EUROPEAN ORGANIZATION FOR NUCLEAR RESEARCH (CERN)

CERN-EP-20XX-YYY
LHCb-PAPER-20XX-YYY
August 14, 2016

Template for writing LHCb papers

The LHCb collaboration[†]

Abstract

Guidelines for the preparation of LHCb documents are given. This is a "living" document that should reflect our current practice. It is expected that these guidelines are implemented for papers before they go into the first collaboration wide review. Please contact the Editorial Board chair if you have suggestions for modifications. This is the title page for journal publications (PAPER). For a CONF note or ANA note, switch to the appropriate template by uncommenting the corresponding line in the file `main.tex`.

Submitted to JHEP / Phys. Rev. D / Phys. Rev. Lett. / Phys. Lett. B / Eur. Phys. J. C / Nucl. Phys. B

[†]Authors are listed at the end of this paper.

1 Introduction

CP violation enters the Standard Model (SM) via the single irreducible phase in the Cabbibo-Kobayashi-Maskawa (CKM) matrix. The unitarity requirement placed on this matrix allows us to construct the Unitray Triangle (UT) in the complex plane from the complex equation:

$$V_{ud}V_{ub}^* + V_{cd}V_{cb}^* + V_{td}V_{tb}^* = 0 \tag{1}$$

This is of particular interest as all angles and sides are of measurable size and represent the weak phases and decay amplitudes respectively, of inter- and intra-generational quark transitions. The least well known angle, $\phi_3 = arg(-V_{ud}V_{ub}^*/V_{cd}V_{cb}^*)$, is accessible via tree-level processes, therefore, as well as being a fundamental parameter of the SM, a precise measurement of this angle at tree level can be compared to higher order processes in order to probe physics beyond the SM (BSM) that may enter decays via loops.

The LHCb experiment has previously probed ϕ_3 by studying the interference between $b \to c\bar{u}s$ and, the colour and CKM suppressed, $b \to u\bar{c}s$ transitions in $B^\pm \to DK$ decays, where the D is an admixture of D^0 and $\bar{D}^0$ mesons decaying to a common final state. These could be two-body, non-self-conjugate multibody, or self-conjugate multibody final states. Similar studies have also been performed on neutral B^0 and B_s^0 mesons. This analysis makes use of self-conjugate multibody final states, $D \to K_s^0 h^+ h^-$, in decays of the form $B^\pm \to D^* K^\pm$, where the charmed meson is produced in an excited D^* state and decays strongly via $D^{*0} \to D\pi^0/\gamma$. Sensitivity to ϕ_3 is then obtained by studying the Dalitz distribution of $D \to K_s^0 h^+ h^-$ events comparatively for B^+ and B^- mesons. In order to achieve this, the strong phase variation of the D meson decay over the bins of the Dalitz plot must be known.

It is possible to determine this distribution using an amplitude model, derived from flavour-tagged $D \to K_s^0 h^+ h^-$ decays. This has been successfully applied in previous analyses by the BaBar, Belle and LHCb collaborations. The alternative approach is a model-independent method, as has been demonstrated by Belle and LHCb, making use of direct measurements of the strong phase variation measured at CLEO-c in decays of $\psi(3770)$ mesons to quantum-correlated $D^0\bar{D}^0$ pairs. This data-driven approach is attractive as it avoids making the assumptions required by the model-dependant case.

This paper presents a model-independant study of $B^\pm \to D^* K^\pm$ decays, with $D^* \to D\pi^0$, $D^* \to D\gamma$ and $D \to K_s^0 \pi^+\pi^-$, $D \to K_s^0 K^+ K^-$. The data used corresponds to a total integrated luminosity of 3.295 fb^{-1} of pp collision acquired with the LHCb detector, at center-of-mass energies of $\sqrt{s} = 7, 8, 13$ TeV over the years 2011, 2012 and 2015, respectively.

[1] [2]

2 Analysis Overview

The neutral D^* meson produced in the decay of the B^- is a superposition of particle, anti-particle states and can be expressed as:

$$D^* = D^{*0} + r_B e^{i(\delta_B - \phi_3)} \overline{D}^{*0} \tag{2}$$

Here, $r_B = \frac{|A(B^- \to \overline{D}^* K^-)|}{|A(B^- \to D^{*0} K^-)|}$, the ratio of the strong decay amplitudes, and δ_B is the strong phase difference between them. Writing this in terms of odd and even CP eigenstates, where $D^*_+ = \frac{D^{*0}+\overline{D}^{*0}}{2}$ and $D^*_- = \frac{D^{*0}-\overline{D}^{*0}}{2}$:

$$D^* = \frac{D^{*+} + D^{*-}}{\sqrt{2}} + r_B e^{i(\delta_B - \phi_3)} \frac{D^{*+} - D^{*-}}{\sqrt{2}} \tag{3}$$

The CP eigenvalue of the D^* state is given by the product $\lambda_{D^*} = \lambda_D \times \lambda_{\pi^0/\gamma} \times (-1)^l$. In the case of the strong D^* decay via π^0 emission, $\lambda_{\pi^0} = -1$ and $l = 1$ therefore $\lambda_{D^*} = \lambda_D$ and $D^{*\pm} \to D^{\pm}\pi^0$. Where as, for γ emission, $\lambda_\gamma = +1$ and $l = 1$ therefore $\lambda_{D^*} = -\lambda_D$ and $D^{*\pm} \to D^{\mp}\gamma$. This introduces a strong phase shift of π between the two neutral D mesons produced in the decay $B^- \to D^* K^-$. Defining $\delta = \delta_B$ for the $D^* \to D\pi^0$ decay and $\delta = \delta_B + \pi$ for $D^{*\pm} \to D_{\mp}\gamma$, we can write the equivalent of Eq. (2) for the D meson produced in B^- decay:

$$D = D^0 + r_B e^{i(\delta - \phi_3)} \overline{D}^0 \tag{4}$$

This can be translated into an amplitude in Dalitz space,

$$A_B(m^2_-, m^2_+) \propto A + r_B e^{i\delta - \phi_3} \bar{A} \tag{5}$$

where $m^2_\pm$ are the invariant masses squared of the $K^0_s h^\pm$ combinations. $A = A(m^2_-, m^2_+)$ is the Dalitz amplitude for the D^0 decay and analogously for the $\overline{D}^0$ decay, $\bar{A} = \bar{A}(m^2_-, m^2_+)$. Making the subsitutions $\phi_3 \to -\phi_3$ and $A \leftrightarrow \bar{A}$ gives the equivalent expression for the amplitude of the D meson produced in the charge-conjugated decay, $B^+ \to DK^+$. The exent to which CP is violated in $D^0 - \overline{D}^0$ mixing and Cabibbo-favoured D meson decays is known to be small, therefore, neglecting these second order effects, the conjugate amplitudes can be related by $A_B(m^2_-, m^2_+) = \bar{A}_B(m^2_+, m^2_-)$.

