](#)
- [63] R Aaij *et al.* (LHCb collaboration), “Measurements of indirect CP asymmetries in $D^0 \rightarrow K^- K^+$ and $D^0 \rightarrow \pi^- \pi^+$ decays,” *Phys.Rev.Lett.* **112**, 041801 (2014), [arXiv:1310.7201 \[hep-ex\]](#)
- [64] Roel Aaij *et al.* (LHCb collaboration), “Measurement of CP violation in the phase space of $B^\pm \rightarrow K^+ K^- \pi^\pm$ and $B^\pm \rightarrow \pi^+ \pi^- \pi^\pm$ decays,” *Phys.Rev.Lett.* **112**, 011801 (2014), [arXiv:1310.4740 \[hep-ex\]](#)
- [65] R Aaij *et al.* (LHCb collaboration), “Search for the doubly charmed baryon Ξ_{cc}^+ ,” *JHEP* **1312**, 090 (2013), [arXiv:1310.2538 \[hep-ex\]](#)
- [66] R Aaij *et al.* (LHCb collaboration), “Search for the decay $D^0 \rightarrow \pi^+ \pi^- \mu^+ \mu^-$,” *Phys.Lett.* **B728**, 234–243 (2014), [arXiv:1310.2535 \[hep-ex\]](#)
- [67] R Aaij *et al.* (LHCb collaboration), “Observation of $\bar{B}_{(s)} \rightarrow J/\psi f_1(1285)$ Decays and Measurement of the $f_1(1285)$ Mixing Angle,” *Phys.Rev.Lett.* **112**, 091802 (2014), [arXiv:1310.2145 \[hep-ex\]](#)
- [68] R Aaij *et al.* (LHCb collaboration), “Measurement of D^0 - D^0 bar mixing parameters and search for CP violation using $D^0 \rightarrow K^+ \pi^-$ decays,” *Phys.Rev.Lett.* **111**, 251801 (2013), [arXiv:1309.6534 \[hep-ex\]](#)
- [69] R Aaij *et al.* (LHCb collaboration), “Measurement of the charge asymmetry in $B^\pm \rightarrow \phi K^\pm$ and search for $B^\pm \rightarrow \phi \pi^\pm$ decays,” *Phys.Lett.* **B728**, 85–94 (2014), [arXiv:1309.3742 \[hep-ex\]](#)
- [70] R Aaij *et al.* (LHCb), “Observation of the decay $B_c \rightarrow J/\psi K^+ K^- \pi^+$,” *JHEP* **1311**, 094 (2013), [arXiv:1309.0587 \[hep-ex\]](#)
- [71] R Aaij *et al.* (LHCb), “Study of J/ψ production and cold nuclear matter effects in pPb collisions at $\sqrt{s_{NN}} = 5$ TeV,” *JHEP* **1402**, 072 (2014), [arXiv:1308.6729 \[nucl-ex\]](#)
- [72] R Aaij *et al.* (LHCb Collaboration), “First observation of $\bar{B}^0 \rightarrow J/\psi K^+ K^-$ and search for $\bar{B}^0 \rightarrow J/\psi \phi$ decays,” *Phys.Rev.* **D88**, 072005 (2013), [arXiv:1308.5916 \[hep-ex\]](#)
- [73] R Aaij *et al.* (LHCb collaboration), “Observation of the decay $B_s^0 \rightarrow \bar{D}^0 \phi$,” *Phys.Lett.* **B727**, 403–411 (2013), [arXiv:1308.4583 \[hep-ex\]](#)
- [74] R Aaij *et al.* (LHCb collaboration), “Observation of the Decay $B_c^+ \rightarrow B_s^0 \pi^+$,” *Phys.Rev.Lett.* **111**, 181801 (2013), [arXiv:1308.4544 \[hep-ex\]](#)
- [75] R Aaij *et al.* (LHCb Collaboration), “Model-independent search for CP violation in $D^0 \rightarrow K^- K^+ \pi^- \pi^+$ and $D^0 \rightarrow \pi^- \pi^+ \pi^+ \pi^-$ decays,” *Phys.Lett.* **B726**, 623–633 (2013), [arXiv:1308.3189 \[hep-ex\]](#)
- [76] R Aaij *et al.* (LHCb collaboration), “Measurement of Form-Factor-Independent Observables in the Decay $B^0 \rightarrow K^{*0} \mu^+ \mu^-$,” *Phys.Rev.Lett.* **111**, 191801 (2013), [arXiv:1308.1707 \[hep-ex\]](#)
- [77] R Aaij *et al.* (LHCb), “First measurement of time-dependent CP violation in $B_s^0 \rightarrow K^+ K^-$ decays,” *JHEP* **1310**, 183 (2013), [arXiv:1308.1428 \[hep-ex\]](#)
- [78] R. Aaij *et al.* (LHCb collaboration), “Measurement of the CP asymmetry in $B^+ \rightarrow K^+ \mu^+ \mu^-$ decays,” *Phys.Rev.Lett.* **111**, 151801 (2013), [arXiv:1308.1340 \[hep-ex\]](#)
