

Emiliano Furfaro

Emiliano Furfaro

Informazioni Personali

Anagrafica

Nome Emiliano Furfaro

e-mail emiliano.furfaro@uniroma1.it

Parametri bibliometrici

Pubblicazioni 359

Citazioni 24278

h-index 75

Formazione

- A.A. **Dottorato di Ricerca**, *Università degli Studi di Roma "Tor Vergata"*.
2015-2016 Titolo della tesi: "Precise measurement of the charged B meson mass at the LHCb experiment".
- A.A. **Laurea in Fisica con votazione 105/110**, *"Sapienza" Università di Roma*.
2008-2009 Titolo della tesi: "Studio ed ottimizzazione delle prestazioni delle camere a multifilo dell'esperimento LHCb".

Esperienza Lavorativa

da apr. 2019 "Sapienza" Università di Roma.

Tecnico.

Supporto alle attività del Laboratorio didattico di Ottica del Dipartimento di Fisica.

Dal 2019 Responsabile Unico di Progetto per procedure di acquisto di beni e servizi relativi ad attrezzature tecnico-scientifiche di importo superiore e inferiore la soglia comunitaria

2015-2019 Neat s.r.l., Roma (Italia).

Responsabile attività di verifica e validazione del software.

Sviluppo in codice C delle funzionalità di sistemi integrati real time.

Programmazione secondo le linee guida MISRA C per sistemi elettronici ferroviari in sicurezza con livello SIL4.

Bug fixing e test.

Attività di laboratorio.

- 2012-2016 Università degli Studi di Roma “Tor Vergata”.
Dottorato di Ricerca in Fisica.
Analisi statistica dei dati prodotti dall’esperimento LHCb.
Utilizzo di tecniche di “machine learning” (alberi decisionali) per l’estrazione del campione di segnale dai dati analizzati.
Definizione delle funzioni per i fit delle distribuzioni. Misura della massa del mesone B carico.
Esperto del monitoring delle camere a muoni dell’esperimento LHCb.
- 2010-2012 INFN, Sezione “Roma1”.
Borsa Tecnologo per attività di ricerca in Fisica delle Alte Energie nell’ambito dell’esperimento LHCb.
Programmazione embedded attraverso il linguaggio C.
Sviluppo di applicativi in ambiente WinCC/PVSS SCADA per la gestione dell’elettronica di front-end del rivelatore di muoni.
- ott. 2010 Alia-Space srl.
Programmatore.
Stage in programmazione C# e SQLServer volto alla gestione dei database attraverso windows forms.
- mag.-lug. 2007 CERN – European Organization for Nuclear Research.
Ricerca nell’ambito della collaborazione LHCb.
Test su banco e installazione delle camere a muoni sull’apparato sperimentale.
Test e hardware fixing delle camere in esercizio sull’apparato.
- 2005-2019 C.F Audio Systems.
Co-fondatore.
Progettazione elettronica e disegno dei telai in ambiente CAD.
Costruzione prototipi e prodotti finiti.

Corsi professionali

- 2005-2006 **Qualifica professionale in programmazione Java e C++.** *Centro Provinciale di Formazione Professionale “ADRIATICO” di Roma.*
- Luglio 2010 **Corso base Web developer ASP.NET**, tirocinio formativo della durata di 160 ore presso *Key To Business s.r.l.*
Principali materie: Object Oriented Programming, sintassi e semantica del linguaggio C#, introduzione alla Base Dati Sql Server, programmazione Web Asp.Net, accesso attraverso ADO.NET.

Attività Scientifica

Associazioni

- 2007-2017 CERN User
- 2010-2017 Associato INFN

Esperimento LHCb

Misura di precisione della Massa del Mesone B carico

Lo studio è stato condotto con il gruppo LHCb di Roma2 all'Università "Tor Vergata". È stato scelto un canale di decadimento del B carico soppresso ma particolarmente favorevole che garantisce una bassa sistematica dovuta alla scala dei momenti, basso Q -value. Grazie all'alta luminosità di LHCb è stato possibile raggiungere l'alta statistica richiesta per questo tipo di misura con i dati acquisiti nel 2011 e nel 2012. Ho studiato tale canale, $B^+ \rightarrow J/\psi \phi K^+$ con $J/\psi \rightarrow \mu^+ \mu^-$, $\phi \rightarrow K^+ K^-$, selezionando gli eventi di segnale rispetto a quelli di fondo attraverso l'uso di tecniche di machine learning, alberi decisionali BDT (*Boosted Decision Tree*). Ho così effettuato uno studio tramite simulazione e dati reali del segnale e del fondo per l'addestramento di tale BDT al fine di ottenere il miglior rapporto S/N . Ho quindi definito la migliore funzione che descrive la distribuzione di massa invariante attraverso lo studio di dati simulati per il fondo e il picco di risonanza. Grazie a questa analisi ho potuto migliorare la precisione della misura della massa del mesone B carico rispetto all'ultima migliore misura riportata in letteratura. In questo periodo ho continuato a seguire la manutenzione del sistema di controllo e monitoring del *Muon System* di LHCb iniziata nel corso del 2011 e in occasione dell'inizio del "Run2" di LHCb sono stato inserito nella lista degli esperti del *Muon System* con il ruolo di "Chamber Monitor Expert" delle camere a muoni.

Studio del *Branching Fraction* del canale $\psi(2S) \rightarrow \mu^+ \mu^-$

Con il gruppo LHCb di Roma2 e il gruppo dell'analisi dati di LHCb ho effettuato lo studio del decadimento della particella $\psi(2S)$ nel canale $\psi(2S) \rightarrow \mu^+ \mu^-$ attraverso il decadimento del mesone B^+ nel canale $B^+ \rightarrow \psi(2S) K^+$. In particolare ho eseguito la misura del *Branching Fraction* di tale canale che dalla precedente misura di LHCb, con i dati del solo anno 2010, mostrava una discrepanza con i valori riportati in letteratura. Ho effettuato la misura sfruttando il rapporto $\mathcal{B}(\psi(2S) \rightarrow \mu^+ \mu^-) / \mathcal{B}(\psi(2S) \rightarrow J/\psi \pi^+ \pi^- (J/\psi \rightarrow \mu^+ \mu^-))$: la presenza in un canale di due tracce cariche in più rispetto all'altro ha comportato che l'efficienza di tracciamento fosse un importante aspetto di questa analisi. Ho così principalmente condotto lo studio analizzando, sia con dati reali che con dati simulati, l'efficienza di ricostruzione delle tracce dei due pioni carichi nello spazio $\eta - p$ e analizzando la molteplicità delle tracce rivelate per i due canali di decadimento al fine di effettuare le correzioni alla misura che tenessero conto delle caratteristiche di rivelazione dell'apparato sperimentale.

Ricerca di risonanze esotiche nel decadimento del mesone B_s

Nell'ambito della ricerca di risonanze esotiche nel decadimento inclusivo $b \rightarrow J/\psi \phi \dots$, condotta dal gruppo LHCb della sezione di Roma2 in collaborazione con il gruppo dell'analisi dati di LHCb, mi sono occupato dell'analisi dello spettro di massa invariante $M(J/\psi \phi) - M(J/\psi)$ nella regione $1000 \div 2060 \text{ MeV}/c^2$ attraverso i dati raccolti dall'esperimento nel 2011 e nel 2012. La mia attività ha riguardato l'analisi e il confronto dello spettro ottenuto dai dati e dalla simulazione dei canali di decadimento al fine di studiare le strutture visibili per $M(J/\psi \phi) - M(J/\psi) \simeq 1200 \text{ MeV}/c^2$ e $M(J/\psi \phi) - M(J/\psi) \simeq 1400 \text{ MeV}/c^2$. In particolare per queste strutture non sono stati individuati meccanismi di riflessione, mancata ricostruzione di tutte le particelle prodotte nei decadimenti, che ne potessero spiegare la natura. È così stato ipotizzato che questi picchi siano dovuti al decadimento di una nuova particella chiamata $X(4300)$ e da una possibile struttura a bassa massa $X(4140)$. La mia analisi ha confermato l'esistenza delle due strutture evidenziando la necessità di raccogliere ulteriori dati e di incrementare i dati simulati al fine di poter interpretare come "nuove particelle" tali risonanze.

Sviluppo del Sistema di Controllo e Monitoring del Muon System

Nell'ambito della collaborazione LHCb, nel gruppo dei muoni di Roma1, ho collaborato alla gestione del sistema di controllo e monitoring del *Muon System* studiando il firmware scritto in linguaggio C delle schede ELMB (progettate e disegnate al CERN) che gestiscono la comunicazione con l'hardware di front-end basata sul bus I2C e sul protocollo CANOpen. Ho sviluppato durante il "Run1" un applicativo per il monitoring delle camere del rivelatore di muoni basato sul sistema SCADA PVSS con interfaccia a pannelli nel linguaggio C. Tale software permette la gestione *real time* dei 120.000 canali di elettronica di front-end, 250 schede di controllo (*Service boards*). In questo periodo di lavoro ho rilasciato diverse versioni di tale software che è usato per monitorare lo stato delle camere grazie a quattro possibili analisi effettuabili sia durante la presa dati che in fase di ottimizzazione. La versione attualmente usata si basa su un protocollo client-server da me sviluppato che permette l'apertura di più pannelli di controllo senza possibilità di sovrapporre le richieste all'hardware di front end. In parallelo allo sviluppo ho apportato dei miglioramenti a diversi pannelli preesistenti nel sistema di monitoraggio rendendoli più veloci da usare e aggiungendo funzionalità mancanti, nonché sistemandone alcuni non ben funzionanti. Questa attività ha richiesto la mia presenza nel sito dell'esperimento per cui ho effettuato diverse missioni al CERN lavorando quasi esclusivamente nella sala controllo di LHCb. Durante questi periodi ho avuto l'occasione di effettuare diversi turni come *piquet*, esperto reperibile, del sistema dei muoni.

Studio delle prestazioni delle camere proporzionali a multi-filo

Durante il periodo di tesi di laurea mi sono occupato dello studio e dell'ottimizzazione delle prestazioni delle camere a multifilo (MWPC) del rivelatore di muoni dell'esperimento LHCb attraverso i raggi cosmici. Per tale scopo ho partecipato alla realizzazione di una stazione di test che permette di acquisire fino a 600 canali di elettronica. Grazie a tale stazione è stato possibile studiare nel dettaglio le prestazioni dei diversi tipi di camere. In particolare mi sono occupato della ottimizzazione del sistema di test e dello sviluppo di un sistema di tracciamento dei raggi cosmici che consentisse di ricostruire la traiettoria delle particelle e di individuare le zone colpite di ciascuna camera in esame. I dati acquisiti sono stati successivamente analizzati da un software, che ho realizzato in ambiente ROOT nel linguaggio C++, in grado di ricostruire la traccia di una singola particella attraverso una selezione degli eventi e un fit.

Test e installazione delle camere proporzionali a multi-filo

Durante il periodo di installazione dell'esperimento ho collaborato all'attività di test di funzionamento delle camere a multifilo del rivelatore di muoni di LHCb, sia in laboratorio che direttamente nel sito dell'esperimento. Mi sono occupato dei test su banco delle camere e dell'installazione delle camere sull'apparato sperimentale. Ho inoltre lavorato ai test e all'*hardware fixing* delle camere per prepararle all'esercizio in apparato.

Test di cristalli per lo sviluppo di un calorimetro per l'esperimento SuperB

Ho iniziato a lavorare nel gruppo impegnato alla progettazione del calorimetro elettromagnetico dell'esperimento SuperB partecipando ai test eseguiti all'impianto di irraggiamento "Calliope" (presso il Centro Ricerche ENEA, Casaccia) per lo studio dell'invecchiamento di prototipi basati su cristalli di LYSO e BGO nell'ambito della ricerca della migliore tecnologia per il calorimetro.

Pubblicazioni

Articoli su rivista

1. A. Ciardiello, S. Altieri, F. Ballarini, V. Bocci, S. Bortolussi, L. Cansolino, D. Carlotti, M. Ciocca, A. Cruciani, R. Faccini, A. Facoetti, C. Ferrari, L. Ficcadenti, E. Furfaro, S. Giagu, F. Iacoangeli, G. Macioce, C. Mancini-Terracciano, A. Messina, L. Milazzo, S. Pacifico, S. Piccolella, I. Postuma, D. Rotili, V. Vercesi, C. Voena, F. Vulcano, and S. Capuani. “Multimodal evaluation of ^{19}F -BPA internalization in pancreatic cancer cells for boron capture and proton therapy potential applications”. *Physica Medica, European Journal of Medical Physics*, 2022.
10.1016/j.ejmp.2021.12.011.
2. R. Aaij *et al.* [LHCb Collaboration]. “Search for CP Violation in $D_S^+ \rightarrow K_S^0 \pi^+$, $D_S^+ \rightarrow K_S^0 K^+$ and $D^+ \rightarrow \phi \pi^+$ Decays”. *European Physical Journal C*, 2019.
10.1140/epjc/s10052-019-7218-1.
3. R. Aaij *et al.* [LHCb Collaboration]. “Measurements of CP asymmetries in charmless four-body Λ_b^0 and Ξ_b^0 decays”. *European Physical Journal C*, 2019.
10.1140/epjc/s10052-019-7218-1.
4. R. Aaij *et al.* [LHCb Collaboration]. “Measurement of the ratio of branching fractions of the decays $\Lambda_b^0 \rightarrow \Psi(2S)\Lambda$ and $\Lambda_b^0 \rightarrow J/\Psi\Lambda$ ”. *Journal of High Energy Physics*, 2019.
10.1007/JHEP03(2019)126.
5. R. Aaij *et al.* [LHCb Collaboration]. “Erratum to: Differential branching fraction and angular analysis of $\Lambda_b^0 \rightarrow \Lambda \mu^+ \mu^-$ decays”. *Journal of High Energy Physics*, 2018.
10.1007/JHEP09(2018)145.
6. R. Aaij *et al.* [LHCb Collaboration]. “Measurement of forward top pair production in the dilepton channel in pp collisions at $\sqrt{s} = 13$ TeV”. *Journal of High Energy Physics*, 2018.
10.1007/JHEP08(2018)174.
7. R. Aaij *et al.* [LHCb Collaboration]. “Search for CP violation using triple product asymmetries in $\Lambda_b^0 \rightarrow p K^- \pi^+ \pi^-$, $\Lambda_b^0 \rightarrow p K^- K^+ K^-$ and $\Xi_b^0 \rightarrow p K^- K^- \pi^+$ decays”. *Journal of High Energy Physics*, 2018.
10.1007/JHEP08(2018)039.
8. R. Aaij *et al.* [LHCb Collaboration]. “Amplitude Analysis of the Decay $\bar{B}^0 \rightarrow K_S^0 \pi^+ \pi^-$ and First Observation of the CP Asymmetry in $\bar{B}^0 \rightarrow K^*(892)^- \pi^+$ ”. *Physical Review Letters*, 2018.
10.1103/PhysRevLett.120.261801.
9. R. Aaij *et al.* [LHCb Collaboration]. “Studies of the resonance structure in $D^0 \rightarrow K^\mp \pi^\pm \pi^\pm \pi^\mp$ decays”. *European Physical Journal C*, 2018.
10.1140/epjc/s10052-018-5758-4.