The Dalitz plot is constructed in 2N bins labelled -N to +N (excluding 0), symmetric about the line $m^2_- = m^2_+$, where N> 0 corresponds to $m^2_- > m^2_+$. It can be seen from Eq. 5 that the square of the amplitude is dependant on the strong phase difference between the D^0 and $\overline{D}^0$ decay:

$$\Delta\delta_D \equiv \delta_D(m^2_+, m^2_-) - \delta_D(m^2_-, m^2_+) \tag{6}$$

where $\delta_D(m^2_+, m^2_-) \equiv \arg A$ - $\arg\bar{A}$ is the phase of $A(m^2_+, m^2_-)$. The equation for the cosine of the average strong phase difference, weighted by the decay rate, within each bin i of area $\mathcal{D}_i$, is given by:

$$c_i \equiv \frac{\int_{\mathcal{D}_i} (|A||\bar{A}| \cos\delta_D) d\mathcal{D}}{\sqrt{\int_{\mathcal{D}_i} |A|^2 d\mathcal{D}} \sqrt{\int_{\mathcal{D}_i} |\bar{A}|^2 d\mathcal{D}}} \tag{7}$$

An analogous expression can be constructed for the sine of the weighted strong phase difference within bin i, s_i. Both parameters have been measured by the CLEO-c experiment, who observed $D^0\overline{D}^0$ pairs produced at the $\psi(3770)$ resonance. One D meson is reconstructed in $K^0_{\rm S}\ h^+h^-$ or $K^0_{\rm L}\ h^+h^-$ final state, and the other in a decay to $K^0_{\rm S}\ h^+h^-$ or a CP eigenstate. Combining the efficiency-corrected events yields in each bin with flavour-tagged information allows s_i and c_i to be determined, where their finite precision introduces a systematic uncertainty into the final result. The benefit of this method is that it avoids making assumptions about the nature of the intermediate resonances contributing to the $K^0_{\rm S}\ h^+h^-$ final state, which are required in the model-dependant approach when fitting an amplitude model to flavour-tagged D^0 decays, in which an assumed functional form for $|A|$, $|\bar{A}|$ and δ_D are constructed.

*** Insert paragraph describing choice of binning scheme ***

The CP observables that are measured in this analysis are defined as:

$$x_\pm \equiv r_B \cos(\delta \pm \phi_3) \text{ and } y_\pm \equiv r_B \sin(\delta \pm \phi_3) \tag{8}$$

and from these parameters, it is possible to extract r_B, δ_B and ϕ_3. As described in Sec. 1, $\delta = \delta_B$ and $\delta = \delta_B + \pi$ for $D^{*0} \to D\pi^0$ and $D^* \to D\gamma$, respectively. The extra strong phase difference of π introduced by the latter decay simply results in a negative sign in front of $x_\pm$ and $y_\pm$, therefore does not provide any extra information.

Selections placed on the data in order to extract signal events result in nonuniformities within the Dalitz phase space, and the associated effect on each position in relation to the others must be accounted for. This is achieved by constructing a relative selection and reconstruction efficiency profile as a function of Dalitz plot position, $\epsilon = \epsilon(m_-^2, m_+^2)$. The fraction of events in bin i is therefore given by:

$$F_i = \frac{\int_{\mathcal{D}_i} |A|^2 \epsilon d\mathcal{D}}{\sum_j \int_{\mathcal{D}_j} |A|^2 \epsilon d\mathcal{D}} \tag{9}$$

Denoting the number of events in positive (negative) bins due to B^+ decays as N_{+i}^+ (N_{-i}^+), and for B^- decays N_{+i}^- (N_{-i}^-), and considering Eq. 5, it then follows that

$$\begin{aligned} N_{\pm i}^+ &= h_{B^+}\left[F_{\mp i} + (x_+^2 + y_+^2)F_{\pm i} + 2\sqrt{F_i F_{-i}}(x_+ c_{\pm i} - y_+ s_{\pm i})\right] \\ N_{\pm i}^- &= h_{B^-}\left[F_{\pm i} + (x_-^2 + y_-^2)F_{\mp i} + 2\sqrt{F_i F_{-i}}(x_- c_{\pm i} + y_- s_{\pm i})\right] \end{aligned} \tag{10}$$

where $h_{B^\pm}$ accounts for the relative normalisation of B^+ and B^- decays that arise from asymmetries in the production rates of bottom and anti-bottom mesons.

The decay $\overset{(-)}{B} \to D^{*\pm}\mu_\mp\nu_\mu X$, where $D^{*\pm} \to \overset{(-)}{D}{}^0\pi^\pm$ and $\overset{(-)}{D}{}^0 \to K_S^0 h^+ h^-$ (X denotes other particles that could be produced in the $\overset{(-)}{B}$ decay), is used as a control mode to determine F_i. Comparions are made between simulated $\overset{(-)}{B} \to D^{*\pm}\mu_\mp\nu_\mu X$ and $B^\pm \to D^* K^\pm$ decays in order to correct for differences in their reconstruction and selection efficiencies. Decays of the higher statistics mode, $B^\pm \to D^*\pi^\pm$, are also studied in order to develop the signal selection procedure and determine the yield of $B^\pm \to D^*\pi^\pm$ miss-identified as $B^\pm \to D^* K^\pm$ candidates.

The effect of D^0-$\overline{D}^0$ mixing was neglected in the CLEO-c measurements of c_i and s_i, as it is in the current analysis. This introduces a bias of $0.2°$ in the derived measurement of ϕ_3. The CP violating effect in K_S^0 decays was also not considered, and is expected to introduce $\mathcal{O}(1°)$ uncertainty to the final result. An uncertainty of similar magnitude enters due to the different interaction cross sections of the K^0 and $\overline{K}^0$ mesons. The results of these neglected effects are negligible in the current analysis, considering the expected precision of the ϕ_3 measurement that can be obtained.