- [79] R Aaij *et al.* (LHCb collaboration), “Observation of B_s^0 - \bar{B}_s^0 mixing and measurement of mixing frequencies using semileptonic B decays,” *Eur.Phys.J.* **C73**, 2655 (2013), [arXiv:1308.1302 \[hep-ex\]](#)
- [80] R Aaij *et al.* (LHCb collaboration), “Branching fraction and CP asymmetry of the decays $B^+ \rightarrow K_s^0 \pi^+$ and $B^+ \rightarrow K_s^0 K^+$,” *Phys.Lett.* **B726**, 646–655 (2013), [arXiv:1308.1277 \[hep-ex\]](#)
- [81] R Aaij *et al.* (LHCb collaboration), “Measurement of the flavour-specific CP-violating asymmetry a_{sl}^s in B_s^0 decays,” *Phys.Lett.* **B728**, 607–615 (2014), [arXiv:1308.1048 \[hep-ex\]](#)

- [82] R Aaij *et al.* (LHCb collaboration), “First evidence for the two-body charmless baryonic decay $B^0 \rightarrow p\bar{p}$,” *JHEP* **1310**, 005 (2013), [arXiv:1308.0961 \[hep-ex\]](#)
- [83] R Aaij *et al.* (LHCb collaboration), “Study of $B_{(s)}^0 \rightarrow K_S^0 h^+ h'^-$ decays with first observation of $B_s^0 \rightarrow K_S^0 K^\pm \pi^\mp$ and $B_s^0 \rightarrow K_S^0 \pi^+ \pi^-$,” *JHEP* **1310**, 143 (2013), [arXiv:1307.7648 \[hep-ex\]](#)
- [84] R Aaij *et al.* (LHCb collaboration), “Observation of a resonance in $B^+ \rightarrow K^+ \mu^+ \mu^-$ decays at low recoil,” *Phys.Rev.Lett.* **111**, 112003 (2013), [arXiv:1307.7595 \[hep-ex\]](#)
- [85] R Aaij *et al.* (LHCb Collaboration), “Measurement of J/ψ polarization in pp collisions at $\sqrt{s} = 7$ TeV,” *Eur.Phys.J.* **C73**, 2631 (2013), [arXiv:1307.6379 \[hep-ex\]](#)
- [86] R Aaij *et al.* (LHCb collaboration), “Studies of the decays $B^+ \rightarrow p\bar{p}h^+$ and observation of $B^+ \rightarrow \bar{\Lambda}(1520)p$,” *Phys.Rev.* **D88**, 052015 (2013), [arXiv:1307.6165 \[hep-ex\]](#)
- [87] R. Aaij *et al.* (LHCb collaboration), “Measurement of the $B_s^0 \rightarrow \mu^+ \mu^-$ branching fraction and search for $B^0 \rightarrow \mu^+ \mu^-$ decays at the LHCb experiment,” *Phys.Rev.Lett.* **111**, 101805 (2013), [arXiv:1307.5024 \[hep-ex\]](#)
- [88] R. Aaij *et al.* (LHCb Collaboration), “Search for the lepton-flavor violating decays $B_s^0 \rightarrow e^\pm \mu^\mp$ and $B^0 \rightarrow e^\pm \mu^\mp$,” *Phys.Rev.Lett.* **111**, 141801 (2013), [arXiv:1307.4889 \[hep-ex\]](#)
- [89] R Aaij *et al.* (LHCb), “Study of D_J meson decays to $D^+ \pi^-$, $D^0 \pi^+$ and $D^{*+} \pi^-$ final states in pp collision,” *JHEP* **1309**, 145 (2013), [arXiv:1307.4556](#)
- [90] R. Aaij *et al.* (LHCb Collaboration), “Measurement of the relative rate of prompt χ_{c0} , χ_{c1} and χ_{c2} production at $\sqrt{s} = 7\text{TeV}$,” *JHEP* **1310**, 115 (2013), [arXiv:1307.4285 \[hep-ex\]](#)
- [91] R Aaij *et al.* (LHCb collaboration), “Measurement of the polarization amplitudes in $B^0 \rightarrow J/\psi K^*(892)^0$ decays,” *Phys.Rev.* **D88**, 052002 (2013), [arXiv:1307.2782 \[hep-ex\]](#)
- [92] R Aaij *et al.* (LHCb collaboration), “Precision measurement of the Λ_b^0 baryon lifetime,” *Phys.Rev.Lett.* **111**, 102003 (2013), [arXiv:1307.2476 \[hep-ex\]](#)
- [93] R Aaij *et al.* (LHCb), “First observation of the decay $B_c^+ \rightarrow J/\psi K^+$,” *JHEP* **1309**, 075 (2013), [arXiv:1306.6723 \[hep-ex\]](#)
- [94] R Aaij *et al.* (LHCb), “Searches for $B_{(s)}^0 \rightarrow J/\psi p\bar{p}$ and $B^+ \rightarrow J/\psi p\bar{p}\pi^+$ decays,” *JHEP* **1309**, 006 (2013), [arXiv:1306.4489 \[hep-ex\]](#)