10. R. Aaij *et al.* [LHCb Collaboration]. “Evidence for the Rare Decay $\Sigma^+ \rightarrow p\mu^+\mu^-$ ”. *Physical Review Letters*, 2018.
10.1103/PhysRevLett.120.221803.
11. R. Aaij *et al.* [LHCb Collaboration]. “Erratum to: Measurement of CP observables in $B^\pm \rightarrow DK^{*\pm}$ decays using two- and four-body D final states”. *Journal of High Energy Physics*, 2018.
10.1007/JHEP05(2018)067.
12. R. Aaij *et al.* [LHCb Collaboration]. “Search for the rare decay $\Lambda_c^+ \rightarrow p\mu^+\mu^-$ ”. *Physical Review D*, 2018.
10.1103/PhysRevD.97.091101.
13. R. Aaij *et al.* [LHCb Collaboration]. “Search for B_c^+ decays to two charm mesons”. *Nuclear Physics B*, 2018.
10.1016/j.nuclphysb.2018.03.015.
14. R. Aaij *et al.* [LHCb Collaboration]. “Measurement of the Ratio of the $B^0 \rightarrow D^{*-}\tau^+\nu_\tau$ and $B^0 \rightarrow D^{*-}\tau^+\nu_\mu$ Branching Fractions Using Three-Prong τ -Lepton Decays”. *Physical Review Letters*, 2018.
10.1103/PhysRevLett.120.171802.
15. R. Aaij *et al.* [LHCb Collaboration]. “Test of lepton flavor universality by the measurement of the $B^0 \rightarrow D^{*-}\tau^+\nu_\tau$ branching fraction using three-prong τ decays”. *Physical Review D*, 2018.
10.1103/PhysRevD.97.072013.
16. R. Aaij *et al.* [LHCb Collaboration]. “Measurement of the Ratio of Branching Fractions $B(B_c^+ \rightarrow J/\psi\tau^+\nu_\tau)$ ”. *Physical Review Letters*, 2018.
10.1103/PhysRevLett.120.121801.
17. R. Aaij *et al.* [LHCb Collaboration]. “A measurement of the CP asymmetry difference between $\Lambda_c^+ \rightarrow pK^-K^+$ and $p\pi^+\pi^-$ decays”. *Journal of High Energy Physics*, 2018.
10.1007/JHEP03(2018)182.
18. R. Aaij *et al.* [LHCb Collaboration]. “First measurement of the CP -violating phase $\phi_s^{d\bar{d}}$ in $B_s^0 \rightarrow (K^+\pi^-)(K^-\pi^+)$ decays”. *Journal of High Energy Physics*, 2018.
10.1007/JHEP03(2018)140.
19. R. Aaij *et al.* [LHCb Collaboration]. “Measurement of CP asymmetry in $B_s^0 \rightarrow D_s^\mp K^\pm$ decays”. *Journal of High Energy Physics*, 2018.
10.1007/JHEP03(2018)059.
20. R. Aaij *et al.* [LHCb Collaboration]. “Measurements of the branching fractions of $\Lambda_c^+ \rightarrow p\pi^-\pi^+$, $\Lambda_c^+ \rightarrow pK^-K^+$, and $\Lambda_c^+ \rightarrow p\pi^-K^+$ ”. *Journal of High Energy Physics*, 2018.
10.1007/JHEP03(2018)043.

21. R. Aaij *et al.* [LHCb Collaboration]. “Search for the lepton-flavour violating decays $B_s^0 \rightarrow e^\pm \mu^\mp$ ”. *Journal of High Energy Physics*, 2018.
10.1007/JHEP03(2018)078.
22. R. Aaij *et al.* [LHCb Collaboration]. “Measurement of CP observables in $B^\pm \rightarrow D^{(*)} K^{pm}$ and $B^{pm} \rightarrow D^{(*)} \pi^{pm}$ decays”. *Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics*, 2018.
10.1016/j.physletb.2017.11.070.
23. R. Aaij *et al.* [LHCb Collaboration]. “Search for Dark Photons Produced in 13 TeV pp Collisions”. *Physical Review Letters*, 2018.
10.1103/PhysRevLett.120.061801.
24. R. Aaij *et al.* [LHCb Collaboration]. “Measurement of branching fractions of charmless four-body Λ_b^0 and Ξ_b^0 decays”. *Journal of High Energy Physics*, 2018.
10.1007/JHEP02(2018)098.
25. R. Aaij *et al.* [LHCb Collaboration]. “First observation of forward $Z \rightarrow b\bar{b}$ production in pp collisions at $s = 8$ TeV”. *Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics*, 2018.
10.1016/j.physletb.2017.11.066.
26. R. Aaij *et al.* [LHCb Collaboration]. “Search for weakly decaying b -flavored pentaquarks”. *Physical Review D*, 2018.
10.1103/PhysRevD.97.032010.
27. R. Aaij *et al.* [LHCb Collaboration]. “Updated determination of $D^0 - \bar{D}^0$ mixing and CP violation parameters with $D^0 \rightarrow K^+ \pi^-$ ”. *Physical Review D*, 2018.
10.1103/PhysRevD.97.031101.
28. R. Aaij *et al.* [LHCb Collaboration]. “Search for excited B_c^+ states”. *Journal of High Energy Physics*, 2018.
10.1007/JHEP01(2018)138.
29. R. Aaij *et al.* [LHCb Collaboration]. “First observation of $B^+ \rightarrow D_s^+ K^+ K^-$ decays and a search for $B^+ \rightarrow D_s^+ \phi$ decays”. *Journal of High Energy Physics*, 2018.
10.1007/JHEP01(2018)131.
30. R. Aaij *et al.* [LHCb Collaboration]. “First Observation of the Rare Purely Baryonic Decay $B^0 \rightarrow p\bar{p}$ ”. *Physical Review Letters*, 2017.
10.1103/PhysRevLett.119.232001.
31. R. Aaij *et al.* [LHCb Collaboration]. “Updated search for long-lived particles decaying to jet pairs”. *European Physical Journal C*, 2017.
10.1140/epjc/s10052-017-5178-x.
32. R. Aaij *et al.* [LHCb Collaboration]. “Measurement of the shape of the $\Lambda_b^0 \rightarrow \Lambda_c^+ \mu^- \nu_\mu$ differential decay rate”. *Physical Review D*, 2017.
10.1103/PhysRevD.96.112005.

33. R. Aaij *et al.* [LHCb Collaboration]. “Measurement of the $\Upsilon(nS)$ polarizations in pp collisions at $\sqrt{s} = 7$ and 8 TeV”. *Journal of High Energy Physics*, 2017. 10.1007/JHEP12(2017)110.
34. R. Aaij *et al.* [LHCb Collaboration]. “Measurement of the B^\pm production cross-section in pp collisions at 10.1016/j.physletb.2017.11.066 and 13 TeV”. *Journal of High Energy Physics*, 2017. 10.1007/JHEP12(2017)026.
35. R. Aaij *et al.* [LHCb Collaboration]. “Bose-Einstein correlations of same-sign charged pions in the forward region in pp collisions at $\sqrt{s} = 7$ TeV”. *Journal of High Energy Physics*, 2017. 10.1007/JHEP12(2017)025.
36. R. Aaij *et al.* [LHCb Collaboration]. “ χ_{c1} and χ_{c2} Resonance Parameters with the Decays $\chi_{c1,c2} \rightarrow J/\psi \mu^+ \mu^-$ ”. *Physical Review Letters*, 2017. 10.1103/PhysRevLett.119.221801.
37. R. Aaij *et al.* [LHCb Collaboration]. “Measurement of B^0 , B_s^0 , B^+ and Λ_b^0 production asymmetries in 7 and 8 TeV proton–proton collisions”. *Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics*, 2017. 10.1016/j.physletb.2017.09.023.
38. R. Aaij *et al.* [LHCb Collaboration]. “Prompt and nonprompt J/ψ production and nuclear modification in pPb collisions at $sNN = 8.16$ TeV”. *Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics*, 2017. 10.1016/j.physletb.2017.09.058.
39. R. Aaij *et al.* [LHCb Collaboration]. “Search for Baryon-Number Violating Ξ_b^0 Oscillations”. *Physical Review Letters*, 2017. 10.1103/PhysRevLett.119.181807.
40. R. Aaij *et al.* [LHCb Collaboration]. “Updated branching fraction measurements of $B_{(s)}^0 \rightarrow K_S^0 h^+ h'^-$ decays”. *Journal of High Energy Physics*, 2017. 10.1007/JHEP11(2017)027.
41. R. Aaij *et al.* [LHCb Collaboration]. “LHCb Collaboration”. *Nuclear Physics A*, 2017. 10.1016/S0375-9474(17)30380-9.
42. R. Aaij *et al.* [LHCb Collaboration]. “Measurement of CP violation in $B^0 \rightarrow J/\psi K_S^0$ and $B^0 \rightarrow \psi(2S) K_S^0$ decays”. *Journal of High Energy Physics*, 2017. 10.1007/JHEP11(2017)170.
43. R. Aaij *et al.* [LHCb Collaboration]. “Measurement of CP observables in $B^\pm \rightarrow DK^{*\pm}$ decays using two- and four-body D final states”. *Journal of High Energy Physics*, 2017. 10.1007/JHEP11(2017)156.

44. R. Aaij *et al.* [LHCb Collaboration]. “Study of $b\bar{b}$ correlations in high energy proton-proton collisions”. *Journal of High Energy Physics*, 2017.
10.1007/JHEP11(2017)030.
45. R. Aaij *et al.* [LHCb Collaboration]. “Observation of D^0 Meson Decays to $\pi^+\pi^-\mu^+\mu^-$ and $K^+K^-\mu^+\mu^-$ Final States”. *Physical Review Letters*, 2017.
10.1103/PhysRevLett.119.181805.
46. R. Aaij *et al.* [LHCb Collaboration]. “Improved limit on the branching fraction of the rare decay $K_S^0 \rightarrow \mu^+\mu^-$ ”. *European Physical Journal C*, 2017.
10.1140/epjc/s10052-017-5230-x.
47. R. Aaij *et al.* [LHCb Collaboration]. “Erratum to: Measurement of the J/ψ pair production cross-section in pp collisions at $\sqrt{s} = 13$ TeV”. *Journal of High Energy Physics*, 2017.
10.1007/JHEP10(2017)068.
48. R. Aaij *et al.* [LHCb Collaboration]. “Study of prompt D^0 meson production in pPb collisions at $\sqrt{sNN} = 5$ TeV”. *Journal of High Energy Physics*, 2017.
10.1007/JHEP10(2017)090.
49. R. Aaij *et al.* [LHCb Collaboration]. “Observation of the Doubly Charmed Baryon Ξ_{cc}^{++} ”. *Physical Review Letters*, 2017.
10.1103/PhysRevLett.119.112001.
50. R. Aaij *et al.* [LHCb Collaboration]. “Measurement of B_s^0 and D_s^- Meson Lifetimes”. *Physical Review Letters*, 2017.
10.1103/PhysRevLett.119.101801.
51. R. Aaij *et al.* [LHCb Collaboration]. “Study of charmonium production in b -hadron decays and first evidence for the decay B_s^0 ”. *European Physical Journal C*, 2017.
10.1140/epjc/s10052-017-5151-8.
52. R. Aaij *et al.* [LHCb Collaboration]. “Observation of the Decays $\Lambda_b^0 \rightarrow \chi_{c1}pK^-$ and $\Lambda_b^0 \rightarrow \chi_{c1}p\bar{K}^-$ ”. *Physical Review Letters*, 2017.
10.1103/PhysRevLett.119.062001.
53. R. Aaij *et al.* [LHCb Collaboration]. “Test of lepton universality with $B^0 \rightarrow K^{*0}l^+l^-$ decays”. *Journal of High Energy Physics*, 2017.
10.1007/JHEP08(2017)055.
54. R. Aaij *et al.* [LHCb Collaboration]. “Resonances and CP violation in B_s^0 and $\bar{B}_s^0 \rightarrow J/\psi K^+K^-$ decays in the mass region above the $\phi(1020)$ ”. *Journal of High Energy Physics*, 2017.
10.1007/JHEP08(2017)037.
55. R. Aaij *et al.* [LHCb Collaboration]. “First Observation of a Baryonic B_s^0 Decay”. *Physical Review Letters*, 2017.
10.1103/PhysRevLett.119.041802.