*** Insert paragraph describing ANA note layout ***

3 Detector and simulation

The LHCb detector [?, 1] is a single-arm forward spectrometer covering the pseudorapidity range $2 < \eta < 5$, designed for the study of particles containing b or c quarks. The detector includes a high-precision tracking system consisting of a silicon-strip vertex detector surrounding the pp interaction region [**?**]*, a large-area silicon-strip detector located upstream of a dipole magnet with a bending power of about 4 Tm, and three stations of silicon-strip detectors and straw drift tubes [**?**]* placed downstream of the magnet. The tracking system provides a measurement of momentum, p, of charged particles with a relative uncertainty that varies from 0.5% at low momentum to 1.0% at 200 GeV/c. The minimum distance of a track to a primary vertex (PV), the impact parameter (IP), is measured with a resolution of $(15 + 29/p_{\mathrm{T}})\,\mu\mathrm{m}$, where p_{T} is the component of the momentum transverse to the beam, in GeV/c. Different types of charged hadrons are distinguished using information from two ring-imaging Cherenkov detectors [**?**]*. Photons, electrons and hadrons are identified by a calorimeter system consisting of scintillating-pad and preshower detectors, an electromagnetic calorimeter and a hadronic calorimeter. Muons are identified by a system composed of alternating layers of iron and multiwire proportional chambers [**?**]*. The online event selection is performed by a trigger [**?**]*, which consists of a hardware stage, based on information from the calorimeter and muon systems, followed by a software stage, which applies a full event reconstruction.

At the hardware trigger stage, events are required to have a muon with high p_{T} or a hadron, photon or electron with high transverse energy in the calorimeters. For hadrons, the transverse energy threshold is 3.5 GeV. The software trigger requires a two-, three- or four-track secondary vertex with a significant displacement from the primary pp interaction vertices. At least one charged particle must have a transverse momentum $p_{\mathrm{T}} > 1.7\,\mathrm{GeV}/c$ and be inconsistent with originating from a PV. A multivariate algorithm [3] is used for the identification of secondary vertices consistent with the decay of a b hadron.

Decays of $K^0_{\mathrm{S}} \to \pi^+\pi^-$ are reconstructed in two different categories: the first involving K^0_{S} mesons that decay early enough for the daughter pions to be reconstructed in the vertex detector; and the second containing K^0_{S} that decay later such that track segments of the pions cannot be formed in the vertex detector. These categories are referred to as *long* and *downstream*, respectively. The long category has better mass, momentum and vertex resolution than the downstream category.

In the simulation, pp collisions are generated using PYTHIA [4] with a specific LHCb configuration [5]. Decays of hadronic particles are described by EVTGEN [6], in which final-state radiation is generated using PHOTOS [7]. The interaction of the generated particles with the detector, and its response, are implemented using the GEANT4 toolkit [8] as described in Ref. [9].

Appendices

A Standard References

Below is a list of common references, as well as a list of all LHCb publications. As they are already in prepared bib files, they can be used as simply as `\cite{Alves:2008zz}` to get the LHCb detector paper. The references are defined in the files `main.bib`, `LHCb-PAPER.bib`, `LHCb-CONF.bib`, `LHCb-DP.bib` `LHCb-TDR.bib` files, with obvious contents. Each of these have their `LHCb-ZZZ-20XX-0YY` number as their cite code. If you believe there is a problem with the formatting or content of one of the entries, then get in contact with the Editorial Board rather than just editing it in your local file, since you are likely to need the latest version just before submiting the article.

Description	`cite` code	Reference
LHCb detector	`Alves:2008zz`	[1]
LHCb simulation	`LHCb-PROC-2011-006`	[9]
PDG 2014	`PDG2014`	[10]
HFAG	`HFAG`	[11]
Pythia	`Sjostrand:2006za, *Sjostrand:2007gs`	[4]
LHCb Pythia tuning	`LHCb-PROC-2010-056`	[5]
Geant4	`Allison:2006ve, *Agostinelli:2002hh`	[8]
EvtGen	`Lange:2001uf`	[6]
Photos	`Golonka:2005pn`	[7]
Dirac	`Tsaregorodtsev:2010zz, *BelleDIRACAmazon`	[12]
Crystal Ball function[1]	`Skwarnicki:1986xj`	[13]
Wilks' theorem	`Wilks:1938dza`	[14]
BDT	`Breiman`	[15]
BDT training	`AdaBoost`	[16]
HLT2 topo	`BBDT`	[3]
DecayTreeFitter	`Hulsbergen:2005pu`	[17]
sPlot	`Pivk:2004ty`	[18]
Punzi's optimization	`Punzi:2003bu`	[19]
f_s/f_d	`fsfd`	[20]

[1] A valid alternative for most papers where the normalisation is not critical is to use the expression"Gaussian function with a low-mass power-law tail" or "Gaussian function with power-law tails". In that case, no citation is needed

LHCb-DP number	Title
LHCb-DP-2016-001 [?]	TESLA project
LHCb-DP-2014-002 [?]	LHCb detector performance
LHCb-DP-2014-001 [?]	Performance of the LHCb Vertex Locator
LHCb-DP-2013-004 [?]	Performance of the LHCb calorimeters
LHCb-DP-2013-003 [?]	Performance of the LHCb Outer Tracker
LHCb-DP-2013-002 [?]	Measurement of the track reconstruction efficiency at LHCb
LHCb-DP-2013-001 [?]	Performance of the muon identification at LHCb
LHCb-DP-2012-005 [?]	Radiation damage in the LHCb Vertex Locator
LHCb-DP-2012-004 [?]	The LHCb trigger and its performance in 2011
LHCb-DP-2012-003 [?]	Performance of the LHCb RICH detector at the LHC
LHCb-DP-2012-002 [?]	Performance of the LHCb muon system
LHCb-DP-2012-001 [?]	Radiation hardness of the LHCb Outer Tracker
LHCb-DP-2011-002 [?]	Simulation of machine induced background ...
LHCb-DP-2011-001 [?]	Performance of the LHCb muon system with cosmic rays
LHCb-DP-2010-001 [?]	First spatial alignment of the LHCb VELO ...

LHCb-TDR number	Title
LHCb-TDR-016 [?]	Trigger and online upgrade
LHCb-TDR-015 [?]	Tracker upgrade
LHCb-TDR-014 [?]	PID upgrade
LHCb-TDR-013 [?]	VELO upgrade
LHCb-TDR-012 [?]	Framework TDR for the upgrade
LHCb-TDR-011 [?]	Computing
LHCb-TDR-010 [?]	Trigger
LHCb-TDR-009 [?]	Reoptimized detector
LHCb-TDR-008 [?]	Inner Tracker
LHCb-TDR-007 [?]	Online, DAQ, ECS
LHCb-TDR-006 [?]	Outer Tracker
LHCb-TDR-005 [?]	VELO
LHCb-TDR-004 [?]	Muon system
LHCb-TDR-003 [?]	RICH
LHCb-TDR-002 [?]	Calorimeters
LHCb-TDR-001 [?]	Magnet

Table 2: LHCb-PAPERs (which have their identifier as their cite code). Note that LHCb-PAPER-2011-039 does not exist.