- [95] R Aaij *et al.* (LHCb collaboration), “Measurement of B meson production cross-sections in proton-proton collisions at $\sqrt{s} = 7$ TeV,” *JHEP* **1308**, 117 (2013), [arXiv:1306.3663](#)
- [96] R Aaij *et al.* (LHCb collaboration), “Measurement of the differential branching fraction of the decay $\Lambda_b^0 \rightarrow \Lambda \mu^+ \mu^-$,” *Phys.Lett.* **B725**, 25–35 (2013), [arXiv:1306.2577 \[hep-ex\]](#)
- [97] R Aaij *et al.* (LHCb Collaboration), “First observation of the decay $B_s^0 \rightarrow \phi \bar{K}^{*0}$,” *JHEP* **1311**, 092 (2013), [arXiv:1306.2239 \[hep-ex\]](#)
- [98] R Aaij *et al.* (LHCb collaboration), “Measurement of CP violation in the phase space of $B^\pm \rightarrow K^\pm \pi^+ \pi^-$ and $B^\pm \rightarrow K^\pm K^+ K^-$ decays,” *Phys.Rev.Lett.* **111**, 101801 (2013), [arXiv:1306.1246 \[hep-ex\]](#)
- [99] R Aaij *et al.* (LHCb collaboration), “Observation of $B_s^0 \rightarrow \chi_{c1} \phi$ decay and study of $B^0 \rightarrow \chi_{c1,2} K^{*0}$ decays,” *Nucl.Phys.* **B874**, 663–678 (2013), [arXiv:1305.6511 \[hep-ex\]](#)
- [100] R Aaij *et al.* (LHCb collaboration), “Search for the rare decay $D^0 \rightarrow \mu^+ \mu^-$,” *Phys.Lett.* **B725**, 15–24 (2013), [arXiv:1305.5059 \[hep-ex\]](#)
- [101] R Aaij *et al.* (LHCb collaboration), “Differential branching fraction and angular analysis of the decay $B_s^0 \rightarrow \phi \mu^+ \mu^-$,” *JHEP* **1307**, 084 (2013), [arXiv:1305.2168 \[hep-ex\]](#)
- [102] R Aaij *et al.* (LHCb collaboration), “Measurement of the CKM angle γ from a combination of $B^\pm \rightarrow Dh^\pm$ analyses,” *Phys.Lett.* **B726**, 151–163 (2013), [arXiv:1305.2050 \[hep-ex\]](#)

- [103] R Aaij *et al.* (LHCb collaboration), “Production of J/ψ and Υ mesons in pp collisions at $\sqrt{s} = 8$ TeV,” *JHEP* **1306**, 064 (2013), [arXiv:1304.6977 \[hep-ex\]](#)
- [104] R Aaij *et al.* (LHCb collaboration), “Precision measurement of D meson mass differences,” *JHEP* **1306**, 065 (2013), [arXiv:1304.6865 \[hep-ex\]](#)
- [105] R Aaij *et al.* (LHCb collaboration), “Search for $D^+(s)$ to $\pi^+ \mu^+ \mu^-$ and $D^+(s)$ to $\pi^- \mu^+ \mu^-$ decays,” *Phys.Lett.* **B724**, 203–212 (2013), [arXiv:1304.6365 \[hep-ex\]](#)
- [106] R. Aaij *et al.* (LHCb Collaboration), “Differential branching fraction and angular analysis of the decay $B^0 \rightarrow K^{*0} \mu^+ \mu^-$,” *JHEP* **1308**, 131 (2013), [arXiv:1304.6325](#)
- [107] R Aaij *et al.* (LHCb collaboration), “Measurement of the branching fractions of the decays $B_s^0 \rightarrow \bar{D}^0 K^- \pi^+$ and $B^0 \rightarrow \bar{D}^0 K^+ \pi^-$,” *Phys.Rev.* **D87**, 112009 (2013), [arXiv:1304.6317 \[hep-ex\]](#)
- [108] R Aaij *et al.* (LHCb collaboration), “First observation of CP violation in the decays of B_s^0 mesons,” *Phys.Rev.Lett.* **110**, 221601 (2013), [arXiv:1304.6173 \[hep-ex\]](#)
- [109] R Aaij *et al.* (LHCb collaboration), “Precision measurement of the B_s^0 - \bar{B}_s^0 oscillation frequency with the decay $B_s^0 \rightarrow D_s^- \pi^+$,” *New J.Phys.* **15**, 053021 (2013), [arXiv:1304.4741 \[hep-ex\]](#)
- [110] R Aaij *et al.* (LHCb collaboration), “Observation of $B_c^+ \rightarrow J/\psi D_s^+$ and $B_c^+ \rightarrow J/\psi D_s^{*+}$ decays,” *Phys.Rev.* **D87**, 112012 (2013), [arXiv:1304.4530 \[hep-ex\]](#)
- [111] R Aaij *et al.* (LHCb collaboration), “Searches for violation of lepton flavour and baryon number in tau lepton decays at LHCb,” *Phys.Lett.* **B724**, 36–45 (2013), [arXiv:1304.4518 \[hep-ex\]](#)