56. R. Aaij *et al.* [LHCb Collaboration]. “Observation of the $B^+ \rightarrow D^{*-} K^+ \pi^+$ decay”. *Physical Review D*, 2017.
10.1103/PhysRevD.96.011101.
57. R. Aaij *et al.* [LHCb Collaboration]. “Observation of the decay $B_s^0 \rightarrow \eta_c \phi$ and evidence for $B_s^0 \rightarrow \eta_c \pi^+ \pi^-$ ”. *Journal of High Energy Physics*, 2017.
10.1007/JHEP07(2017)021.
58. R. Aaij *et al.* [LHCb Collaboration]. “Measurement of the CP Violation Parameter A_Γ in $D^0 \rightarrow K^+ K^-$ and $D^0 \rightarrow \pi^+ \pi^-$ Decays”. *Physical Review Letters*, 2017.
10.1103/PhysRevLett.118.261803.
59. R. Aaij *et al.* [LHCb Collaboration]. “Search for the Decays $B_s^0 \rightarrow \tau^+ \tau^-$ and $B^0 \rightarrow \tau^+ \tau^-$ ”. *Physical Review Letters*, 2017.
10.1103/PhysRevLett.118.251802.
60. R. Aaij *et al.* [LHCb Collaboration]. “Search for CP violation in the phase space of $D^0 \rightarrow \pi^+ \pi^- \pi^+ \pi^-$ decays”. *Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics*, 2017.
10.1016/j.physletb.2017.03.062.
61. R. Aaij *et al.* [LHCb Collaboration]. “Observation of $\eta_c(2S) \rightarrow p \bar{p}$ and search for $X(3872) \rightarrow p \bar{p}$ decays”. *Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics*, 2017.
10.1016/j.physletb.2017.03.046.
62. R. Aaij *et al.* [LHCb Collaboration]. “Measurements of prompt charm production cross-sections in pp collisions at $\sqrt{s} = 5$ TeV”. *Journal of High Energy Physics*, 2017.
10.1007/JHEP06(2017)147.
63. R. Aaij *et al.* [LHCb Collaboration]. “Observation of the decay $\Lambda_b^0 \rightarrow p K^- \mu^+ \mu^-$ and a search for CP violation”. *Journal of High Energy Physics*, 2017.
10.1007/JHEP06(2017)108.
64. R. Aaij *et al.* [LHCb Collaboration]. “Measurement of the J/ψ pair production cross-section in pp collisions at $\sqrt{s} = 13$ TeV”. *Journal of High Energy Physics*, 2017.
10.1007/JHEP06(2017)047.
65. R. Aaij *et al.* [LHCb Collaboration]. “Measurement of the $B_s^0 \rightarrow \mu^+ \mu^-$ Branching Fraction and Effective Lifetime and Search for $B^0 \rightarrow \mu^+ \mu^-$ Decays”. *Physical Review Letters*, 2017.
10.1103/PhysRevLett.118.191801.
66. R. Aaij *et al.* [LHCb Collaboration]. “Study of J/ψ Production in Jets”. *Physical Review Letters*, 2017.
10.1103/PhysRevLett.118.192001.

67. R. Aaij *et al.* [LHCb Collaboration]. “Observation of Five New Narrow Ω_c^0 States Decaying to $\Xi_c^+ K^-$ ”. *Physical Review Letters*, 2017.
10.1103/PhysRevLett.118.182001.
68. R. Aaij *et al.* [LHCb Collaboration]. “Erratum to: Measurement of forward J/ψ production cross-sections in pp collisions at $\sqrt{s} = 13$ TeV”. *Journal of High Energy Physics*, 2017.
10.1007/JHEP05(2017)063.
69. R. Aaij *et al.* [LHCb Collaboration]. “Search for the $B_s^0 \rightarrow \eta' \phi$ decay”. *Journal of High Energy Physics*, 2017.
10.1007/JHEP05(2017)158.
70. R. Aaij *et al.* [LHCb Collaboration]. “Erratum to: Measurements of prompt charm production cross-sections in pp collisions at $\sqrt{s} = 13$ TeV”. *Journal of High Energy Physics*, 2017.
10.1007/JHEP05(2017)074.
71. R. Aaij *et al.* [LHCb Collaboration]. “Study of the $D^0 p$ amplitude in $\Lambda_b^0 \rightarrow D^0 p \pi^-$ decays”. *Journal of High Energy Physics*, 2017.
10.1007/JHEP05(2017)030.
72. R. Aaij *et al.* [LHCb Collaboration]. “Measurement of CP asymmetry in $D^0 \rightarrow K^+ K^-$ decays”. *Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics*, 2017.
10.1016/j.physletb.2017.01.061.
73. R. Aaij *et al.* [LHCb Collaboration]. “Measurement of forward $t\bar{t}$, $W + b\bar{b}$ and $W + c\bar{c}$ production in pp collisions at $\sqrt{s} = 8$ TeV”. *Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics*, 2017.
10.1016/j.physletb.2017.01.044.
74. R. Aaij *et al.* [LHCb Collaboration]. “Search for long-lived scalar particles in $B^+ \rightarrow K^+ \chi(\mu^+ \mu^-)$ decays”. *Physical Review D*, 2017.
10.1103/PhysRevD.95.071101.
75. R. Aaij *et al.* [LHCb Collaboration]. “Evidence for the two-body charmless baryonic decay $B^+ \rightarrow p \bar{\Lambda}$ ”. *Journal of High Energy Physics*, 2017.
10.1007/JHEP04(2017)162.
76. R. Aaij *et al.* [LHCb Collaboration]. “Erratum to: Measurements of the S-wave fraction in $B^0 \rightarrow K^+ \pi^- \mu^+ \mu^-$ decays and the $B^0 \rightarrow K^*(892)^0 \mu^+ \mu^-$ differential branching fraction”. *Journal of High Energy Physics*, 2017.
10.1007/JHEP04(2017)142.
77. R. Aaij *et al.* [LHCb Collaboration]. “New algorithms for identifying the flavour of B^0 mesons using pions and protons”. *European Physical Journal C*, 2017.
10.1140/epjc/s10052-017-4731-y.

78. R. Aaij *et al.* [LHCb Collaboration]. “Observation of the suppressed decay $\Lambda_b^0 \rightarrow p\pi^-\mu^+\mu^-$ ”. *Journal of High Energy Physics*, 2017.
10.1007/JHEP04(2017)029.
79. R. Aaij *et al.* [LHCb Collaboration]. “Search for massive long-lived particles decaying semileptonically in the LHCb detector”. *European Physical Journal C*, 2017.
10.1140/epjc/s10052-017-4744-6.
80. R. Aaij *et al.* [LHCb Collaboration]. “Measurement of matter-antimatter differences in beauty baryon decays”. *Nature Physics*, 2017.
10.1038/nphys4021.
81. R. Aaij *et al.* [LHCb Collaboration]. “Observation of $B_c^+ \rightarrow D^0 K^+$ Decays”. *Physical Review Letters*, 2017.
10.1103/PhysRevLett.118.111803.
82. R. Aaij *et al.* [LHCb Collaboration]. “Measurements of charm mixing and CP violation using $D^0 \rightarrow K^\pm \pi^\pm$ decays”. *Physical Review D*, 2017.
10.1103/PhysRevD.95.052004.
83. R. Aaij *et al.* [LHCb Collaboration]. “Measurement of the B^\pm production asymmetry and the CP asymmetry in $B^\pm \rightarrow J/\psi K^\pm$ decays”. *Physical Review D*, 2017.
10.1103/PhysRevD.95.052005.
84. R. Aaij *et al.* [LHCb Collaboration]. “Measurement of the phase difference between short- and long-distance amplitudes in the $B^+ \rightarrow K^+ \mu^+ \mu^-$ decay”. *European Physical Journal C*, 2017.
10.1140/epjc/s10052-017-4703-2.
85. R. Aaij *et al.* [LHCb Collaboration]. “Measurement of the ratio of branching fractions and difference in CP asymmetries of the decays $B^+ \rightarrow J/\psi \pi^+$ and $B^+ \rightarrow J/\psi K^+$ ”. *Journal of High Energy Physics*, 2017.
10.1007/JHEP03(2017)036.
86. R. Aaij *et al.* [LHCb Collaboration]. “Search for decays of neutral beauty mesons into four muons”. *Journal of High Energy Physics*, 2017.
10.1007/JHEP03(2017)001.
87. R. Aaij *et al.* [LHCb Collaboration]. “Observation of $B_c^+ \rightarrow J/\psi D^* K^*$ decays”. *Physical Review D*, 2017.
10.1103/PhysRevD.95.032005.
88. R. Aaij *et al.* [LHCb Collaboration]. “Observation of the Annihilation Decay Mode $B^0 \rightarrow K^+ K^-$ ”. *Physical Review Letters*, 2017.
10.1103/PhysRevLett.118.081801.
89. R. Aaij *et al.* [LHCb Collaboration]. “Observation of the Decay $\Xi_b^- K^- K^-$ ”. *Physical Review Letters*, 2017.
10.1103/PhysRevLett.118.071801.

90. R. Aaij *et al.* [LHCb Collaboration]. “Search for the suppressed decays $B^+ \rightarrow K^+ K^+ \pi^-$ and $B^+ \rightarrow \pi^+ \pi^+ K^-$ ”. *Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics*, 2017.
10.1016/j.physletb.2016.11.053.
91. R. Aaij *et al.* [LHCb Collaboration]. “Measurement of the b -Quark Production Cross Section in 7 and 13 TeV pp Collisions”. *Physical Review Letters*, 2017.
10.1103/PhysRevLett.118.052002.
92. R. Aaij *et al.* [LHCb Collaboration]. “Observation of $B^+ \rightarrow J/\psi 3\pi^+ 2\pi^-$ and $B^+ \rightarrow \psi(2S)\pi^+ \pi^+ \pi^-$ decays”. *European Physical Journal C*, 2017.
10.1140/epjc/s10052-017-4610-6.
93. R. Aaij *et al.* [LHCb Collaboration]. “Observation of $J/\psi\phi$ Structures Consistent with Exotic States from Amplitude Analysis of $B^+ \rightarrow J/\psi\phi K^+$ Decays”. *Physical Review Letters*, 2017.
10.1103/PhysRevLett.118.022003.
94. R. Aaij *et al.* [LHCb Collaboration]. “Amplitude analysis of $B^+ \rightarrow J/\psi\phi K^+$ decays”. *Physical Review D*, 2017.
10.1103/PhysRevD.95.012002.
95. R. Aaij *et al.* [LHCb Collaboration]. “Observation of the decay $B_s^0 \rightarrow \phi\pi^+\pi^-$ and evidence for $B^0 \rightarrow \phi\pi^+\pi^-$ ”. *Physical Review D*, 2017.
10.1103/PhysRevD.95.012006.
96. R. Aaij *et al.* [LHCb Collaboration]. “Search for the CP -violating strong decays $\eta \rightarrow \pi^+\pi^-$ and $\eta'(958) \rightarrow \pi^+\pi^-$ ”. *Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics*, 2017.
10.1016/j.physletb.2016.11.032.
97. R. Aaij *et al.* [LHCb Collaboration]. “First Experimental Study of Photon Polarization in Radiative B_s^0 Decays”. *Physical Review Letters*, 2017.
10.1103/PhysRevLett.118.021801.
98. R. Aaij *et al.* [LHCb Collaboration]. “Measurement of CP asymmetries in $D^\pm \rightarrow \eta'\pi^\pm$ and $D_s^\pm \rightarrow \eta'\pi^\pm$ decays”. *Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics*, 2017.
10.1016/j.physletb.2017.05.013.
99. R. Aaij *et al.* [LHCb Collaboration]. “Observation of charmless baryonic decays $B_s^0 \rightarrow p\bar{p}hh'^-$ ”. *Physical Review D*, 2017.
10.1103/PhysRevD.96.051103.
100. R. Aaij *et al.* [LHCb Collaboration]. “Observation of the $\Xi_b^- \rightarrow J/\psi \Lambda K^-$ decay”. *Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics*, 2017.
10.1016/j.physletb.2017.06.045.

101. R. Aaij *et al.* [LHCb Collaboration]. “Measurement of CP Violation in $B^0 \rightarrow D^+ D^-$ Decays”. *Physical Review Letters*, 2016.
10.1103/PhysRevLett.117.261801.
102. R. Aaij *et al.* [LHCb Collaboration]. “Measurement of the CKM angle γ from a combination of LHCb results”. *Journal of High Energy Physics*, 2016.
10.1007/JHEP12(2016)087.
103. R. Aaij *et al.* [LHCb Collaboration]. “Differential branching fraction and angular moments analysis of the decay $B^0 \rightarrow K^+ \pi^- \mu^+ \mu^-$ in the $K_{0,2}^*(1430)^0$ region”. *Journal of High Energy Physics*, 2016.
10.1007/JHEP12(2016)065.
104. R. Aaij *et al.* [LHCb Collaboration]. “Search for Higgs-like bosons decaying into long-lived exotic particles”. *European Physical Journal C*, 2016.
10.1140/epjc/s10052-016-4489-7.
105. R. Aaij *et al.* [LHCb Collaboration]. “Study of B_c^+ decays to the $K^+ K^- \pi^+$ final state and evidence for the decay $B_c^+ \rightarrow \chi_{c0} \pi^+$ ”. *Physical Review D*, 2016.
10.1103/PhysRevD.94.091102.
106. R. Aaij *et al.* [LHCb Collaboration]. “Measurement of the $B_s^0 \rightarrow J/\psi \eta$ lifetime”. *Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics*, 2016.
10.1016/j.physletb.2016.10.006.
107. R. Aaij *et al.* [LHCb Collaboration]. “Measurements of long-range near-side angular correlations in $\sqrt{s_{NN}} = 5$ TeV proton-lead collisions in the forward region”. *Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics*, 2016.
10.1016/j.physletb.2016.09.064.
108. R. Aaij *et al.* [LHCb Collaboration]. “First study of the CP -violating phase and decay-width difference in $B_s^0 \rightarrow \psi(2S) \phi$ decays”. *Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics*, 2016.
10.1016/j.physletb.2016.09.028.
109. R. Aaij *et al.* [LHCb Collaboration]. “Measurements of the S-wave fraction in $B^0 \rightarrow K^+ \pi^- \mu^+ \mu^-$ decays and the $B^0 \rightarrow K^*(892)^0 \mu^+ \mu^-$ differential branching fraction”. *Journal of High Energy Physics*, 2016.
10.1007/JHEP11(2016)047.
110. R. Aaij *et al.* [LHCb Collaboration]. “Search for Structure in the $B_s^0 \pi^\pm$ Invariant Mass Spectrum”. *Physical Review Letters*, 2016.
10.1103/PhysRevLett.117.152003.
111. R. Aaij *et al.* [LHCb Collaboration]. “Amplitude analysis of $B^- \rightarrow D^+ \pi^- \pi^-$ decays”. *Physical Review D*, 2016.
10.1103/PhysRevD.94.072001.