	LHCb-PAPER-2016-029 [21]
LHCb-PAPER-2016-028 [22]	LHCb-PAPER-2016-027 [23]
LHCb-PAPER-2016-026 [24]	LHCb-PAPER-2016-025 [25]
LHCb-PAPER-2016-024 [26]	LHCb-PAPER-2016-023 [27]
LHCb-PAPER-2016-022 [28]	LHCb-PAPER-2016-021 [29]
LHCb-PAPER-2016-020 [30]	LHCb-PAPER-2016-019 [31]
LHCb-PAPER-2016-018 [32]	LHCb-PAPER-2016-017 [33]
LHCb-PAPER-2016-016 [34]	LHCb-PAPER-2016-015 [35]
LHCb-PAPER-2016-014 [36]	LHCb-PAPER-2016-013 [37]

– continued from previous page.

LHCb-PAPER-2016-012 [38]	LHCb-PAPER-2016-011 [39]
LHCb-PAPER-2016-010 [40]	LHCb-PAPER-2016-009 [41]
LHCb-PAPER-2016-008 [42]	LHCb-PAPER-2016-007 [43]
LHCb-PAPER-2016-006 [44]	LHCb-PAPER-2016-005 [45]
LHCb-PAPER-2016-004 [46]	LHCb-PAPER-2016-003 [47]
LHCb-PAPER-2016-002 [48]	LHCb-PAPER-2016-001 [49]
LHCb-PAPER-2015-060 [50]	LHCb-PAPER-2015-059 [51]
LHCb-PAPER-2015-058 [52]	LHCb-PAPER-2015-057 [53]
LHCb-PAPER-2015-056 [54]	LHCb-PAPER-2015-055 [55]
LHCb-PAPER-2015-054 [56]	LHCb-PAPER-2015-053 [57]
LHCb-PAPER-2015-052 [58]	LHCb-PAPER-2015-051 [59]
LHCb-PAPER-2015-050 [60]	LHCb-PAPER-2015-049 [61]
LHCb-PAPER-2015-048 [62]	LHCb-PAPER-2015-047 [63]
LHCb-PAPER-2015-046 [64]	LHCb-PAPER-2015-045 [65]
LHCb-PAPER-2015-044 [66]	LHCb-PAPER-2015-043 [67]
LHCb-PAPER-2015-042 [68]	LHCb-PAPER-2015-041 [69]
LHCb-PAPER-2015-040 [70]	LHCb-PAPER-2015-039 [71]
LHCb-PAPER-2015-038 [72]	LHCb-PAPER-2015-037 [73]
LHCb-PAPER-2015-036 [74]	LHCb-PAPER-2015-035 [75]
LHCb-PAPER-2015-034 [76]	LHCb-PAPER-2015-033 [77]
LHCb-PAPER-2015-032 [78]	LHCb-PAPER-2015-031 [79]
LHCb-PAPER-2015-030 [80]	LHCb-PAPER-2015-029 [81]
LHCb-PAPER-2015-028 [82]	LHCb-PAPER-2015-027 [83]
LHCb-PAPER-2015-026 [84]	LHCb-PAPER-2015-025 [85]
LHCb-PAPER-2015-024 [86]	LHCb-PAPER-2015-023 [87]
LHCb-PAPER-2015-022 [88]	LHCb-PAPER-2015-021 [89]
LHCb-PAPER-2015-020 [90]	LHCb-PAPER-2015-019 [91]
LHCb-PAPER-2015-018 [92]	LHCb-PAPER-2015-017 [93]
LHCb-PAPER-2015-016 [94]	LHCb-PAPER-2015-015 [95]
LHCb-PAPER-2015-014 [96]	LHCb-PAPER-2015-013 [97]
LHCb-PAPER-2015-012 [98]	LHCb-PAPER-2015-011 [99]
LHCb-PAPER-2015-010 [100]	LHCb-PAPER-2015-009 [101]
LHCb-PAPER-2015-008 [102]	LHCb-PAPER-2015-007 [103]
LHCb-PAPER-2015-006 [104]	LHCb-PAPER-2015-005 [105]
LHCb-PAPER-2015-004 [106]	LHCb-PAPER-2015-003 [107]
LHCb-PAPER-2015-002 [108]	LHCb-PAPER-2015-001 [109]
LHCb-PAPER-2014-070 [110]	LHCb-PAPER-2014-069 [111]
LHCb-PAPER-2014-068 [112]	LHCb-PAPER-2014-067 [113]
LHCb-PAPER-2014-066 [114]	LHCb-PAPER-2014-065 [115]
LHCb-PAPER-2014-064 [116]	LHCb-PAPER-2014-063 [117]
LHCb-PAPER-2014-062 [118]	LHCb-PAPER-2014-061 [119]
LHCb-PAPER-2014-060 [120]	LHCb-PAPER-2014-059 [121]
LHCb-PAPER-2014-058 [122]	LHCb-PAPER-2014-057 [123]
LHCb-PAPER-2014-056 [124]	LHCb-PAPER-2014-055 [125]
LHCb-PAPER-2014-054 [126]	LHCb-PAPER-2014-053 [127]
LHCb-PAPER-2014-052 [128]	LHCb-PAPER-2014-051 [129]

– continued from previous page.