- [112] R Aaij *et al.* (LHCb collaboration), “Measurement of the effective $B_s^0 \rightarrow J/\psi K_S^0$ lifetime,” *Nucl.Phys.* **B873**, 275–292 (2013), [arXiv:1304.4500 \[hep-ex\]](#)
- [113] R Aaij *et al.* (LHCb collaboration), “Measurement of the $B^0 \rightarrow K^{*0} e^+ e^-$ branching fraction at low dilepton mass,” *JHEP* **1305**, 159 (2013), [arXiv:1304.3035 \[hep-ex\]](#)
- [114] R Aaij *et al.* (LHCb collaboration), “Measurement of CP violation and the B_s^0 meson decay width difference with $B_s^0 \rightarrow J/\psi K^+ K^-$ and $B_s^0 \rightarrow J/\psi \pi^+ \pi^-$ decays,” *Phys.Rev.* **D87**, 112010 (2013), [arXiv:1304.2600 \[hep-ex\]](#)
- [115] R Aaij *et al.* (LHCb collaboration), “Limits on neutral Higgs boson production in the forward region in pp collisions at $\sqrt{s} = 7$ TeV,” *JHEP* **1305**, 132 (2013), [arXiv:1304.2591 \[hep-ex\]](#)
- [116] R Aaij *et al.* (LHCb collaboration), “Measurements of the branching fractions of $B^+ \rightarrow p \bar{p} K^+$ decays,” *Eur.Phys.J.* **C73**, 2462 (2013), [arXiv:1303.7133 \[hep-ex\]](#)
- [117] R Aaij *et al.* (LHCb collaboration), “First measurement of the CP-violating phase in $B_s^0 \rightarrow \phi \phi$ decays,” *Phys.Rev.Lett.* **110**, 241802 (2013), [arXiv:1303.7125 \[hep-ex\]](#)
- [118] R Aaij *et al.* (LHCb collaboration), “Study of $B^0 \rightarrow D^{*-} \pi^+ \pi^- \pi^+$ and $B^0 \rightarrow D^{*-} K^+ \pi^- \pi^+$ decays,” *Phys.Rev.* **D87**, 092001 (2013), [arXiv:1303.6861 \[hep-ex\]](#)
- [119] R Aaij *et al.* (LHCb collaboration), “Search for CP violation in $D^+ \rightarrow \phi \pi^+$ and $D_s^+ \rightarrow K_S^0 \pi^+$ decays,” *JHEP* **1306**, 112 (2013), [arXiv:1303.4906 \[hep-ex\]](#)
- [120] R Aaij *et al.* (LHCb collaboration), “Observation of the suppressed ADS modes $B^\pm \rightarrow [\pi^\pm K^\mp \pi^+ \pi^-]_D K^\pm$ and $B^\pm \rightarrow [\pi^\pm K^\mp \pi^+ \pi^-]_D \pi^\pm$,” *Phys.Lett.* **B723**, 44–53 (2013), [arXiv:1303.4646 \[hep-ex\]](#)
- [121] R Aaij *et al.* (LHCb collaboration), “Search for direct CP violation in $D^0 \rightarrow h^- h^+$ modes using semileptonic B decays,” *Phys.Lett.* **B723**, 33–43 (2013), [arXiv:1303.2614 \[hep-ex\]](#)
- [122] R Aaij *et al.* (LHCb collaboration), “Observation of the decay $B_c^+ \rightarrow \psi(2S) \pi^+$,” *Phys.Rev.* **D87**, 071103 (2013), [arXiv:1303.1737 \[hep-ex\]](#)

- [123] R Aaij *et al.* (LHCb collaboration), “Search for rare $B_{(s)}^0 \rightarrow \mu^+ \mu^- \mu^+ \mu^-$ decays,” *Phys.Rev.Lett.* **110**, 211801 (2013), [arXiv:1303.1092 \[hep-ex\]](#)
- [124] R Aaij *et al.* (LHCb collaboration), “Search for the decay $B_s^0 \rightarrow D^{*\mp} \pi^\pm$,” *Phys.Rev.* **D87**, 071101 (2013), [arXiv:1302.6446 \[hep-ex\]](#)
- [125] R Aaij *et al.* (LHCb collaboration), “Observations of $B_s^0 \rightarrow \psi(2S)\eta$ and $B_{(s)}^0 \rightarrow \psi(2S)\pi^+\pi^-$ decays,” *Nucl.Phys.* **B871**, 403–419 (2013), [arXiv:1302.6354 \[hep-ex\]](#)
- [126] R Aaij *et al.* (LHCb), “Determination of the X(3872) meson quantum numbers,” *Phys.Rev.Lett.* **110**, 222001 (2013), [arXiv:1302.6269 \[hep-ex\]](#)
- [127] R Aaij *et al.* (LHCb collaboration), “First observations of $\bar{B}_s^0 \rightarrow D^+ D^-$, $D_s^+ D^-$ and $D^0 \bar{D}^0$ decays,” *Phys.Rev.* **D87**, 092007 (2013), [arXiv:1302.5854 \[hep-ex\]](#)