112. R. Aaij *et al.* [LHCb Collaboration]. “Measurement of forward $W \rightarrow e\nu$ production in pp collisions at $\sqrt{s} = 8$ TeV”. *Journal of High Energy Physics*, 2016.
10.1007/JHEP10(2016)030.
113. R. Aaij *et al.* [LHCb Collaboration]. “Measurement of the ratio of branching fractions $\mathcal{B}(B_c^+ \rightarrow J/\psi K^+)/\mathcal{B}(B_c^+ \rightarrow J/\psi \pi^+)$ ”. *Journal of High Energy Physics*, 2016.
10.1007/JHEP09(2016)153.
114. R. Aaij *et al.* [LHCb Collaboration]. “Measurement of the forward Z boson production cross-section in pp collisions at $\sqrt{s} = 13$ TeV”. *Journal of High Energy Physics*, 2016.
10.1007/JHEP09(2016)136.
115. R. Aaij *et al.* [LHCb Collaboration]. “Erratum to: Measurements of prompt charm production cross-sections in pp collisions at $\sqrt{s} = 13$ TeV”. *Journal of High Energy Physics*, 2016.
10.1007/JHEP09(2016)013.
116. R. Aaij *et al.* [LHCb Collaboration]. “Evidence for Exotic Hadron Contributions to $\Lambda_b^0 \rightarrow J/\psi \pi^-$ Decays”. *Physical Review Letters*, 2016.
10.1103/PhysRevLett.117.082003.
117. R. Aaij *et al.* [LHCb Collaboration]. “Model-Independent Evidence for $J/\psi p$ Contributions to $\Lambda_b^0 \rightarrow J/\psi p K^-$ Decays”. *Physical Review Letters*, 2016.
10.1103/PhysRevLett.117.082002.
118. R. Aaij *et al.* [LHCb Collaboration]. “Search for B_c^+ decays to the $p\bar{p}\pi^+$ final state”. *Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics*, 2016.
10.1016/j.physletb.2016.05.074.
119. R. Aaij *et al.* [LHCb Collaboration]. “Observation of the $\Lambda_b^0 \rightarrow \Lambda \phi$ decay”. *Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics*, 2016.
10.1016/j.physletb.2016.05.077.
120. R. Aaij *et al.* [LHCb Collaboration]. “Measurement of the CP Asymmetry in $B_s^0 - \bar{B}_s^0$ Mixing”. *Physical Review Letters*, 2016.
10.1103/PhysRevLett.117.061803.
121. R. Aaij *et al.* [LHCb Collaboration]. “Measurement of the CKM angle γ using $B^0 \rightarrow DK^{*0}$ with $D \rightarrow K_S^0 \pi^+ \pi^-$ decays”. *Journal of High Energy Physics*, 2016.
10.1007/JHEP08(2016)137.
122. R. Aaij *et al.* [LHCb Collaboration]. “A precise measurement of the B_0 meson oscillation frequency”. *European Physical Journal C*, 2016.
10.1140/epjc/s10052-016-4250-2.

123. R. Aaij *et al.* [LHCb Collaboration]. “Production of associated Υ and open charm hadrons in pp collisions at $\sqrt{s} = 7$ and 8 TeV via double parton scattering”. *Journal of High Energy Physics*, 2016.
10.1007/JHEP07(2016)052.
124. R. Aaij *et al.* [LHCb Collaboration]. “Constraints on the unitarity triangle angle γ from Dalitz plot analysis of $B_0 \rightarrow DK^+\pi^-$ decays”. *Physical Review D*, 2016.
10.1103/PhysRevD.93.112018.
125. R. Aaij *et al.* [LHCb Collaboration]. “First Observation of $D^0 - \bar{D}^0$ Oscillations in $D^0 \rightarrow K^+\pi^-\pi^+\pi^-$ Decays and Measurement of the Associated Coherence Parameters”. *Physical Review Letters*, 2016.
10.1103/PhysRevLett.116.241801.
126. R. Aaij *et al.* [LHCb Collaboration]. “Search for Violations of Lorentz Invariance and CPT Symmetry in B_s^0 Mixing”. *Physical Review Letters*, 2016.
10.1103/PhysRevLett.116.241601.
127. R. Aaij *et al.* [LHCb Collaboration]. “First observation of the decay $D^0 \rightarrow K^-\pi^+\mu^+\mu^-$ in the $\rho^0 - \omega$ region of the dimuon mass spectrum”. *Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics*, 2016.
10.1016/j.physletb.2016.04.029.
128. R. Aaij *et al.* [LHCb Collaboration]. “Model-independent measurement of the CKM angle γ using $B^0 \rightarrow DK^{*0}$ decays with $D \rightarrow K_S^0\pi^+\pi^-$ and $K_S^0K^+K^-$ ”. *Journal of High Energy Physics*, 2016.
10.1007/JHEP06(2016)131.
129. R. Aaij *et al.* [LHCb Collaboration]. “Measurement of the $B_s^0 \rightarrow D_s^{(*)+}D_s^{(*)-}$ branching fractions”. *Physical Review D*, 2016.
10.1103/PhysRevD.93.092008.
130. R. Aaij *et al.* [LHCb Collaboration]. “Measurement of the mass and lifetime of the Ω_b^- baryon”. *Physical Review D*, 2016.
10.1103/PhysRevD.93.092007.
131. R. Aaij *et al.* [LHCb Collaboration]. “A new algorithm for identifying the flavour of B_s^0 mesons at LHCb”. *Journal of Instrumentation*, 2016.
10.1088/1748-0221/11/05/P05010.
132. R. Aaij *et al.* [LHCb Collaboration]. “Measurement of the Difference of Time-Integrated CP Asymmetries in $D^0 \rightarrow K^-K^+$ and $D^0 \rightarrow \pi^-\pi^+$ Decays”. *Physical Review Letters*, 2016.
10.1103/PhysRevLett.116.191601.
133. R. Aaij *et al.* [LHCb Collaboration]. “Observations of $\Lambda_b^0 \rightarrow \Lambda K^+\pi^-$ and $\Lambda_b^0 \rightarrow \Lambda K^+K^-$ decays and searches for other Λ_b^0 and Ξ_b^0 decays to $\Lambda h^+h'^-$ final states”. *Journal of High Energy Physics*, 2016.
10.1007/JHEP05(2016)081.

134. R. Aaij *et al.* [LHCb Collaboration]. “Measurement of the properties of the Ξ_b^{*0} baryon”. *Journal of High Energy Physics*, 2016.
10.1007/JHEP05(2016)161.
135. R. Aaij *et al.* [LHCb Collaboration]. “Observation of $\Lambda_b^0 \rightarrow \psi(2(S))pK^-$ and $\Lambda_b^0 \rightarrow J\psi\pi^+\pi^-pK^-$ decays and a measurement of the Λ_b^0 baryon mass”. *Journal of High Energy Physics*, 2016.
10.1007/JHEP05(2016)132.
136. R. Aaij *et al.* [LHCb Collaboration]. “Measurement of forward W and Z boson production in association with jets in proton-proton collisions at $\sqrt{s} = 8$ TeV”. *Journal of High Energy Physics*, 2016.
10.1007/JHEP05(2016)131.
137. R. Aaij *et al.* [LHCb Collaboration]. “Observation of $B_s^0 \rightarrow D^0 K_S^0$ and Evidence for $B_s^0 \rightarrow D^{*0} K_S^0$ Decays”. *Physical Review Letters*, 2016.
10.1103/PhysRevLett.116.161802.
138. L. Anderlini, M. Anelli, F. Archilli, G. Auriemma, W. Baldini, G. Bencivenni, A. Bizzeti, V. Bocci, N. Bondar, W. Bonivento, B. Bochín, C. Bozzi, D. Brundu, S. Cadeddu, P. Campana, G. Carboni, A. Cardini, M. Carletti, L. Casu, A. Chubykin, P. Ciambone, E. Dané, P. De Simone, A. Falabella, G. Felici, M. Fiore, M. Fontana, P. Fresch, E. Furfaro, G. Graziani, A. Kashchuk, S. Kotriakhova, A. Lai, G. Lanfranchi, A. Loi, O. Maev, G. Manca, G. Martellotti, P. Neustroev, R.G.C. Oldeman, M. Palutan, G. Passaleva, G. Penso, D. Pinci, E. Polcarpo, B. Saitta, R. Santacesaria, M. Santimaria, E. Santovetti, A. Saputi, A. Sarti, C. Satriano, A. Satta, B. Schmidt, T. Schneider, B. Sciascia, A. Sciubba, B.G. Siddi, G. Tellarini, C. Vacca, R. Vazquez-Gomez, S. Vecchi, M. Veltri, and A. Vorobyev. “Measurement of the front-end dead-time of the LHCb muon detector and evaluation of its contribution to the muon detection inefficiency”. *Journal of Instrumentation*, 2016.
10.1088/1748-0221/11/04/P04010.
139. R. Aaij *et al.* [LHCb Collaboration]. “Model-independent measurement of mixing parameters in $D^0 \rightarrow K_S^0 \pi^+ \pi^-$ decays”. *Journal of High Energy Physics*, 2016.
10.1007/JHEP04(2016)033.
140. R. Aaij *et al.* [LHCb Collaboration]. “Studies of the resonance structure in $D^0 \rightarrow K_S^0 K^\pm \pi^\pm$ decays”. *Physical Review D*, 2016.
10.1103/PhysRevD.93.052018.
141. R. Aaij *et al.* [LHCb Collaboration]. “Search for the lepton-flavour violating decay $D^0 \rightarrow e^\pm \mu^\mp$ ”. *Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics*, 2016.
10.1016/j.physletb.2016.01.029.
142. R. Aaij *et al.* [LHCb Collaboration]. “First observation of the rare $B^+ \rightarrow D^+ K^+ \pi^-$ decay”. *Physical Review D*, 2016.
10.1103/PhysRevD.93.051101.

143. R. Aaij *et al.* [LHCb Collaboration]. “Observation of the $B_s^0 \rightarrow J/\psi \phi \phi$ decay”. *Journal of High Energy Physics*, 2016.
10.1007/JHEP03(2016)040.
144. R. Aaij *et al.* [LHCb Collaboration]. “Measurements of prompt charm production cross-sections in pp collisions at $\sqrt{s} = 13$ TeV”. *Journal of High Energy Physics*, 2016.
10.1007/JHEP03(2016)159.
145. R. Aaij *et al.* [LHCb Collaboration]. “Study of $\psi(2S)$ production and cold nuclear matter effects in pPb collisions at $\sqrt{s_{NN}} = 5$ TeV”. *Journal of High Energy Physics*, 2016.
10.1007/JHEP03(2016)133.
146. R. Aaij *et al.* [LHCb Collaboration]. “Angular analysis of the $B^0 \rightarrow K^{*0} \mu^+ \mu^-$ decay using 3 fb^{-1} of integrated luminosity”. *Journal of High Energy Physics*, 2016.
10.1007/JHEP02(2016)104.
147. R. Aaij *et al.* [LHCb Collaboration]. “Study of $D_{sJ}^{(*)+}$ mesons decaying to $D^{*+} K_S^0$ and $D^{*+} K^+$ final states”. *Journal of High Energy Physics*, 2016.
10.1007/JHEP02(2016)133.
148. R. Aaij *et al.* [LHCb Collaboration]. “First observation of the decay $B_s^0 \rightarrow K_S^0 K^{*}(892)^0$ at LHCb”. *Journal of High Energy Physics*, 2016.
10.1007/JHEP01(2016)012.
149. R. Aaij *et al.* [LHCb Collaboration]. “Study of the production of Λ_b^0 and \bar{B}^0 hadrons in pp collisions and first measurement of the $\Lambda_b^0 \rightarrow J/\psi p K^+$ branching fraction”. *Chinese Physics C*, 2016.
10.1088/1674-1137/40/1/011001.
150. R. Aaij *et al.* [LHCb Collaboration]. “Measurement of forward W and Z boson production in pp collisions at $\sqrt{s} = 8$ TeV”. *Journal of High Energy Physics*, 2016.
10.1007/JHEP01(2016)155.
151. R. Aaij *et al.* [LHCb Collaboration]. “Measurement of CP observables in $B^\pm \rightarrow DK^\pm$ and $B^\pm \rightarrow D\pi^\pm$ with two- and four-body D decays”. *Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics*, 2016.
10.1016/j.physletb.2016.06.022.
152. R. Aaij *et al.* [LHCb Collaboration]. “Model-independent confirmation of the $Z(4430)^-$ state”. *Physical Review D - Particles, Fields, Gravitation and Cosmology*, 2015.
10.1103/PhysRevD.92.112009.
153. R. Aaij *et al.* [LHCb Collaboration]. “Study of $B^- \rightarrow DK^- \pi^+ \pi^-$ and $B^- \rightarrow D\pi^- \pi^+ \pi^-$ decays and determination of the CKM angle γ ”. *Physical Review D -*