LHCb-PAPER-2014-050 [130]	LHCb-PAPER-2014-049 [131]
LHCb-PAPER-2014-048 [132]	LHCb-PAPER-2014-047 [133]
LHCb-PAPER-2014-046 [134]	LHCb-PAPER-2014-045 [135]
LHCb-PAPER-2014-044 [136]	LHCb-PAPER-2014-043 [137]
LHCb-PAPER-2014-042 [138]	LHCb-PAPER-2014-041 [139]
LHCb-PAPER-2014-040 [140]	LHCb-PAPER-2014-039 [141]
LHCb-PAPER-2014-038 [142]	LHCb-PAPER-2014-037 [143]
LHCb-PAPER-2014-036 [144]	LHCb-PAPER-2014-035 [145]
LHCb-PAPER-2014-034 [146]	LHCb-PAPER-2014-033 [147]
LHCb-PAPER-2014-032 [148]	LHCb-PAPER-2014-031 [149]
LHCb-PAPER-2014-030 [150]	LHCb-PAPER-2014-029 [151]
LHCb-PAPER-2014-028 [152]	LHCb-PAPER-2014-027 [153]
LHCb-PAPER-2014-026 [154]	LHCb-PAPER-2014-025 [155]
LHCb-PAPER-2014-024 [156]	LHCb-PAPER-2014-023 [157]
LHCb-PAPER-2014-022 [158]	LHCb-PAPER-2014-021 [159]
LHCb-PAPER-2014-020 [160]	LHCb-PAPER-2014-019 [161]
LHCb-PAPER-2014-018 [162]	LHCb-PAPER-2014-017 [163]
LHCb-PAPER-2014-016 [164]	LHCb-PAPER-2014-015 [165]
LHCb-PAPER-2014-014 [166]	LHCb-PAPER-2014-013 [167]
LHCb-PAPER-2014-012 [168]	LHCb-PAPER-2014-011 [169]
LHCb-PAPER-2014-010 [170]	LHCb-PAPER-2014-009 [171]
LHCb-PAPER-2014-008 [172]	LHCb-PAPER-2014-007 [173]
LHCb-PAPER-2014-006 [174]	LHCb-PAPER-2014-005 [175]
LHCb-PAPER-2014-004 [176]	LHCb-PAPER-2014-003 [177]
LHCb-PAPER-2014-002 [178]	LHCb-PAPER-2014-001 [179]
LHCb-PAPER-2013-070 [180]	LHCb-PAPER-2013-069 [181]
LHCb-PAPER-2013-068 [182]	LHCb-PAPER-2013-067 [183]
LHCb-PAPER-2013-066 [184]	LHCb-PAPER-2013-065 [185]
LHCb-PAPER-2013-064 [186]	LHCb-PAPER-2013-063 [187]
LHCb-PAPER-2013-062 [188]	LHCb-PAPER-2013-061 [189]
LHCb-PAPER-2013-060 [190]	LHCb-PAPER-2013-059 [191]
LHCb-PAPER-2013-058 [192]	LHCb-PAPER-2013-057 [193]
LHCb-PAPER-2013-056 [194]	LHCb-PAPER-2013-055 [195]
LHCb-PAPER-2013-054 [196]	LHCb-PAPER-2013-053 [197]
LHCb-PAPER-2013-052 [198]	LHCb-PAPER-2013-051 [199]
LHCb-PAPER-2013-050 [200]	LHCb-PAPER-2013-049 [201]
LHCb-PAPER-2013-048 [202]	LHCb-PAPER-2013-047 [203]
LHCb-PAPER-2013-046 [204]	LHCb-PAPER-2013-045 [205]
LHCb-PAPER-2013-044 [206]	LHCb-PAPER-2013-043 [207]
LHCb-PAPER-2013-042 [208]	LHCb-PAPER-2013-041 [209]
LHCb-PAPER-2013-040 [210]	LHCb-PAPER-2013-039 [211]
LHCb-PAPER-2013-038 [212]	LHCb-PAPER-2013-037 [213]
LHCb-PAPER-2013-036 [214]	LHCb-PAPER-2013-035 [215]
LHCb-PAPER-2013-034 [216]	LHCb-PAPER-2013-033 [217]
LHCb-PAPER-2013-032 [218]	LHCb-PAPER-2013-031 [219]
LHCb-PAPER-2013-030 [220]	LHCb-PAPER-2013-029 [221]

– continued from previous page.

LHCb-PAPER-2013-028 [222]	LHCb-PAPER-2013-027 [223]
LHCb-PAPER-2013-026 [224]	LHCb-PAPER-2013-025 [225]
LHCb-PAPER-2013-024 [226]	LHCb-PAPER-2013-023 [227]
LHCb-PAPER-2013-022 [228]	LHCb-PAPER-2013-021 [229]
LHCb-PAPER-2013-020 [230]	LHCb-PAPER-2013-019 [231]
LHCb-PAPER-2013-018 [232]	LHCb-PAPER-2013-017 [233]
LHCb-PAPER-2013-016 [234]	LHCb-PAPER-2013-015 [235]
LHCb-PAPER-2013-014 [236]	LHCb-PAPER-2013-013 [237]
LHCb-PAPER-2013-012 [238]	LHCb-PAPER-2013-011 [239]
LHCb-PAPER-2013-010 [240]	LHCb-PAPER-2013-009 [241]
LHCb-PAPER-2013-008 [242]	LHCb-PAPER-2013-007 [243]
LHCb-PAPER-2013-006 [244]	LHCb-PAPER-2013-005 [245]
LHCb-PAPER-2013-004 [246]	LHCb-PAPER-2013-003 [247]
LHCb-PAPER-2013-002 [248]	LHCb-PAPER-2013-001 [249]
LHCb-PAPER-2012-057 [250]	
LHCb-PAPER-2012-056 [251]	LHCb-PAPER-2012-055 [252]
LHCb-PAPER-2012-054 [253]	LHCb-PAPER-2012-053 [254]
LHCb-PAPER-2012-052 [255]	LHCb-PAPER-2012-051 [256]
LHCb-PAPER-2012-050 [257]	LHCb-PAPER-2012-049 [258]
LHCb-PAPER-2012-048 [259]	LHCb-PAPER-2012-047 [260]
LHCb-PAPER-2012-046 [261]	LHCb-PAPER-2012-045 [262]
LHCb-PAPER-2012-044 [263]	LHCb-PAPER-2012-043 [264]
LHCb-PAPER-2012-042 [265]	LHCb-PAPER-2012-041 [266]
LHCb-PAPER-2012-040 [267]	LHCb-PAPER-2012-039 [268]
LHCb-PAPER-2012-038 [269]	LHCb-PAPER-2012-037 [270]
LHCb-PAPER-2012-036 [271]	LHCb-PAPER-2012-035 [272]
LHCb-PAPER-2012-034 [273]	LHCb-PAPER-2012-033 [274]
LHCb-PAPER-2012-032 [275]	LHCb-PAPER-2012-031 [276]
LHCb-PAPER-2012-030 [277]	LHCb-PAPER-2012-029 [278]
LHCb-PAPER-2012-028 [279]	LHCb-PAPER-2012-027 [280]
LHCb-PAPER-2012-026 [281]	LHCb-PAPER-2012-025 [282]
LHCb-PAPER-2012-024 [283]	LHCb-PAPER-2012-023 [284]
LHCb-PAPER-2012-022 [285]	LHCb-PAPER-2012-021 [286]
LHCb-PAPER-2012-020 [287]	LHCb-PAPER-2012-019 [288]
LHCb-PAPER-2012-018 [289]	LHCb-PAPER-2012-017 [290]
LHCb-PAPER-2012-016 [291]	LHCb-PAPER-2012-015 [292]
LHCb-PAPER-2012-014 [293]	LHCb-PAPER-2012-013 [294]
LHCb-PAPER-2012-012 [295]	LHCb-PAPER-2012-011 [296]
LHCb-PAPER-2012-010 [297]	LHCb-PAPER-2012-009 [298]
LHCb-PAPER-2012-008 [299]	LHCb-PAPER-2012-007 [300]
LHCb-PAPER-2012-006 [301]	LHCb-PAPER-2012-005 [302]
LHCb-PAPER-2012-004 [303]	LHCb-PAPER-2012-003 [304]
LHCb-PAPER-2012-002 [305]	LHCb-PAPER-2012-001 [306]
LHCb-PAPER-2011-045 [307]	LHCb-PAPER-2011-044 [308]
LHCb-PAPER-2011-043 [309]	LHCb-PAPER-2011-042 [310]
LHCb-PAPER-2011-041 [311]	LHCb-PAPER-2011-040 [312]