- [128] R Aaij *et al.* (LHCb collaboration), “Measurements of the $\Lambda_b^0 \rightarrow J/\psi \Lambda$ decay amplitudes and the Λ_b^0 polarisation in pp collisions at $\sqrt{s} = 7$ TeV,” *Phys.Lett.* **B724**, 27–35 (2013), [arXiv:1302.5578 \[hep-ex\]](#)
- [129] R Aaij *et al.* (LHCb collaboration), “Prompt charm production in pp collisions at $\sqrt{s}=7$ TeV,” *Nucl.Phys.* **B871**, 1–20 (2013), [arXiv:1302.2864 \[hep-ex\]](#)
- [130] R Aaij *et al.* (LHCb Collaboration), “Amplitude analysis and the branching fraction measurement of $\bar{B}_s^0 \rightarrow J/\psi K^+ K^-$,” *Phys.Rev.* **D87**, 072004 (2013), [arXiv:1302.1213 \[hep-ex\]](#)
- [131] R Aaij *et al.* (LHCb collaboration), “Measurement of the Λ_b^0 , Ξ_b^- and Ω_b^- baryon masses,” *Phys.Rev.Lett.* **110**, 182001 (2013), [arXiv:1302.1072 \[hep-ex\]](#)
- [132] R Aaij *et al.* (LHCb collaboration), “Exclusive J/ψ and $\psi(2S)$ production in pp collisions at $\sqrt{s} = 7$ TeV,” *J.Phys.* **G40**, 045001 (2013), [arXiv:1301.7084 \[hep-ex\]](#)
- [133] R Aaij *et al.* (LHCb collaboration), “Analysis of the resonant components in $B^0 \rightarrow J/\psi \pi^+ \pi^-$,” *Phys.Rev.* **D87**, 052001 (2013), [arXiv:1301.5347 \[hep-ex\]](#)
- [134] R Aaij *et al.* (LHCb collaboration), “Measurement of the fragmentation fraction ratio f_s/f_d and its dependence on B meson kinematics,” *JHEP* **1304**, 001 (2013), [arXiv:1301.5286 \[hep-ex\]](#)
- [135] R Aaij *et al.* (LHCb collaboration), “Measurement of CP observables in $B^0 \rightarrow DK^{*0}$ with $D \rightarrow K^+ K^-$,” *JHEP* **1303**, 067 (2013), [arXiv:1212.5205 \[hep-ex\]](#)
- [136] R Aaij *et al.* (LHCb collaboration), “Measurement of the forward energy flow in pp collisions at $\sqrt{s} = 7$ TeV,” *Eur.Phys.J.* **C73**, 2421 (2013), [arXiv:1212.4755 \[hep-ex\]](#)
- [137] R Aaij *et al.* (LHCb collaboration), “Measurement of the cross-section for $Z \rightarrow e^+ e^-$ production in pp collisions at $\sqrt{s} = 7$ TeV,” *JHEP* **1302**, 106 (2013), [arXiv:1212.4620 \[hep-ex\]](#)
- [138] R Aaij *et al.* (LHCb collaboration), “Measurement of J/ψ production in pp collisions at $\sqrt{s} = 2.76$ TeV,” *JHEP* **1302**, 041 (2013), [arXiv:1212.1045 \[hep-ex\]](#)
- [139] R Aaij *et al.* (LHCb collaboration), “Measurement of the time-dependent CP asymmetry in $B^0 \rightarrow J/\psi K_S^0$ decays,” *Phys.Lett.* **B721**, 24–31 (2013), [arXiv:1211.6093 \[hep-ex\]](#)
- [140] R Aaij *et al.* (LHCb collaboration), “First observation of the decay $B_{s2}^{*}(5840)^0 \rightarrow B^{*+} K^-$ and studies of excited B_s^0 mesons,” *Phys.Rev.Lett.* **110**, 151803 (2013), [arXiv:1211.5994 \[hep-ex\]](#)
- [141] R Aaij *et al.* (LHCb Collaboration), “First Evidence for the Decay $B_s^0 \rightarrow \mu^+ \mu^-$,” *Phys.Rev.Lett.* **110**, 021801 (2013), [arXiv:1211.2674 \[hep-ex\]](#)
- [142] R Aaij *et al.* (LHCb Collaboration), “Observation of $D^0 - \bar{D}^0$ oscillations,” *Phys.Rev.Lett.* **110**, 101802 (2013), [arXiv:1211.1230 \[hep-ex\]](#)
- [143] R Aaij *et al.* (LHCb Collaboration), “First observation of the decays $\bar{B}_{(s)}^0 \rightarrow D_s^+ K^- \pi^+ \pi^-$ and $\bar{B}_s^0 \rightarrow D_{s1}(2536)^+ \pi^-$,” *Phys.Rev.* **D86**, 112005 (2012), [arXiv:1211.1541 \[Unknown\]](#)