- Particles, Fields, Gravitation and Cosmology*, 2015.
10.1103/PhysRevD.92.112005.
154. R. Aaij *et al.* [LHCb Collaboration]. “Evidence for the Strangeness-Changing Weak Decay $\Xi_b^- \rightarrow \Lambda_b^0 \pi^-$ ”. *Physical Review Letters*, 2015.
10.1103/PhysRevLett.115.241801.
 155. B. Adeva *et al.* [LHCb Collaboration]. “Search for CP violation in $D^0 \rightarrow \pi^- \pi^+ \pi^0$ decays with the energy test”. *Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics*, 2015.
10.1016/j.physletb.2014.11.043.
 156. R. Aaij *et al.* [LHCb Collaboration]. “Search for the rare decays $B^0 \rightarrow J/\psi \gamma$ and $B_S^0 \rightarrow J/\psi \gamma$ ”. *Physical Review D - Particles, Fields, Gravitation and Cosmology*, 2015.
10.1103/PhysRevD.92.112002.
 157. R. Aaij *et al.* [LHCb Collaboration]. “Search for long-lived heavy charged particles using a ring imaging Cherenkov technique at LHCb”. *European Physical Journal C*, 2015.
10.1140/epjc/s10052-015-3809-7.
 158. R. Aaij *et al.* [LHCb Collaboration]. “Measurement of CP violation parameters and polarisation fractions in $B_S^0 \rightarrow J/\psi K^*$ decays”. *Journal of High Energy Physics*, 2015.
10.1007/JHEP11(2015)082.
 159. R. Aaij *et al.* [LHCb Collaboration]. “Forward production of Υ mesons in pp collisions at $\sqrt{s} = 7$ and 8 TeV”. *Journal of High Energy Physics*, 2015.
10.1007/JHEP11(2015)103.
 160. R. Aaij *et al.* [LHCb Collaboration]. “Measurement of the forward-backward asymmetry in $Z/\gamma^* \rightarrow \mu^+ \mu^-$ decays and determination of the effective weak mixing angle”. *Journal of High Energy Physics*, 2015.
10.1007/JHEP11(2015)190.
 161. R. Aaij *et al.* [LHCb Collaboration]. “Measurement of the branching fraction ratio $\mathcal{B}(B_c^+ \rightarrow \psi(2S)\pi^+)/\mathcal{B}(B_c^+ \rightarrow J\psi\pi^+)$ ”. *Physical Review D - Particles, Fields, Gravitation and Cosmology*, 2015.
10.1103/PhysRevD.92.072007.
 162. R. Aaij *et al.* [LHCb Collaboration]. “Search for Hidden-Sector Bosons in $B^0 \rightarrow K^{*0} \mu^+ \mu^-$ Decays”. *Physical Review Letters*, 2015.
10.1103/PhysRevLett.115.161802.
 163. R. Aaij *et al.* [LHCb Collaboration]. “ B flavour tagging using charm decays at the LHCb experiment”. *Journal of Instrumentation*, 2015.
10.1088/1748-0221/10/10/P10005.
 164. R. Aaij *et al.* [LHCb Collaboration]. “Measurement of forward J/ψ production cross-sections in pp collisions at $\sqrt{s} = 13$ TeV”. *Journal of High Energy Physics*,

2015.
10.1007/JHEP10(2015)172.
165. R. Aaij *et al.* [LHCb Collaboration]. “Measurement of the time-integrated CP asymmetry in $D^0 \rightarrow K_S^0 K_S^0$ decays”. *Journal of High Energy Physics*, 2015.
10.1007/JHEP10(2015)055.
 166. R. Aaij *et al.* [LHCb Collaboration]. “Measurement of the $B_S^0 \rightarrow \phi\phi$ branching fraction and search for the decay $B^0 \rightarrow \phi\phi$ ”. *Journal of High Energy Physics*, 2015.
10.1007/JHEP10(2015)053.
 167. R. Aaij *et al.* [LHCb Collaboration]. “First measurement of the differential branching fraction and CP asymmetry of the $B^\pm \rightarrow \pi^\pm \mu^+ \mu^-$ decay”. *Journal of High Energy Physics*, 2015.
10.1007/JHEP10(2015)034.
 168. R. Aaij *et al.* [LHCb Collaboration]. “Measurement of the exclusive Υ production cross-section in pp collisions at $\sqrt{s} = 7$ TeV and 8 TeV”. *Journal of High Energy Physics*, 2015.
10.1007/JHEP09(2015)084.
 169. R. Aaij *et al.* [LHCb Collaboration]. “Search for the $\Lambda_b^0 \rightarrow \Lambda \eta'$ and $\Lambda_b^0 \rightarrow \Lambda \eta$ decays with the LHCb detector”. *Journal of High Energy Physics*, 2015.
10.1007/JHEP09(2015)006.
 170. R. Aaij *et al.* [LHCb Collaboration]. “Measurement of the Ratio of Branching Fractions $\mathcal{B}(\bar{B}^0 \rightarrow D^{*+} \tau^- \bar{\nu}_\tau) / \mathcal{B}(\bar{B}^0 \rightarrow D^{*+} \mu^- \bar{\nu}_\mu)$ ”. *Physical Review Letters*, 2015.
10.1103/PhysRevLett.115.111803.
 171. R. Aaij *et al.* [LHCb Collaboration]. “First Observation of Top Quark Production in the Forward Region”. *Physical Review Letters*, 2015.
10.1103/PhysRevLett.115.112001.
 172. R. Aaij *et al.* [LHCb Collaboration]. “Study of W boson production in association with beauty and charm”. *Physical Review D - Particles, Fields, Gravitation and Cosmology*, 2015.
10.1103/PhysRevD.92.052001.
 173. R. Aaij *et al.* [LHCb Collaboration]. “Determination of the quark coupling strength $|V_{ub}|$ using baryonic decays”. *Nature Physics*, 2015.
10.1038/nphys3415.
 174. R. Aaij *et al.* [LHCb Collaboration]. “Angular analysis and differential branching fraction of the decay $B_S^0 \rightarrow \phi \mu^+ \mu^-$ ”. *Journal of High Energy Physics*, 2015.
10.1007/JHEP09(2015)179.
 175. R. Aaij *et al.* [LHCb Collaboration]. “Measurement of the forward Z boson production cross-section in pp collisions at $\sqrt{s} = 7$ TeV”. *Journal of High Energy*

- Physics*, 2015.
10.1007/JHEP08(2015)039.
176. R. Aaij *et al.* [LHCb Collaboration]. “Observation of $J/\psi p$ Resonances Consistent with Pentaquark States in $\Lambda_b^0 \rightarrow J/\psi K^- p$ Decays”. *Physical Review Letters*, 2015.
10.1103/PhysRevLett.115.072001.
 177. R. Aaij *et al.* [LHCb Collaboration]. “Search for the decay $B_S^0 \rightarrow \bar{D}^0 f_0(980)$ ”. *Journal of High Energy Physics*, 2015.
10.1007/JHEP08(2015)005.
 178. R. Aaij *et al.* [LHCb Collaboration]. “Dalitz plot analysis of $B^0 \rightarrow \bar{D}^0 \pi^+ \pi^-$ decays”. *Physical Review D - Particles, Fields, Gravitation and Cosmology*, 2015.
10.1103/PhysRevD.92.032002.
 179. R. Aaij *et al.* [LHCb Collaboration]. “Quantum numbers of the $X(3872)$ state and orbital angular momentum in its $\rho^0 J/\psi$ decay”. *Physical Review D - Particles, Fields, Gravitation and Cosmology*, 2015.
10.1103/PhysRevD.92.011102.
 180. R. Aaij *et al.* [LHCb Collaboration]. “Measurement of the $\eta_c(1S)$ production cross-section in proton–proton collisions via the decay $\eta_c(1S) \rightarrow p \bar{p}$ ”. *European Physical Journal C*, 2015.
10.1140/epjc/s10052-015-3502-x.
 181. R. Aaij *et al.* [LHCb Collaboration]. “Observation of the $B_S^0 \rightarrow \eta' \eta'$ Decay”. *Physical Review Letters*, 2015.
10.1103/PhysRevLett.115.051801.
 182. R. Aaij *et al.* [LHCb Collaboration]. “Amplitude analysis of $B^0 \rightarrow \bar{D}^0 K^+ \pi^-$ decays”. *Physical Review D - Particles, Fields, Gravitation and Cosmology*, 2015.
10.1103/PhysRevD.92.012012.
 183. R. Aaij *et al.* [LHCb Collaboration]. “Measurement of CP Violation in $B^0 \rightarrow J/\psi K_S^0$ Decays”. *Physical Review Letters*, 2015.
10.1103/PhysRevLett.115.031601.
 184. R. Aaij *et al.* [LHCb Collaboration]. “Measurement of CP asymmetries and polarisation fractions in $B_S^0 \rightarrow K^{*0} \bar{K}^{*0}$ decays”. *Journal of High Energy Physics*, 2015.
10.1007/JHEP07(2015)166.
 185. R. Aaij *et al.* [LHCb Collaboration]. “Observation of the decay $\bar{B}_S^0 \rightarrow \Psi(2S) K^+ \pi^-$ ”. *Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics*, 2015.
10.1016/j.physletb.2015.06.038.

186. R. Aaij *et al.* [LHCb Collaboration]. “Observation of the $B^0 \rightarrow \rho^0 \rho^0$ decay from an amplitude analysis of $B^0 \rightarrow (\pi^+ \pi^-) \pi^+ \pi^-$ decays”. *Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics*, 2015.
10.1016/j.physletb.2015.06.027.
187. R. Aaij *et al.* [LHCb Collaboration]. “Measurement of the time-dependent CP asymmetries in $B_S^0 \rightarrow J/\psi K_S^0$ ”. *Journal of High Energy Physics*, 2015.
10.1007/JHEP06(2015)131.
188. R. Aaij *et al.* [LHCb Collaboration]. “Differential branching fraction and angular analysis of $\Lambda_b^0 \rightarrow \Lambda \mu^+ \mu^-$ decays”. *Journal of High Energy Physics*, 2015.
10.1007/JHEP06(2015)115.
189. R. Aaij *et al.* [LHCb Collaboration]. “First observation and measurement of the branching fraction for the decay $B_S^0 \rightarrow D_s^{*\pm} K^\pm$ ”. *Journal of High Energy Physics*, 2015.
10.1007/JHEP06(2015)130.
190. R. Aaij *et al.* [LHCb Collaboration]. “Study of CP violation in $B^\pm \rightarrow Dh^\pm$ ($h = K, \pi$) with the modes $D \rightarrow K^\mp \pi^\pm \pi^0$, $D \rightarrow \pi^+ \pi^- \pi^0$ and $D \rightarrow K^+ K^- \pi^0$ ”. *Physical Review D - Particles, Fields, Gravitation and Cosmology*, 2015.
10.1103/PhysRevD.91.112014.
191. V. Khachatryan *et al.* “Observation of the rare $B_S^0 \rightarrow \mu^+ \mu^-$ decay from the combined analysis of CMS and LHCb data”. *Nature*, 2015.
10.1038/nature14474.
192. R. Aaij *et al.* [LHCb Collaboration]. “Identification of beauty and charm quark jets at LHCb”. *Journal of Instrumentation*, 2015.
10.1088/1748-0221/10/06/P06013.
193. R. Aaij *et al.* [LHCb Collaboration]. “First observation and amplitude analysis of the $B^- \rightarrow D^+ K^- \pi^-$ decay”. *Physical Review D - Particles, Fields, Gravitation and Cosmology*, 2015.
10.1103/PhysRevD.91.092002.
194. R. Aaij *et al.* [LHCb Collaboration]. “Measurement of forward $Z \rightarrow e^+ e^-$ production at $\sqrt{s} = 8$ TeV”. *Journal of High Energy Physics*, 2015.
10.1007/JHEP05(2015)109.
195. R. Aaij *et al.* [LHCb Collaboration]. “Determination of the branching fractions of $B_S^0 \rightarrow D_s^\mp K^\mp$ and $B^0 \rightarrow D_s^- K^+$ ”. *Journal of High Energy Physics*, 2015.
10.1007/JHEP05(2015)019.
196. R. Aaij *et al.* [LHCb Collaboration]. “Search for long-lived particles decaying to jet pairs”. *European Physical Journal C*, 2015.
10.1140/epjc/s10052-015-3344-6.
197. B. Adeva *et al.* [LHCb Collaboration]. “Study of the rare B_S^0 and B^0 decays into the $\pi^+ \pi^- \mu^+ \mu^-$ final state”. *Physics Letters, Section B: Nuclear, Elementary*

- Particle and High-Energy Physics*, 2015.
10.1016/j.physletb.2015.02.010.
198. R. Aaij *et al.* [LHCb Collaboration]. “Measurement of B_c^+ production in proton-proton collisions at $\sqrt{s} = 8$ TeV”. *Physical Review Letters*, 2015.
10.1103/PhysRevLett.114.132001.
 199. R. Aaij *et al.* [LHCb Collaboration]. “Measurement of indirect CP asymmetries in $D^0 \rightarrow K^- K^+$ and $D^0 \rightarrow \pi^- \pi^+$ decays using semileptonic B decays”. *Journal of High Energy Physics*, 2015.
10.1007/JHEP04(2015)043.
 200. R. Aaij *et al.* [LHCb Collaboration]. “Precise measurements of the properties of the $B_1(5721)^{0,+}$ and $B_2(5747)^{0,+}$ states and observation of $B^{+,0}\pi^+, -$ mass structures”. *Journal of High Energy Physics*, 2015.
10.1007/JHEP04(2015)024.
 201. R. Aaij *et al.* [LHCb Collaboration]. “Angular analysis of the $B^0 \rightarrow K^{*0} e^+ e^-$ decay in the low- q^2 region”. *Journal of High Energy Physics*, 2015.
10.1007/JHEP04(2015)064.
 202. R. Aaij *et al.* [LHCb Collaboration]. “LHCb detector performance”. *International Journal of Modern Physics A*, 2015.
10.1142/S0217751X15300227.
 203. B. Adeva *et al.* [LHCb Collaboration]. “Measurement of the lifetime of the B_c^+ meson using the $B_c^+ \rightarrow J/\psi \pi^+$ decay mode”. *Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics*, 2015.
10.1016/j.physletb.2015.01.010.
 204. R. Aaij *et al.* [LHCb Collaboration]. “Measurement of the track reconstruction efficiency at LHCb”. *Journal of Instrumentation*, 2015.
10.1088/1748-0221/10/02/P02007.
 205. R. Aaij *et al.* [LHCb Collaboration]. “Observation of two new Ξ_b^- Baryon resonances”. *Physical Review Letters*, 2015.
10.1103/PhysRevLett.114.062004.
 206. R. Aaij *et al.* [LHCb Collaboration]. “Precision measurement of CP violation in $B_S^0 \rightarrow J/\psi K^+ K^-$ decays”. *Physical Review Letters*, 2015.
10.1103/PhysRevLett.114.041801.
 207. R. Aaij *et al.* [LHCb Collaboration]. “Measurement of the semileptonic CP asymmetry in $B^0 - \bar{B}^0$ mixing”. *Physical Review Letters*, 2015.
10.1103/PhysRevLett.114.041601.
 208. L. Zhong *et al.* [LHCb Collaboration]. “Search for the lepton flavour violating decay $\tau^- \rightarrow \mu^- \mu^+ \mu^-$ ”. *Journal of High Energy Physics*, 2015.
10.1007/JHEP02(2015)121.