– continued from previous page.

LHCb-PAPER-2011-038 [313]	LHCb-PAPER-2011-037 [314]
LHCb-PAPER-2011-036 [315]	LHCb-PAPER-2011-035 [316]
LHCb-PAPER-2011-034 [317]	LHCb-PAPER-2011-033 [318]
LHCb-PAPER-2011-032 [319]	LHCb-PAPER-2011-031 [320]
LHCb-PAPER-2011-031 [321]	LHCb-PAPER-2011-029 [322]
LHCb-PAPER-2011-028 [323]	LHCb-PAPER-2011-027 [324]
LHCb-PAPER-2011-026 [325]	LHCb-PAPER-2011-025 [326]
LHCb-PAPER-2011-024 [327]	LHCb-PAPER-2011-023 [328]
LHCb-PAPER-2011-023 [329]	LHCb-PAPER-2011-021 [330]
LHCb-PAPER-2011-020 [331]	LHCb-PAPER-2011-019 [332]
LHCb-PAPER-2011-018 [333]	LHCb-PAPER-2011-017 [334]
LHCb-PAPER-2011-016 [335]	LHCb-PAPER-2011-015 [336]
LHCb-PAPER-2011-014 [337]	LHCb-PAPER-2011-013 [338]
LHCb-PAPER-2011-012 [339]	LHCb-PAPER-2011-011 [340]
LHCb-PAPER-2011-010 [341]	LHCb-PAPER-2011-009 [342]
LHCb-PAPER-2011-008 [343]	LHCb-PAPER-2011-007 [344]
LHCb-PAPER-2011-006 [345]	LHCb-PAPER-2011-005 [346]
LHCb-PAPER-2011-004 [347]	LHCb-PAPER-2011-003 [348]
LHCb-PAPER-2011-002 [349]	LHCb-PAPER-2011-001 [350]
LHCb-PAPER-2010-002 [351]	LHCb-PAPER-2010-001 [352]

Table 3: LHCb-CONFs (which have their identifier as their cite code). Note that LHCb-CONF-2011-032 does not exist.

	LHCb-CONF-2016-005 [?]
LHCb-CONF-2016-004 [?]	LHCb-CONF-2016-003 [?]
LHCb-CONF-2016-002 [?]	LHCb-CONF-2016-001 [?]
LHCb-CONF-2015-005 [?]	
LHCb-CONF-2015-004 [?]	LHCb-CONF-2015-003 [?]
LHCb-CONF-2015-002 [?]	LHCb-CONF-2015-001 [?]
LHCb-CONF-2014-004 [?][2]	LHCb-CONF-2014-003 [?]
LHCb-CONF-2014-002 [?]	LHCb-CONF-2014-001 [?]
LHCb-CONF-2013-013 [?]	
LHCb-CONF-2013-012 [?]	LHCb-CONF-2013-011 [?]
LHCb-CONF-2013-010 [?]	LHCb-CONF-2013-009 [?]
LHCb-CONF-2013-008 [?]	LHCb-CONF-2013-007 [?]
LHCb-CONF-2013-006 [?]	LHCb-CONF-2013-005 [?]
LHCb-CONF-2013-004 [?]	LHCb-CONF-2013-003 [?]
LHCb-CONF-2013-002 [?]	LHCb-CONF-2013-001 [?]
LHCb-CONF-2012-034 [?]	LHCb-CONF-2012-033 [?]
LHCb-CONF-2012-032 [?]	LHCb-CONF-2012-031 [?]

[2] If you cite the gamma combination, always also cite the latest gamma paper as `\cite{LHCb-PAPER-2013-020,*LHCb-CONF-2014-004}` (unless you cite LHCb-PAPER-2013-020 separately too).

– continued from previous page.