- [144] R Aaij *et al.* (LHCb Collaboration), “Measurement of the $B^0-\bar{B}^0$ oscillation frequency Δm_d with the decays $B^0 \rightarrow D^- \pi^+$ and $B^0 \rightarrow J/\psi K^{*0}$,” *Phys.Lett.* **B719**, 318–325 (2013), [arXiv:1210.6750 \[hep-ex\]](#)
- [145] R Aaij *et al.* (LHCb Collaboration), “A study of the Z production cross-section in pp collisions at $\sqrt{s} = 7$ TeV using tau final states,” *JHEP* **1301**, 111 (2013), [arXiv:1210.6289 \[hep-ex\]](#)
- [146] R Aaij *et al.* (LHCb Collaboration), “Measurement of the CP asymmetry in $B^0 \rightarrow K^{*0} \mu^+ \mu^-$ decays,” *Phys.Rev.Lett.* **110**, 031801 (2013), [arXiv:1210.4492 \[hep-ex\]](#)
- [147] R Aaij *et al.* (LHCb Collaboration), “Measurement of the $D^{+/-}$ production asymmetry in 7 TeV pp collisions,” *Phys.Lett.* **B718**, 902–909 (2013), [arXiv:1210.4112 \[Unknown\]](#)
- [148] R Aaij *et al.* (LHCb Collaboration), “First observation of the decay $B^+ \rightarrow \pi^+ \mu^+ \mu^-$,” *JHEP* **1212**, 125 (2012), [arXiv:1210.2645 \[hep-ex\]](#)
- [149] R Aaij *et al.* (LHCb Collaboration), “Evidence for the decay $B^0 \rightarrow J/\psi \omega$ and measurement of the relative branching fractions of B_s^0 meson decays to $J/\psi \eta$ and $J/\psi \eta'$,” *Nucl.Phys.* **B867**, 547–566 (2013), [arXiv:1210.2631 \[hep-ex\]](#)
- [150] R Aaij *et al.* (LHCb Collaboration), “First evidence for the annihilation decay mode $B^+ \rightarrow D_s^+ \phi$,” *JHEP* **1302**, 043 (2013), [arXiv:1210.1089 \[hep-ex\]](#)
- [151] R. Aaij *et al.* (LHCb Collaboration), “A model-independent Dalitz plot analysis of $B^\pm \rightarrow DK^\pm$ with $D \rightarrow K_S^0 h^+ h^-$ ($h = \pi, K$) decays and constraints on the CKM angle γ ,” *Phys.Lett.* **B718**, 43–55 (2012), [arXiv:1209.5869 \[hep-ex\]](#)
- [152] R Aaij *et al.* (LHCb Collaboration), “Measurements of B_c^+ production and mass with the $B_c^+ \rightarrow J/\psi \pi^+$ decay,” *Phys.Rev.Lett.* **109**, 232001 (2012), [arXiv:1209.5634 \[hep-ex\]](#)
- [153] R Aaij *et al.* (LHCb Collaboration), “Differential branching fraction and angular analysis of the $B^+ \rightarrow K^+ \mu^+ \mu^-$ decay,” *JHEP* **1302**, 105 (2013), [arXiv:1209.4284 \[hep-ex\]](#)
- [154] R. Aaij *et al.* (LHCb Collaboration), “Search for the rare decay $K_S \rightarrow \mu^+ \mu^-$,” *JHEP* **1301**, 090 (2013), [arXiv:1209.4029 \[hep-ex\]](#)
- [155] R Aaij *et al.* (LHCb Collaboration), “Measurement of the ratio of branching fractions $\text{BR}(B_0 \rightarrow K_0^{*0} \gamma)/\text{BR}(B_0^0 \rightarrow \phi \gamma)$ and the direct CP asymmetry in $B_0 \rightarrow K_0^{*0} \gamma$,” *Nucl.Phys.* **B867**, 1–18 (2013), [arXiv:1209.0313 \[hep-ex\]](#)
- [156] R. Aaij *et al.* (LHCb Collaboration), “Measurement of the fraction of $\Upsilon(1S)$ originating from $\chi_b(1P)$ decays in pp collisions at $\sqrt{s} = 7$ TeV,” *JHEP* **1211**, 031 (2012), [arXiv:1209.0282 \[hep-ex\]](#)
- [157] R Aaij *et al.* (LHCb Collaboration), “Implications of LHCb measurements and future prospects,” *Eur.Phys.J.* **C73**, 2373 (2013), [arXiv:1208.3355 \[hep-ex\]](#)
- [158] R Aaij *et al.* (LHCb Collaboration), “Measurement of the $B_s^0 \rightarrow J/\psi \bar{K}^{*0}$ branching fraction and angular amplitudes,” *Phys.Rev.* **D86**, 071102 (2012), [arXiv:1208.0738 \[hep-ex\]](#)
- [159] R Aaij *et al.* (LHCb Collaboration), “Study of D_{sJ} decays to $D^+ K_S^0$ and $D^0 K^+$ final states in pp collisions,” *JHEP* **1210**, 151 (2012), [arXiv:1207.6016 \[hep-ex\]](#)