209. R. Aaij *et al.* [LHCb Collaboration]. “Study of $\eta - \eta'$ mixing from measurement of $B_S^0 \rightarrow J/\psi \eta'$ decay rates”. *Journal of High Energy Physics*, 2015.
10.1007/JHEP01(2015)024.
210. R. Aaij *et al.* [LHCb Collaboration]. “Measurement of the inelastic pp cross-section at a centre-of-mass energy of $\sqrt{s} = 7$ TeV”. *Journal of High Energy Physics*, 2015.
10.1007/JHEP02(2015)129.
211. B. Adeva *et al.* [LHCb Collaboration]. “Measurement of the CP -violating phase β in $B^0 \rightarrow J/\psi \pi^+ \pi^-$ decays and limits on penguin effects”. *Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics*, 2015.
10.1016/j.physletb.2015.01.008.
212. L. Zhong *et al.* [LHCb Collaboration]. “Measurement of the Z +b-jet cross-section in pp collisions at $\sqrt{s} = 7$ TeV in the forward region”. *Journal of High Energy Physics*, 2015.
10.1007/JHEP01(2015)064.
213. C. Abellán Beteta *et al.* [LHCb Collaboration]. “Determination of γ and $-2\beta_s$ from charmless two-body decays of beauty mesons”. *Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics*, 2015.
10.1016/j.physletb.2014.12.015.
214. R. Aaij *et al.* [LHCb Collaboration]. “Measurements of CP violation in the three-body phase space of charmless B^\pm decays”. *Physical Review D - Particles, Fields, Gravitation and Cosmology*, 2014.
10.1103/PhysRevD.90.112004.
215. R. Aaij *et al.* [LHCb Collaboration]. “LHCb Collaboration”. *Nuclear Physics A*, 2014.
10.1016/S0375-9474(14)00603-4.
216. R. 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 Journal of Physics*, 2014.
10.1088/1367-2630/16/12/123001.
217. B. Adeva *et al.* [LHCb Collaboration]. “Measurement of the $B^0 B^0$ and $B_S^0 B_S^0$ production asymmetries in pp collisions at $\sqrt{s} = 7$ TeV”. *Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics*, 2014.
10.1016/j.physletb.2014.10.005.
218. R. Aaij *et al.* [LHCb Collaboration]. “Measurement of CP violation parameters in $B^0 \rightarrow DK^{*0}$ decays”. *Physical Review D - Particles, Fields, Gravitation and Cosmology*, 2014.
10.1103/PhysRevD.90.112002.
219. R. 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”.

- Nuclear Physics B*, 2014.
10.1016/j.nuclphysb.2014.09.015.
220. R. Aaij *et al.* [LHCb Collaboration]. “Precision luminosity measurements at LHCb”. *Journal of Instrumentation*, 2014.
10.1088/1748-0221/9/12/P12005.
 221. R. Aaij *et al.* [LHCb Collaboration]. “Measurement of the CP -Violating Phase ϕ_S in $\bar{B}_{SS}^{\pm} \rightarrow D_s^+ D_s^-$ Decays”. *Physical Review Letters*, 2014.
10.1103/PhysRevLett.113.211801.
 222. R. Aaij *et al.* [LHCb Collaboration]. “Observation of charmonium pairs produced exclusively in pp collisions”. *Journal of Physics G: Nuclear and Particle Physics*, 2014.
10.1088/0954-3899/41/11/115002.
 223. R. Aaij *et al.* [LHCb Collaboration]. “Measurement of the \bar{B}_S^0 meson lifetime in $D_s^+ \pi^-$ Decays”. *Physical Review Letters*, 2014.
10.1103/PhysRevLett.113.172001.
 224. R. Aaij *et al.* [LHCb Collaboration]. “Study of χ_b meson production in pp collisions at $\sqrt{s} = 7$ and 8 TeV and observation of the decay $\chi_b(3P) \rightarrow \Upsilon(3S)\gamma$ ”. *European Physical Journal C*, 2014.
10.1140/epjc/s10052-014-3092-z.
 225. R. Aaij *et al.* [LHCb Collaboration]. “Dalitz plot analysis of $B_S^0 \rightarrow \bar{D}^0 K^- \pi^+$ decays”. *Physical Review D - Particles, Fields, Gravitation and Cosmology*, 2014.
10.1103/PhysRevD.90.072003.
 226. R. Aaij *et al.* [LHCb Collaboration]. “Observation of Overlapping Spin-1 and Spin-3 $\bar{D}^0 K^-$ Resonances at Mass 2.86 GeV $/c^2$ ”. *Physical Review Letters*, 2014.
10.1103/PhysRevLett.113.162001.
 227. R. Aaij *et al.* [LHCb Collaboration]. “First observation of a baryonic B_c^+ decay”. *Physical Review Letters*, 2014.
10.1103/PhysRevLett.113.152003.
 228. R. Aaij *et al.* [LHCb Collaboration]. “First observations of the rare decays $B^+ \rightarrow K^+ \pi^+ \pi^- \mu^+ \mu^+$ and $B^+ \rightarrow \phi K^+ \mu^+ \mu^+$ ”. *Journal of High Energy Physics*, 2014.
10.1007/JHEP10(2014)064.
 229. R. Aaij *et al.* [LHCb Collaboration]. “Test of lepton universality using $B^+ \rightarrow K^+ l^+ l^-$ decays”. *Physical Review Letters*, 2014.
10.1103/PhysRevLett.113.151601.
 230. R. Aaij *et al.* [LHCb Collaboration]. “Search for CP violation using T-odd correlations in $D^+ \rightarrow K^+ K^- \pi^+ \pi^-$ decays”. *Journal of High Energy Physics*, 2014.
10.1007/JHEP10(2014)005.

231. R. Aaij *et al.* [LHCb Collaboration]. “Measurement of CP violation in $B_S^0 \rightarrow \phi\phi$ decays”. *Physical Review D - Particles, Fields, Gravitation and Cosmology*, 2014.
10.1103/PhysRevD.90.052011.
232. R. Aaij *et al.* [LHCb Collaboration]. “Evidence for CP violation in $B^+ \rightarrow p\bar{p}K^+$ decays”. *Physical Review Letters*, 2014.
10.1103/PhysRevLett.113.141801.
233. R. Aaij *et al.* [LHCb Collaboration]. “Effective lifetime measurements in the $B_S^0 \rightarrow K^+K^-$, $B^0 \rightarrow K^+\pi^-$ and $B_S^0 \rightarrow \pi^+K^-$ decays”. *Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics*, 2014.
10.1016/j.physletb.2014.07.051.
234. R. Aaij *et al.* [LHCb Collaboration]. “Measurement of the Ξ_b^- and Ω_b^- baryon lifetimes”. *Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics*, 2014.
10.1016/j.physletb.2014.06.064.
235. 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”. *Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics*, 2014.
10.1016/j.physletb.2014.06.079.
236. R. Aaij *et al.* [LHCb Collaboration]. “Observation of Z production in proton-lead collisions at LHCb”. *Journal of High Energy Physics*, 2014.
10.1007/JHEP09(2014)030.
237. R. Aaij *et al.* [LHCb Collaboration]. “Measurement of the ratio of B_c^+ branching fractions to $J/\psi\pi^+$ and $J/\psi\pi^+\mu^+\nu_\mu$ final states”. *Physical Review D - Particles, Fields, Gravitation and Cosmology*, 2014.
10.1103/PhysRevD.90.032009.
238. R. Aaij *et al.* [LHCb Collaboration]. “First measurement of the charge asymmetry in beauty-quark pair production”. *Physical Review Letters*, 2014.
10.1103/PhysRevLett.113.082003.
239. R. Aaij *et al.* [LHCb Collaboration]. “Precision measurement of the mass and lifetime of the Ξ_b^0 Baryon”. *Physical Review Letters*, 2014.
10.1103/PhysRevLett.113.032001.
240. R. Aaij *et al.* [LHCb Collaboration]. “Measurement of the resonant and CP components in $\bar{B}_S^0 \rightarrow J/\psi\pi^+\pi^-$ decays”. *Physical Review D - Particles, Fields, Gravitation and Cosmology*, 2014.
10.1103/PhysRevD.90.012003.
241. R. Aaij *et al.* [LHCb Collaboration]. “Study of production and cold nuclear matter effects in pPb collisions at $\sqrt{s_{NN}} = 5$ TeV”. *Journal of High Energy Physics*, 2014.
10.1007/JHEP07(2014)094.

242. R. Aaij *et al.* [LHCb Collaboration]. “Precision measurement of the ratio of the Λ_b^0 to \bar{B}^0 lifetimes”. *Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics*, 2014.
10.1016/j.physletb.2014.05.021.
243. R. Aaij *et al.* [LHCb Collaboration]. “Observation of the resonant character of the $Z(4430)$ -state”. *Physical Review Letters*, 2014.
10.1103/PhysRevLett.112.222002.
244. R. Aaij *et al.* [LHCb Collaboration]. “Evidence for the decay $B_c^+ \rightarrow J/\psi 3\pi^+ 2\pi^-$ ”. *Journal of High Energy Physics*, 2014.
10.1007/JHEP05(2014)148.
245. R. Aaij *et al.* [LHCb Collaboration]. “Measurement of charged particle multiplicities and densities in pp collisions at $\sqrt{s} = 7$ TeV in the forward region”. *European Physical Journal C*, 2014.
10.1140/epjc/s10052-014-2888-1.
246. R. Aaij *et al.* [LHCb Collaboration]. “Study of beauty hadron decays into Pairs of charm hadrons”. *Physical Review Letters*, 2014.
10.1103/PhysRevLett.112.202001.
247. R. Aaij *et al.* [LHCb Collaboration]. “Measurement of resonant and CP components in $\bar{B}_S^0 \rightarrow J/\psi \pi^+ \pi^-$ decays”. *Physical Review D - Particles, Fields, Gravitation and Cosmology*, 2014.
10.1103/PhysRevD.89.092006.
248. R. Aaij *et al.* [LHCb Collaboration]. “Measurement of the B_c^+ meson lifetime using $B_c^+ \rightarrow J/\psi \mu^+ \nu_\mu X$ decays”. *European Physical Journal C*, 2014.
10.1140/epjc/s10052-014-2839-x.
249. R. Aaij *et al.* [LHCb Collaboration]. “Measurement of Υ production in pp collisions at $\sqrt{s} = 2.76$ TeV”. *European Physical Journal C*, 2014.
10.1140/epjc/s10052-014-2835-1.
250. R. Aaij *et al.* [LHCb Collaboration]. “Observation of photon polarization in the $b \rightarrow s\gamma$ transition”. *Physical Review Letters*, 2014.
10.1103/PhysRevLett.112.161801.
251. R. Aaij *et al.* [LHCb Collaboration]. “Observation of associated production of a Z boson with a D meson in the forward region”. *Journal of High Energy Physics*, 2014.
10.1007/JHEP04(2014)091.
252. R. Aaij *et al.* [LHCb Collaboration]. “Search for Majorana neutrinos in $B^- \rightarrow \pi^+ \mu^- \mu^-$ decays”. *Physical Review Letters*, 2014.
10.1103/PhysRevLett.112.131802.
253. 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”. *Physical Review Letters*, 2014.
10.1103/PhysRevLett.112.111802.

254. R. Aaij *et al.* [LHCb Collaboration]. “Observation of $\bar{B}_S^0 \rightarrow J/\psi f_1(1285)$ decays and measurement of the $f_1(1285)$ mixing angle”. *Physical Review Letters*, 2014. 10.1103/PhysRevLett.112.091802.
255. R. Aaij *et al.* [LHCb Collaboration]. “Studies of beauty baryon decays to $D^0 p h^-$ And $\Lambda_c^+ h^-$ Final states”. *Physical Review D - Particles, Fields, Gravitation and Cosmology*, 2014. 10.1103/PhysRevD.89.032001.
256. R. Aaij *et al.* [LHCb Collaboration]. “Measurements of indirect CP Asymmetries in $D^0 \rightarrow K^- K^+$ and $D^0 \rightarrow \pi^- \pi^+$ decays”. *Physical Review Letters*, 2014. 10.1103/PhysRevLett.112.041801.
257. R. 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”. *Physical Review Letters*, 2014. 10.1103/PhysRevLett.112.011801.
258. R. Aaij *et al.* [LHCb Collaboration]. “Study of J/ψ production and cold nuclear matter effects in pPb collisions at $\sqrt{S_{NN}} = 5$ TeV”. *Journal of High Energy Physics*, 2014. 10.1007/JHEP02(2014)072.
259. R. Aaij *et al.* [LHCb Collaboration]. “Search for the decay $D^0 \rightarrow \pi^+ \pi^- \mu^+ \mu^-$ ”. *Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics*, 2014. 10.1016/j.physletb.2013.11.053.
260. 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”. *Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics*, 2014. 10.1016/j.physletb.2013.11.036.
261. R. Aaij *et al.* [LHCb Collaboration]. “Measurement of the flavour-specific CP -violating asymmetry a_{SI}^s in B_s^0 decays”. *Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics*, 2014. 10.1016/j.physletb.2013.12.030.
262. B. Adeva *et al.* [LHCb Collaboration]. “Evidence for the decay $X(3872) \rightarrow \psi(2S)\gamma$ ”. *Nuclear Physics B*, 2014. 10.1016/j.nuclphysb.2014.06.011.
263. 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”. *Journal of High Energy Physics*, 2014. 10.1007/JHEP08(2014)143.
264. R. 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”. *Journal of High Energy Physics*, 2014. 10.1007/JHEP08(2014)143.