LHCb-CONF-2012-030 [?]	LHCb-CONF-2012-029 [?]
LHCb-CONF-2012-028 [?]	LHCb-CONF-2012-027 [?]
LHCb-CONF-2012-026 [?]	LHCb-CONF-2012-025 [?]
LHCb-CONF-2012-024 [?]	LHCb-CONF-2012-023 [?]
LHCb-CONF-2012-022 [?]	LHCb-CONF-2012-021 [?]
LHCb-CONF-2012-020 [?]	LHCb-CONF-2012-019 [?]
LHCb-CONF-2012-018 [?]	LHCb-CONF-2012-017 [?]
LHCb-CONF-2012-016 [?]	LHCb-CONF-2012-015 [?]
LHCb-CONF-2012-014 [?]	LHCb-CONF-2012-013 [?]
LHCb-CONF-2012-012 [?]	LHCb-CONF-2012-011 [?]
LHCb-CONF-2012-010 [?]	LHCb-CONF-2012-009 [?]
LHCb-CONF-2012-008 [?]	LHCb-CONF-2012-007 [?]
LHCb-CONF-2012-006 [?]	LHCb-CONF-2012-005 [?]
LHCb-CONF-2012-004 [?]	LHCb-CONF-2012-003 [?]
LHCb-CONF-2012-002 [?]	LHCb-CONF-2012-001 [?]
LHCb-CONF-2011-062 [?]	LHCb-CONF-2011-061 [?]
LHCb-CONF-2011-060 [?]	LHCb-CONF-2011-059 [?]
LHCb-CONF-2011-058 [?]	LHCb-CONF-2011-057 [?]
LHCb-CONF-2011-056 [?]	LHCb-CONF-2011-055 [?]
LHCb-CONF-2011-054 [?]	LHCb-CONF-2011-053 [?]
LHCb-CONF-2011-052 [?]	LHCb-CONF-2011-051 [?]
LHCb-CONF-2011-050 [?]	LHCb-CONF-2011-049 [?]
LHCb-CONF-2011-048 [?]	LHCb-CONF-2011-047 [?]
LHCb-CONF-2011-046 [?]	LHCb-CONF-2011-045 [?]
LHCb-CONF-2011-044 [?]	LHCb-CONF-2011-043 [?]
LHCb-CONF-2011-042 [?]	LHCb-CONF-2011-041 [?]
LHCb-CONF-2011-040 [?]	LHCb-CONF-2011-039 [?]
LHCb-CONF-2011-038 [?]	LHCb-CONF-2011-037 [?]
LHCb-CONF-2011-036 [?]	LHCb-CONF-2011-035 [?]
LHCb-CONF-2011-034 [?]	LHCb-CONF-2011-033 [?]
LHCb-CONF-2011-031 [?]	
LHCb-CONF-2011-030 [?]	LHCb-CONF-2011-029 [?]
LHCb-CONF-2011-028 [?]	LHCb-CONF-2011-027 [?]
LHCb-CONF-2011-026 [?]	LHCb-CONF-2011-025 [?]
LHCb-CONF-2011-024 [?]	LHCb-CONF-2011-023 [?]
LHCb-CONF-2011-023 [?]	LHCb-CONF-2011-021 [?]
LHCb-CONF-2011-020 [?]	LHCb-CONF-2011-019 [?]
LHCb-CONF-2011-018 [?]	LHCb-CONF-2011-017 [?]
LHCb-CONF-2011-016 [?]	LHCb-CONF-2011-015 [?]
LHCb-CONF-2011-014 [?]	LHCb-CONF-2011-013 [?]
LHCb-CONF-2011-012 [?]	LHCb-CONF-2011-011 [?]
LHCb-CONF-2011-010 [?]	LHCb-CONF-2011-009 [?]
LHCb-CONF-2011-008 [?]	LHCb-CONF-2011-007 [?]
LHCb-CONF-2011-006 [?]	LHCb-CONF-2011-005 [?]
LHCb-CONF-2011-004 [?]	LHCb-CONF-2011-003 [?]

– continued from previous page.

LHCb-CONF-2011-002 [?]	LHCb-CONF-2011-001 [?]
LHCb-CONF-2010-014 [?]	LHCb-CONF-2010-013 [?]
LHCb-CONF-2010-012 [?]	LHCb-CONF-2010-011 [?]
LHCb-CONF-2010-010 [?]	LHCb-CONF-2010-009 [?]
LHCb-CONF-2010-008 [?]	

Some LHCb papers quoted together will look like [344–348]. The combination of CMS and LHCb results on $B^0_{(s)} \to \mu^+\mu^-$ should be cited like [?].

B Standard symbols

As explained in Sect. ?? this appendix contains standard typesetting of symbols, particle names, units etc. in LHCb documents.

In the file `lhcb-symbols-def.tex`, which is included, a large number of symbols is defined. While they can lead to quicker typing, the main reason is to ensure a uniform notation within a document and between different LHCb documents. If a symbol like `\CP` to typeset *CP* violation is available for a unit, particle name, process or whatever, it should be used. If you do not agree with the notation you should ask to get the definition in `lhcb-symbols-def.tex` changed rather than just ignoring it.

All the main particles have been given symbols. The B mesons are thus named B^+, B^0, B^0_s, and B^+_c. There is no need to go into math mode to use particle names, thus saving the typing of many $ signs. By default particle names are typeset in italic type to agree with the PDG preference. To get roman particle names you can just change `\setboolean{uprightparticles}{false}` to `true` at the top of this template.

There is a large number of units typeset that ensures the correct use of fonts, capitals and spacing. As an example we have $m_{B^0_s} = 5366.3 \pm 0.6\,\mathrm{MeV}/c^2$. Note that μm is typeset with an upright μ, even if the particle names have slanted greek letters.

A set of useful symbols are defined for working groups. More of these symbols can be included later. As an example in the Rare Decay group we have several different analyses looking for a measurement of $\mathcal{C}_7^{\prime(\mathrm{eff})}$ and $\mathcal{O}_7^{\prime}$.

C List of all symbols

C.1 Experiments

`\lhcb`	LHCb	`\atlas`	ATLAS	`\cms`	CMS
`\alice`	ALICE	`\babar`	BaBar	`\belle`	Belle
`\cleo`	CLEO	`\cdf`	CDF	`\dzero`	D0
`\aleph`	ALEPH	`\delphi`	DELPHI	`\opal`	OPAL
`\lthree`	L3	`\sld`	SLD	`\cern`	CERN
`\lhc`	LHC	`\lep`	LEP	`\tevatron`	Tevatron

182 ### C.1.1 LHCb sub-detectors and sub-systems

	\velo	VELO	\rich	RICH	\richone	RICH1
	\richtwo	RICH2	\ttracker	TT	\intr	IT
	\st	ST	\ot	OT	\spd	SPD
	\presh	PS	\ecal	ECAL	\hcal	HCAL
183	\MagUp	*MagUp*	\MagDown	*MagDown*	\ode	ODE
	\daq	DAQ	\tfc	TFC	\ecs	ECS
	\lone	L0	\hlt	HLT	\hltone	HLT1
	\hlttwo	HLT2				

184 ## C.2 Particles

185 ### C.2.1 Leptons

	\electron	e	\en	e^-	\ep	e^+
	\epm	$e^\pm$	\epem	e^+e^-	\muon	μ
	\mup	μ^+	\mun	μ^-	\mumu	$\mu^+\mu^-$
	\tauon	τ	\taup	τ^+	\taum	τ^-
186	\tautau	$\tau^+\tau^-$	\lepton	ℓ	\ellm	ℓ^-
	\ellp	ℓ^+	\ellell	$\ell^+\ell^-$	\neu	ν
	\neub	$\overline{\nu}$	\neue	ν_e	\neueb	$\overline{\nu}_e$
	\neum	ν_μ	\neumb	$\overline{\nu}_\mu$	\neut	ν_τ
	\neutb	$\overline{\nu}_\tau$	\neul	ν_ℓ	\neulb	$\overline{\nu}_\ell$