- [160] R Aaij *et al.* (LHCb Collaboration), “Measurement of the effective $B_s^0 \rightarrow K^+ K^-$ lifetime,” *Phys.Lett.* **B716**, 393–400 (2012), [arXiv:1207.5993 \[hep-ex\]](#)
- [161] R Aaij *et al.* (LHCb Collaboration), “Observation of $B^0 \rightarrow \bar{D}^0 K^+ K^-$ and evidence of $B_s^0 \rightarrow \bar{D}^0 K^+ K^-$,” *Phys.Rev.Lett.* **109**, 131801 (2012), [arXiv:1207.5991 \[hep-ex\]](#)
- [162] R. Aaij *et al.* (LHCb Collaboration), “Measurement of the B_s effective lifetime in the $J/\psi f_0(980)$ final state,” *Phys.Rev.Lett.* **109**, 152002 (2012), [arXiv:1207.0878 \[hep-ex\]](#)
- [163] R Aaij *et al.* (LHCb Collaboration), “Measurement of prompt hadron production ratios in pp collisions at $\sqrt{s} = 0.9$ and 7 TeV,” *Eur.Phys.J.* **C72**, 2168 (2012), [arXiv:1206.5160 \[hep-ex\]](#)

- [164] R Aaij *et al.* (LHCb Collaboration), “Measurement of b -hadron branching fractions for two-body decays into charmless charged hadrons,” *JHEP* **1210**, 037 (2012), [arXiv:1206.2794 \[hep-ex\]](#)
- [165] R Aaij *et al.* (LHCb Collaboration), “Observation of excited Λ_b^0 baryons,” *Phys.Rev.Lett.* **109**, 172003 (2012), [arXiv:1205.3452 \[hep-ex\]](#)
- [166] R Aaij *et al.* (LHCb Collaboration), “Measurement of the isospin asymmetry in $B \rightarrow K^{(*)}\mu^+\mu^-$ decays,” *JHEP* **1207**, 133 (2012), [arXiv:1205.3422 \[hep-ex\]](#)
- [167] R Aaij *et al.* (LHCb Collaboration), “Observation of double charm production involving open charm in pp collisions at $\sqrt{s} = 7$ TeV,” *JHEP* **1206**, 141 (2012), [arXiv:1205.0975 \[hep-ex\]](#)
- [168] R Aaij *et al.* (LHCb Collaboration), “Measurement of the $B_s^0 \rightarrow J/\psi K_S^0$ branching fraction,” *Phys.Lett.* **B713**, 172–179 (2012), [arXiv:1205.0934 \[hep-ex\]](#)
- [169] R Aaij *et al.* (LHCb Collaboration), “Measurement of relative branching fractions of B decays to $\psi(2S)$ and J/ψ mesons,” *Eur.Phys.J.* **C72**, 2118 (2012), [arXiv:1205.0918 \[hep-ex\]](#)
- [170] R Aaij *et al.* (LHCb Collaboration), “Measurement of the $D_s^+ - D_s^-$ production asymmetry in 7 TeV pp collisions,” *Phys.Lett.* **B713**, 186–195 (2012), [arXiv:1205.0897 \[hep-ex\]](#)
- [171] R Aaij *et al.* (LHCb Collaboration), “Measurement of the CP-violating phase ϕ_s in $\bar{B}_s^0 \rightarrow J/\psi\pi^+\pi^-$ decays,” *Phys.Lett.* **B713**, 378–386 (2012), [arXiv:1204.5675 \[hep-ex\]](#)
- [172] R Aaij *et al.* (LHCb Collaboration), “Analysis of the resonant components in $B_s \rightarrow J/\psi\pi^+\pi^-$,” *Phys.Rev.* **D86**, 052006 (2012), [arXiv:1204.5643 \[hep-ex\]](#)
- [173] R Aaij *et al.* (LHCb Collaboration), “Measurement of the polarization amplitudes and triple product asymmetries in the $B_s^0 \rightarrow \phi\phi$ decay,” *Phys.Lett.* **B713**, 369–377 (2012), [arXiv:1204.2813 \[hep-ex\]](#)
- [174] R Aaij *et al.* (LHCb Collaboration), “Inclusive W and Z production in the forward region at $\sqrt{s} = 7$ TeV,” *JHEP* **1206**, 058 (2012), [arXiv:1204.1620 \[hep-ex\]](#)
- [175] R Aaij *et al.* (LHCb Collaboration), “Measurement of the ratio of prompt χ_c to J/ψ production in pp collisions at $\sqrt{s} = 7$ TeV,” *Phys.Lett.* **B718**, 431–440 (2012), [arXiv:1204.1462 \[hep-ex\]](#)
- [176] R Aaij *et al.* (LHCb Collaboration), “Measurement of $\psi(2S)$ meson production in pp collisions at $\sqrt{s}=7$ TeV,” *Eur.Phys.J.* **C72**, 2100 (2012), [arXiv:1204.1258 \[hep-ex\]](#)