- Physics*, 2014.
10.1007/JHEP10(2014)097.
265. R. 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”. *Journal of High Energy Physics*, 2014.
10.1007/JHEP10(2014)088.
 266. 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”. *Journal of High Energy Physics*, 2014.
10.1007/JHEP10(2014)025.
 267. R. Aaij *et al.* [LHCb Collaboration]. “Precision measurement of the mass and lifetime of the Ξ_b^- baryon”. *Physical Review Letters*, 2014.
10.1103/PhysRevLett.113.242002.
 268. R. Aaij *et al.* [LHCb Collaboration]. “Measurement of CP asymmetry in $B_S^0 \rightarrow D_s^\mp K^\pm$ decays”. *Journal of High Energy Physics*, 2014.
10.1007/JHEP11(2014)060.
 269. P. AlvarezCartelle *et al.* [LHCb Collaboration]. “A study of CP violation in $B^\pm \rightarrow DK^\pm$ and $B^\pm \rightarrow D\pi^\pm$ decays with $D \rightarrow K_S^0 K^\pm$ final states”. *Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics*, 2014.
10.1016/j.physletb.2014.03.051.
 270. R. Aaij *et al.* [LHCb Collaboration]. “Measurement of CP asymmetries in the decays $B^0 \rightarrow K^{*0} \mu^+ \mu^-$ and $B^+ \rightarrow K^+ \mu^+ \mu^-$ ”. *Journal of High Energy Physics*, 2014.
10.1007/JHEP09(2014)177.
 271. A. Zvyagin *et al.* [LHCb Collaboration]. “Measurement of the forward W boson cross-section in pp collisions at $\sqrt{s} = 7$ TeV”. *Journal of High Energy Physics*, 2014.
10.1007/JHEP12(2014)079.
 272. R. Aaij *et al.* [LHCb Collaboration]. “Angular analysis of charged and neutral $B \rightarrow K \mu^+ \mu^-$ decays”. *Journal of High Energy Physics*, 2014.
10.1007/JHEP05(2014)082.
 273. R. Aaij *et al.* [LHCb Collaboration]. “Observation of the $B_S^0 \rightarrow J/\psi K_S^0 K^\pm \pi^\mp$ decay”. *Journal of High Energy Physics*, 2014.
10.1007/JHEP07(2014)140.
 274. R. Aaij *et al.* [LHCb Collaboration]. “Observation of the $\Lambda_b^0 \rightarrow J/\psi p \pi^-$ Decay”. *Journal of High Energy Physics*, 2014.
10.1007/JHEP07(2014)103.
 275. R. Aaij *et al.* [LHCb Collaboration]. “Differential branching fractions and isospin asymmetries of $B \rightarrow K^* \mu^+ \mu^-$ decays”. *Journal of High Energy Physics*, 2014.
10.1007/JHEP06(2014)133.

276. R. Aaij *et al.* [LHCb Collaboration]. “Measurement of CP asymmetry in $D^0 \rightarrow K^- K^+$ and $D^0 \rightarrow \pi^- \pi^+$ decays”. *Journal of High Energy Physics*, 2014. 10.1007/JHEP07(2014)041.
277. R. Aaij *et al.* [LHCb Collaboration]. “Measurement of $\psi(2S)$ polarisation in pp collisions at $\sqrt{s} = 7$ TeV”. *European Physical Journal C*, 2014. 10.1140/epjc/s10052-014-2872-9.
278. R. Aaij *et al.* [LHCb Collaboration]. “Measurements of the B^+ , B^0 , B_S^0 meson and Λ_b^0 baryon lifetimes”. *Journal of High Energy Physics*, 2014. 10.1007/JHEP04(2014)114.
279. R. Aaij *et al.* [LHCb Collaboration]. “Searches for Λ_b^0 and Ξ_b^0 decays to $K_S^0 p \pi^-$ and $K_S^0 p K^-$ final states with first observation of the $\Lambda_b^0 \rightarrow K_S^0 p \pi^-$ decay”. *Journal of High Energy Physics*, 2014. 10.1007/JHEP04(2014)087.
280. R. Aaij *et al.* [LHCb Collaboration]. “Measurement of polarization amplitudes and CP asymmetries in $B^0 \rightarrow \phi K^*(892)^0$ ”. *Journal of High Energy Physics*, 2014. 10.1007/JHEP05(2014)069.
281. R. 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”. *Journal of Physics G: Nuclear and Particle Physics*, 2014. 10.1088/0954-3899/41/5/055002.
282. R. Aaij *et al.* [LHCb Collaboration]. “Search for CP violation in the decay $D^+ \rightarrow \pi^- \pi^+ \pi^+$ ”. *Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics*, 2014. 10.1016/j.physletb.2013.12.035.
283. R. Aaij *et al.* [LHCb Collaboration]. “Study of forward Z + jet production in pp collisions at $\sqrt{s} = 7$ TeV”. *Journal of High Energy Physics*, 2014. 10.1007/JHEP01(2014)033.
284. R. Aaij *et al.* [LHCb Collaboration]. “Observation of the decay $B_S^0 \rightarrow \bar{D}^0 \phi$ ”. *Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics*, 2013. 10.1016/j.physletb.2013.10.057.
285. R. Aaij *et al.* [LHCb Collaboration]. “Measurement of $D^0 - \bar{D}^0$ mixing parameters and search for CP violation using $D^0 \rightarrow K^+ \pi^-$ decays”. *Physical Review Letters*, 2013. 10.1103/PhysRevLett.111.251801.
286. 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”. *European Physical Journal C*, 2013. 10.1140/epjc/s10052-013-2655-8.

287. R. Aaij *et al.* [LHCb Collaboration]. “Search for the doubly charmed baryon Ξ_{cc}^+ ”. *Journal of High Energy Physics*, 2013.
10.1007/JHEP12(2013)090.
288. R. Aaij *et al.* [LHCb Collaboration]. “Study of $B_{(S)}^0 \rightarrow K_S^0 h^+ h'^-$ decays with first observation of $B_S^0 \rightarrow K_S^0 K^\pm \pi^\pm$ and $B_S^0 \rightarrow K_S^0 \pi^+ \pi^-$ ”. *Journal of High Energy Physics*, 2013.
10.1007/JHEP10(2013)143.
289. R. Aaij *et al.* [LHCb Collaboration]. “Measurement of J/ψ polarization in pp collisions at $\sqrt{s} = 7$ TeV”. *European Physical Journal C*, 2013.
10.1140/epjc/s10052-013-2631-3.
290. R. Aaij *et al.* [LHCb Collaboration]. “Measurement of form-factor-independent observables in the decay $B^0 \rightarrow K^{*0} \mu^+ \mu^-$ ”. *Physical Review Letters*, 2013.
10.1103/PhysRevLett.111.191801.
291. R. Aaij *et al.* [LHCb Collaboration]. “First observation of the decay $B_S^0 \rightarrow \phi \bar{K}^{*0}$ ”. *Journal of High Energy Physics*, 2013.
10.1007/JHEP11(2013)092.
292. R. Aaij *et al.* [LHCb Collaboration]. “Observation of the decay $B_c^+ \rightarrow J/\psi K^+ K^- \pi^+$ ”. *Journal of High Energy Physics*, 2013.
10.1007/JHEP11(2013)094.
293. R. Aaij *et al.* [LHCb Collaboration]. “Observation of the decay $B_c^+ \rightarrow B_S^0 \pi^+$ ”. *Physical Review Letters*, 2013.
10.1103/PhysRevLett.111.181801.
294. 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”. *Physical Review D - Particles, Fields, Gravitation and Cosmology*, 2013.
10.1103/PhysRevD.88.072005.
295. R. Aaij *et al.* [LHCb Collaboration]. “Measurement of the CP asymmetry in $B^+ \rightarrow K^+ \mu^+ \mu^-$ decays”. *Physical Review Letters*, 2013.
10.1103/PhysRevLett.111.151801.
296. F. Archilli, W. Baldini, G. Bencivenni, N. Bondar, W. Bonivento, S. Cadeddu, P. Campana, A. Cardini, P. Ciambone, X. Cid Vidal, C. Deplano, P. De Simone, A. Falabella, M. Frosini, S. Furcas, E. Furfaro, M. Gandelman, J.A. Hernando Morata, G. Graziani, A. Lai, G. Lanfranchi, J.H. Lopes, O. Maev, G. Manca, G. Martellotti, A. Massafferri, D. Milanese, R. Oldeman, M. Palutan, G. Passaleva, D. Pinci, E. Polcarpo, R. Santacesaria, E. Santovetti, A. Sarti, A. Satta, B. Schmidt, B. Sciascia, F. Soomro, A. Sciubba, and S. Vecchi. “Performance of the muon identification at LHCb”. *Journal of Instrumentation*, 2013.
10.1088/1748-0221/8/10/P10020.
297. R. Aaij *et al.* [LHCb Collaboration]. “First evidence for the two-body charmless baryonic decay $B^0 \rightarrow p \bar{p}$ ”. *Journal of High Energy Physics*, 2013.
10.1007/JHEP10(2013)005.

298. R. Aaij *et al.* [LHCb Collaboration]. “Measurement of the relative rate of prompt χ_{c0} , χ_{c1} and χ_{c2} production at $\sqrt{s} = 7$ TeV”. *Journal of High Energy Physics*, 2013.
10.1007/JHEP10(2013)115.
299. R. Aaij *et al.* [LHCb Collaboration]. “Search for the lepton-flavor-violating decays $B_S^0 \rightarrow e^\pm \mu^\mp$ and $B^0 \rightarrow e^\pm \mu^\mp$ ”. *Physical Review Letters*, 2013.
10.1103/PhysRevLett.111.141801.
300. R. Aaij *et al.* [LHCb Collaboration]. “Differential branching fraction and angular analysis of the decay $B^0 \rightarrow K^{*0} \mu^+ \mu^-$ ”. *Journal of High Energy Physics*, 2013.
10.1007/JHEP08(2013)131.
301. R. Aaij *et al.* [LHCb Collaboration]. “First observation of the decay $B_c^+ \rightarrow J/\psi K^+$ ”. *Journal of High Energy Physics*, 2013.
10.1007/JHEP09(2013)075.
302. R. Aaij *et al.* [LHCb Collaboration]. “Study of D_J meson decays to $D^+ \pi^-$, $D^0 \pi^+$ and $D^{*+} \pi^-$ final states in pp collisions”. *Journal of High Energy Physics*, 2013.
10.1007/JHEP09(2013)145.
303. R. Aaij *et al.* [LHCb Collaboration]. “Studies of the decays $B^+ \rightarrow p \bar{p} h^+$ and observation of $B^+ \rightarrow \bar{\Lambda}(1520) p$ ”. *Physical Review D - Particles, Fields, Gravitation and Cosmology*, 2013.
10.1103/PhysRevD.88.052015.
304. R. Aaij *et al.* [LHCb Collaboration]. “Searches for $B_S^0 \rightarrow J/\psi p \bar{p}$ and $B^+ \rightarrow J/\psi p \bar{p} \pi^+$ decays”. *Journal of High Energy Physics*, 2013.
10.1007/JHEP09(2013)006.
305. R. Aaij *et al.* [LHCb Collaboration]. “Observation of a resonance in $B^+ \rightarrow K^+ \mu^+ \mu^-$ decays at low recoil”. *Physical Review Letters*, 2013.
10.1103/PhysRevLett.111.112003.
306. 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”. *Physical Review Letters*, 2013.
10.1103/PhysRevLett.111.101805.
307. R. Aaij *et al.* [LHCb Collaboration]. “Precision measurement of the Λ_b^0 baryon lifetime”. *Physical Review Letters*, 2013.
10.1103/PhysRevLett.111.102003.
308. R. Aaij *et al.* [LHCb Collaboration]. “Measurement of the polarization amplitudes in $B^0 \rightarrow J/\psi K^*(892)^0$ decays”. *Physical Review D - Particles, Fields, Gravitation and Cosmology*, 2013.
10.1103/PhysRevD.88.052002.
309. 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”. *Physical Review*

- Letters*, 2013.
10.1103/PhysRevLett.111.101801.
310. R. Aaij *et al.* [LHCb Collaboration]. “Measurement of B meson production cross-sections in proton-proton collisions at $\sqrt{s} = 7$ TeV”. *Journal of High Energy Physics*, 2013.
10.1007/JHEP08(2013)117.
 311. R. Aaij *et al.* [LHCb Collaboration]. “Differential branching fraction and angular analysis of the decay $B_S^0 \rightarrow \phi \mu^+ \mu^-$ ”. *Journal of High Energy Physics*, 2013.
10.1007/JHEP07(2013)084.
 312. R. Aaij *et al.* [LHCb Collaboration]. “Measurement of the effective $B_S^0 \rightarrow J/\psi K_S^0$ lifetime”. *Nuclear Physics B*, 2013.
10.1016/j.nuclphysb.2013.04.021.
 313. R. Aaij *et al.* [LHCb Collaboration]. “Measurement of the differential branching fraction of the decay $\Lambda_b^0 \rightarrow \Lambda \mu^+ \mu^-$ ”. *Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics*, 2013.
10.1016/j.physletb.2013.06.060.
 314. R. Aaij *et al.* [LHCb Collaboration]. “Search for CP violation in $D^+ \rightarrow \phi \pi^+$ and $D_s^+ \rightarrow K_S^0 \pi^+$ decays”. *Journal of High Energy Physics*, 2013.
10.1007/JHEP06(2013)112.
 315. R. Aaij *et al.* [LHCb Collaboration]. “Production of J/ψ and Υ mesons in pp collisions at $\sqrt{s} = 8$ TeV”. *Journal of High Energy Physics*, 2013.
10.1007/JHEP06(2013)064.
 316. R. Aaij *et al.* [LHCb Collaboration]. “Precision measurement of D meson mass differences”. *Journal of High Energy Physics*, 2013.
10.1007/JHEP06(2013)065.
 317. R. Aaij *et al.* [LHCb Collaboration]. “Search for $D_{(s)}^+ \rightarrow \pi^+ \mu^+ \mu^-$ and $D_{(s)}^+ \rightarrow \pi^- \mu^+ \mu^+$ decays”. *Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics*, 2013.
10.1016/j.physletb.2013.06.010.
 318. R. Aaij *et al.* [LHCb Collaboration]. “Search for the rare decay $D^0 \rightarrow \mu^+ \mu^-$, journal=Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics”. 2013.
10.1016/j.physletb.2013.06.037.
 319. 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”. *Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics*, 2013.
10.1016/j.physletb.2013.05.041.
 320. R. Aaij *et al.* [LHCb Collaboration]. “Searches for violation of lepton flavour and baryon number in tau lepton decays at LHCb”. *Physics Letters, Section B:*