- [177] R Aaij *et al.* (LHCb Collaboration), “Measurements of the branching fractions of the decays $B_s^0 \rightarrow D_s^\mp K^\pm$ and $B_s^0 \rightarrow D_s^- \pi^+$,” *JHEP* **1206**, 115 (2012), [arXiv:1204.1237 \[hep-ex\]](#)
- [178] R Aaij *et al.* (LHCb Collaboration), “First observation of the decay $B_c^+ \rightarrow J/\psi\pi^+\pi^-\pi^+$,” *Phys.Rev.Lett.* **108**, 251802 (2012), [arXiv:1204.0079 \[hep-ex\]](#)
- [179] R. Aaij *et al.* (LHCb Collaboration), “Strong constraints on the rare decays $B_s \rightarrow \mu^+\mu^-$ and $B^0 \rightarrow \mu^+\mu^-$,” *Phys.Rev.Lett.* **108**, 231801 (2012), [arXiv:1203.4493 \[hep-ex\]](#)
- [180] R. Aaij *et al.* (LHCb Collaboration), “Observation of CP violation in B^+ to DK^+ decays,” *Phys.Lett.* **B712**, 203–212 (2012), [arXiv:1203.3662 \[hep-ex\]](#)
- [181] R. Aaij *et al.* (LHCb Collaboration), “Measurements of the branching fractions and CP asymmetries of B^+ to $J/\psi\pi^+$ and B^+ to $\psi(2S)\pi^+$ decays,” *Phys.Rev.* **D85**, 091105 (2012), [arXiv:1203.3592 \[hep-ex\]](#)
- [182] R Aaij *et al.* (LHCb Collaboration), “Measurement of Upsilon production in pp collisions at $\sqrt{s} = 7$ TeV,” *Eur.Phys.J.* **C72**, 2025 (2012), [arXiv:1202.6579 \[hep-ex\]](#)
- [183] R Aaij *et al.* (LHCb Collaboration), “Measurement of the ratio of branching fractions $\mathcal{B}(B^0 \rightarrow K^{*0}\gamma)/\mathcal{B}(B_s^0 \rightarrow \phi\gamma)$,” *Phys.Rev.* **D85**, 112013 (2012), [arXiv:1202.6267 \[hep-ex\]](#)
- [184] R. Aaij *et al.* (LHCb Collaboration), “First evidence of direct CP violation in charmless two-body decays of B_s^0 mesons,” *Phys.Rev.Lett.* **108**, 201601 (2012), [arXiv:1202.6251 \[hep-ex\]](#)

- [185] R Aaij *et al.* (LHCb Collaboration), “Search for the $X(4140)$ state in $B^+ \rightarrow J/\psi\phi K^+$ decays,” *Phys.Rev.* **D85**, 091103 (2012), [arXiv:1202.5087 \[hep-ex\]](#)
- [186] R. Aaij *et al.* (LHCb Collaboration), “Opposite-side flavour tagging of B mesons at the LHCb experiment,” *Eur.Phys.J.* **C72**, 2022 (2012), [arXiv:1202.4979 \[hep-ex\]](#)
- [187] R. Aaij *et al.* (LHCb Collaboration), “Measurement of the B^\pm production cross-section in pp collisions at $\sqrt{s} = 7$ TeV,” *JHEP* **1204**, 093 (2012), [arXiv:1202.4812 \[hep-ex\]](#)
- [188] R Aaij *et al.* (LHCb Collaboration), “Determination of the sign of the decay width difference in the B_s system,” *Phys.Rev.Lett.* **108**, 241801 (2012), [arXiv:1202.4717 \[hep-ex\]](#)
- [189] R Aaij *et al.* (LHCb Collaboration), “Measurement of the cross-section ratio $\sigma(\chi_{c2})/\sigma(\chi_{c1})$ for prompt χ_c production at $\sqrt{s} = 7$ TeV,” *Phys.Lett.* **B714**, 215–223 (2012), [arXiv:1202.1080 \[hep-ex\]](#)
- [190] R. Aaij *et al.* (LHCb Collaboration), “Searches for Majorana neutrinos in B^- decays,” *Phys.Rev.* **D85**, 112004 (2012), [arXiv:1201.5600 \[hep-ex\]](#)
- [191] R Aaij *et al.* (LHCb Collaboration), “First observation of the decays $\bar{B}^0 \rightarrow D^+ K^- \pi^+ \pi^-$ and $B^- \rightarrow D^0 K^- \pi^+ \pi^-$,” *Phys.Rev.Lett.* **108**, 161801 (2012), [arXiv:1201.4402 \[hep-ex\]](#)
- [192] R. Aaij *et al.* (LHCb Collaboration), “Measurement of the effective $B_s^0 \rightarrow K^+ K^-$ lifetime,” *Phys.Lett.* **B707**, 349–356 (2012), [arXiv:1111.0521 \[hep-ex\]](#)