- Nuclear, Elementary Particle and High-Energy Physics*, 2013.
10.1016/j.physletb.2013.05.063.
321. R. Aaij *et al.* [LHCb Collaboration]. “Observation of $B_c^+ \rightarrow J/\psi D_s^+$ and $B_c^+ \rightarrow J/\psi D_s^{*+}$ decays”. *Physical Review D - Particles, Fields, Gravitation and Cosmology*, 2013.
10.1103/PhysRevD.87.112012.
 322. 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”. *Physical Review D - Particles, Fields, Gravitation and Cosmology*, 2013.
10.1103/PhysRevD.87.112010.
 323. 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”. *Nuclear Physics B*, 2013.
10.1016/j.nuclphysb.2013.03.004.
 324. R. Aaij *et al.* [LHCb Collaboration]. “Measurement of the branching fractions of the decays $B_S^0 \rightarrow \bar{D}^0 K^- \pi^+$ and $B^0 \rightarrow \bar{D}^0 K^+ \pi^-$ ”. *Physical Review D - Particles, Fields, Gravitation and Cosmology*, 2013.
10.1103/PhysRevD.87.112009.
 325. R. Aaij *et al.* [LHCb Collaboration]. “Measurement of the $B^0 \rightarrow K^{*0} e^+ e^-$ Branching fraction at low dilepton mass”. *Journal of High Energy Physics*, 2013.
10.1007/JHEP05(2013)159.
 326. R. Aaij *et al.* [LHCb Collaboration]. “Limits on neutral Higgs boson production in the forward region in pp collisions at $\sqrt{s} = 7$ TeV”. *Journal of High Energy Physics*, 2013.
10.1007/JHEP05(2013)132.
 327. R. Aaij *et al.* [LHCb Collaboration]. “Measurements of the branching fractions of $B^+ \rightarrow p \bar{p} K^+$ decays”. *European Physical Journal C*, 2013.
10.1140/epjc/s10052-013-2462-2.
 328. R. Aaij *et al.* [LHCb Collaboration]. “First measurement of the CP -violating phase in $B_S^0 \rightarrow \phi \phi$ decays”. *Physical Review Letters*, 2013.
10.1103/PhysRevLett.110.241802.
 329. R. Aaij *et al.* [LHCb Collaboration]. “Observation of the suppressed ADS modes $B^+ \rightarrow [\pi^\pm K^\mp \pi^+ \pi^-]_D K^\pm$ and $B^+ \rightarrow [\pi^\pm K^\mp \pi^+ \pi^-]_D \pi^\pm$ ”. *Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics*, 2013.
10.1016/j.physletb.2013.05.009.
 330. R. Aaij *et al.* [LHCb Collaboration]. “Search for direct CP violation in $D^0 \rightarrow h^- h^+$ modes using semileptonic B decays”. *Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics*, 2013.
10.1016/j.physletb.2013.04.061.

331. R. Aaij *et al.* [LHCb Collaboration]. “Prompt charm production in pp collisions at $\sqrt{s} = 7$ TeV”. *Nuclear Physics B*, 2013.
10.1016/j.nuclphysb.2013.02.010.
332. R. Aaij *et al.* [LHCb Collaboration]. “First observation of CP violation in the decays of B_S^0 mesons”. *Physical Review Letters*, 2013.
10.1103/PhysRevLett.110.221601.
333. R. Aaij *et al.* [LHCb Collaboration]. “Determination of the $X(3872)$ meson quantum numbers”. *Physical Review Letters*, 2013.
10.1103/PhysRevLett.110.222001.
334. R. Aaij *et al.* [LHCb Collaboration]. “First observations of $\bar{B}_S^0 \rightarrow D^+ D^-$, $D_s^+ D^-$ and $D^0 \bar{D}^-$ decays”. *Physical Review D - Particles, Fields, Gravitation and Cosmology*, 2013.
10.1103/PhysRevD.87.092007.
335. R. Aaij *et al.* [LHCb Collaboration]. “Search for rare $\bar{B}_{(s)}^0 \rightarrow \mu^+ \mu^- \mu^+ \mu^-$ decays”. *Physical Review Letters*, 2013.
10.1103/PhysRevLett.110.211801.
336. R. Aaij *et al.* [LHCb Collaboration]. “Study of $B^0 \rightarrow D^{*-} \pi^+ \pi^- \pi^+$ and $B^0 \rightarrow D^{*-} K^+ \pi^- \pi^+$ decays”. *Physical Review D - Particles, Fields, Gravitation and Cosmology*, 2013.
10.1103/PhysRevD.87.092001.
337. R. Aaij *et al.* [LHCb Collaboration]. “Measurement of the Λ_b^0 , Ξ_b^- , and Ω_b^- Baryon masses”. *Physical Review Letters*, 2013.
10.1103/PhysRevLett.110.182001.
338. 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 Journal of Physics*, 2013.
10.1088/1367-2630/15/5/053021.
339. R. Aaij *et al.* [LHCb Collaboration]. “Observation of the decay $B_c^+ \rightarrow \psi(2S) \pi^+$ ”. *Physical Review D - Particles, Fields, Gravitation and Cosmology*, 2013.
10.1103/PhysRevD.87.071103.
340. R. Aaij *et al.* [LHCb Collaboration]. “Search for the decay $B_S^0 \rightarrow D^{*\mp} \pi^\pm$ ”. *Physical Review D - Particles, Fields, Gravitation and Cosmology*, 2013.
10.1103/PhysRevD.87.071101.
341. R. Aaij *et al.* [LHCb Collaboration]. “Amplitude analysis and branching fraction measurement of $\bar{B}_S^0 \rightarrow J/\psi K^+ K^-$ ”. *Physical Review D - Particles, Fields, Gravitation and Cosmology*, 2013.
10.1103/PhysRevD.87.072004.
342. R. Aaij *et al.* [LHCb Collaboration]. “Exclusive J/ψ and $\psi(2S)$ production in pp collisions at $\sqrt{s} = 7$ TeV”. *Journal of Physics G: Nuclear and Particle Physics*,

2013.
10.1088/0954-3899/40/4/045001.
343. R. Aaij *et al.* [LHCb Collaboration]. “Measurement of CP observables in $B^0 \rightarrow DK^{*0}$ with $D \rightarrow K^+ K^-$ ”. *Journal of High Energy Physics*, 2013.
10.1007/JHEP03(2013)067.
 344. R. Aaij *et al.* [LHCb Collaboration]. “Analysis of the resonant components in $\bar{B}^0 \rightarrow J/\psi \pi^+ \pi^-$ ”. *Physical Review D - Particles, Fields, Gravitation and Cosmology*, 2013.
10.1103/PhysRevD.87.052001.
 345. R. Aaij *et al.* [LHCb Collaboration]. “Measurement of J/ψ production in pp collisions at $\sqrt{s} = 2.76$ TeV”. *Journal of High Energy Physics*, 2013.
10.1007/JHEP02(2013)041.
 346. A.A. Alves Jr., L. Anderlini, M. Anelli, R.A. Nobrega, G. Auremma, W. Baldini, G. Bencivenni, R. Berutti, A. Bizzeti, V. Bocci, N. Bondar, W. Bonivento, B. Botchin, S. Cadeddu, P. Campana, G. Carboni, A. Cardini, M. Carletti, P. Ciambone, E. Dané, S. De Capua, V. De Leo, C. Deplano, P. De Simone, F. Dettori, A. Falabella, F.F. Rodriguez, M. Frosini, S. Furcas, E. Furfaro, G. Graziani, L. Gruber, G. Haefeli, A. Kashchuk, F. Iacoangeli, A. Lai, G. Lanfranchi, M. Lenzi, O. Levitskaya, K. Mair, O. Maev, G. Manca, M. Mara, G. Martellotti, A.M. Rodrigues, R. Messi, F. Murtas, P. Neustroev, R.G.C. Oldeman, M. Palutan, G. Passaleva, G. Penso, D. Pinci, E. Polcarpo, D. Raspino, G. Sabatino, B. Saitta, A. Salamon, R. Santacesaria, E. Santovetti, A. Saputi, A. Sarti, C. Satriano, A. Satta, M. Savrié, B. Schmidt, T. Schneider, B. Sciascia, A. Sciubba, N. Serra, P. Shatalov, S. Vecchi, M. Veltri, S. Volkov, and A. Vorobyev. “Performance of the LHCb muon system”. *Journal of Instrumentation*, 2013.
10.1088/1748-0221/8/02/P02022.
 347. G. Eigen, Z. Zhou, D. Chao, C.H. Cheng, B. Echenard, K.T. Flood, D.G. Hitlin, F.C. Porter, R.Y. Zhu, G. De Nardo, C. Sciacca, M. Bizzarri, C. Cecchi, S. Germani, P. Lubrano, E. Manoni, A. Papi, G. Scolieri, A. Rossi, V. Bocci, G. Chiodi, R. Faccini, S. Fiore, E. Furfaro, P. Gauzzi, G. Martellotti, F. Pellegrino, V. Pettinacci, D. Pinci, L. Recchia, A. Zullo, P. Branchini, and A. Budano. “A LYSO calorimeter for the SuperB factory, journal=Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment”. 2013.
10.1016/j.nima.2012.11.100.
 348. R. Aaij *et al.* [LHCb Collaboration]. “Measurement of the fragmentation fraction ratio f_s/f_d and its dependence on B meson kinematics”. *Journal of High Energy Physics*, 2013.
10.1007/JHEP04(2013)001.
 349. R. Aaij *et al.* [LHCb Collaboration]. “Branching fraction and CP asymmetry of the decays $B^+ \rightarrow K_S^0 \pi^+$ and $B^+ \rightarrow K_S^0 K^+$ ”. *Physics Letters, Section B*:

Nuclear, Elementary Particle and High-Energy Physics, 2013.
10.1016/j.physletb.2013.09.046.

350. 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”. *Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics*, 2013.
10.1016/j.physletb.2013.09.011.
351. 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”. *Nuclear Physics B*, 2013.
10.1016/j.nuclphysb.2013.06.005.
352. R. Aaij *et al.* [LHCb Collaboration]. “Measurement of the CKM angle γ from a combination of $B^\pm \rightarrow Dh^\pm$ analyses”. *Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics*, 2013.
10.1016/j.physletb.2013.08.020.
353. R. Aaij *et al.* [LHCb Collaboration]. “First measurement of time-dependent CP violation in $B^0 \rightarrow K^+ K^-$ decays”. *Journal of High Energy Physics*, 2013.
10.1007/JHEP10(2013)183.
354. 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”. *Journal of High Energy Physics*, 2013.
10.1007/JHEP02(2013)106.
355. E. Furfaro, G. Martellotti, R. Nobrega, G. Penso, and D. Pinci. “Study of the performance of the LHCb muon chambers with cosmic rays”. *Journal of Instrumentation*, 2011.
10.1088/1748-0221/6/12/P12002.
- Conference proceedings
356. S. Fiore, I. Dafinei, R. Faccini, E. Furfaro, and D. Pinci. “Gamma-ray induced radiation damage in large size BGO crystals for the superb calorimeter”. *IEEE Nuclear Science Symposium Conference Record*, 2012.
10.1109/NSSMIC.2012.6551427.
357. R.A. Nobrega, V. Bocci, E. Furfaro, G. Martellotti, G. Penso, and D. Pinci. “Performance of the MWPC of the first station of the LHCb Muon system”. *IEEE Nuclear Science Symposium Conference Record*, 2009.
10.1109/NSSMIC.2009.5402314.
358. E. Furfaro, G. Martellotti, R. Nobrega, G. Penso, and D. Pinci. “Study of the LHCb Muon Chambers Performance with Cosmic Rays”. *Journal of Physics: Conference Series*, 2008. 10.1088/1742-6596/110/2/022017.
359. R. Antunes Nobrega, V. Bocci, E. Furfaro, G. Martellotti, F. Iacoangeli, G. Penso, D. Pinei, and W. Rinaldi. “Performance of the quadri-gap LHCb Muon Chambers studied with cosmic rays”. *IEEE Nuclear Science Symposium Conference Record*, 2007. 10.1109/NSSMIC.2007.4436395.

Note pubbliche d'esperimento

360. G. Martellotti et al. "Study of the performance of the LHCb MWPC with cosmic rays". LHCb-2008-057, 2008.

Tesi

361. E. Furfaro. "Precise measurement of the charged B meson mass at the LHCb experiment". CERN-THESIS-2017-028.

Presentazioni a Conferenze

362. Febbraio 2015. Presentazione dal titolo: "Attività di analisi del gruppo LHCb di Roma2" alla conferenza "LHCb Italy Meeting", 2015.
363. Settembre 2014. Presentazione dal titolo: "Attività di analisi del gruppo LHCb di Roma2" alla conferenza "LHCb Italy Meeting", 2014.

Roma, 05/02/2024