187 ### C.2.2 Gauge bosons and scalars

	\g	γ	\H	H^0	\Hp	H^+
	\Hm	H^-	\Hpm	$H^\pm$	\W	W
188	\Wp	W^+	\Wm	W^-	\Wpm	$W^\pm$
	\Z	Z				

189 ### C.2.3 Quarks

	\quark	q	\quarkbar	$\overline{q}$	\qqbar	$q\overline{q}$
	\uquark	u	\uquarkbar	$\overline{u}$	\uubar	$u\overline{u}$
	\dquark	d	\dquarkbar	$\overline{d}$	\ddbar	$d\overline{d}$
190	\squark	s	\squarkbar	$\overline{s}$	\ssbar	$s\overline{s}$
	\cquark	c	\cquarkbar	$\overline{c}$	\ccbar	$c\overline{c}$
	\bquark	b	\bquarkbar	$\overline{b}$	\bbbar	$b\overline{b}$
	\tquark	t	\tquarkbar	$\overline{t}$	\ttbar	$t\overline{t}$

191 C.2.4 Light mesons

	\hadron	h	\pion	π	\piz	π^0
	\pizs	$\pi^0\,\mathrm{s}$	\pip	π^+	\pim	π^-
	\pipm	$\pi^\pm$	\pimp	$\pi^\mp$	\rhomeson	ρ
	\rhoz	ρ^0	\rhop	ρ^+	\rhom	ρ^-
	\rhopm	$\rho^\pm$	\rhomp	$\rho^\mp$	\kaon	K
	\Kb	$\overline{K}$	\KorKbar	$\overset{(-)}{K}$	\Kz	K^0
192	\Kzb	$\overline{K}^0$	\Kp	K^+	\Km	K^-
	\Kpm	$K^\pm$	\Kmp	$K^\mp$	\KS	K^0_S
	\KL	K^0_L	\Kstarz	K^{*0}	\Kstarzb	$\overline{K}^{*0}$
	\Kstar	K^*	\Kstarb	$\overline{K}^*$	\Kstarp	K^{*+}
	\Kstarm	K^{*-}	\Kstarpm	$K^{*\pm}$	\Kstarmp	$K^{*\mp}$
	\etaz	η	\etapr	η'	\phiz	ϕ
	\omegaz	ω				

193 C.2.5 Heavy mesons

	\D	D	\Db	$\overline{D}$	\DorDbar	$\overset{(-)}{D}$
	\Dz	D^0	\Dzb	$\overline{D}^0$	\Dp	D^+
	\Dm	D^-	\Dpm	$D^\pm$	\Dmp	$D^\mp$
	\Dstar	D^*	\Dstarb	$\overline{D}^*$	\Dstarz	D^{*0}
	\Dstarzb	$\overline{D}^{*0}$	\Dstarp	D^{*+}	\Dstarm	D^{*-}
	\Dstarpm	$D^{*\pm}$	\Dstarmp	$D^{*\mp}$	\Ds	D^+_s
	\Dsp	D^+_s	\Dsm	D^-_s	\Dspm	$D^\pm_s$
	\Dsmp	$D^\mp_s$	\Dss	D^{*+}_s	\Dssp	D^{*+}_s
194	\Dssm	D^{*-}_s	\Dsspm	$D^{*\pm}_s$	\Dssmp	$D^{*\mp}_s$
	\B	B	\Bbar	$\overline{B}$	\Bb	$\overline{B}$
	\BorBbar	$\overset{(-)}{B}$	\Bz	B^0	\Bzb	$\overline{B}^0$
	\Bu	B^+	\Bub	B^-	\Bp	B^+
	\Bm	B^-	\Bpm	$B^\pm$	\Bmp	$B^\mp$
	\Bd	B^0	\Bs	B^0_s	\Bsb	$\overline{B}^0_s$
	\Bdb	$\overline{B}^0$	\Bc	B^+_c	\Bcp	B^+_c
	\Bcm	B^-_c	\Bcpm	$B^\pm_c$		

195 C.2.6 Onia

	\jpsi	J/ψ	\psitwos	$\psi(2S)$	\psiprpr	$\psi(3770)$
	\etac	η_c	\chiczero	χ_{c0}	\chicone	χ_{c1}
196	\chictwo	χ_{c2}	\OneS	$\Upsilon(1S)$	\TwoS	$\Upsilon(2S)$
	\ThreeS	$\Upsilon(3S)$	\FourS	$\Upsilon(4S)$	\FiveS	$\Upsilon(5S)$
	\chic	χ_c				

197

C.2.7 Baryons

	\proton	p	\antiproton	$\overline{p}$	\neutron	n
	\antineutron	$\overline{n}$	\Deltares	$\mathit{\Delta}$	\Deltaresbar	$\overline{\mathit{\Delta}}$
	\Xires	$\mathit{\Xi}$	\Xiresbar	$\overline{\mathit{\Xi}}$	\Lz	$\mathit{\Lambda}$
	\Lbar	$\overline{\mathit{\Lambda}}$	\LorLbar	$\overset{(-)}{\mathit{\Lambda}}$	\Lambdares	$\mathit{\Lambda}$
	\Lambdaresbar	$\overline{\mathit{\Lambda}}$	\Sigmares	$\mathit{\Sigma}$	\Sigmaresbar	$\overline{\mathit{\Sigma}}$
	\Omegares	$\mathit{\Omega}$	\Omegaresbar	$\overline{\mathit{\Omega}}$	\Lb	$\mathit{\Lambda}^0_b$
198	\Lbbar	$\overline{\mathit{\Lambda}}{}^0_b$	\Lc	$\mathit{\Lambda}^+_c$	\Lcbar	$\overline{\mathit{\Lambda}}{}^-_c$
	\Xib	$\mathit{\Xi}_b$	\Xibz	$\mathit{\Xi}^0_b$	\Xibm	$\mathit{\Xi}^-_b$
	\Xibbar	$\overline{\mathit{\Xi}}_b$	\Xibbarz	$\overline{\mathit{\Xi}}{}^0_b$	\Xibbarp	$\overline{\mathit{\Xi}}{}^+_b$
	\Xic	$\mathit{\Xi}_c$	\Xicz	$\mathit{\Xi}^0_c$	\Xicp	$\mathit{\Xi}^+_c$
	\Xicbar	$\overline{\mathit{\Xi}}_c$	\Xicbarz	$\overline{\mathit{\Xi}}{}^0_c$	\Xicbarm	$\overline{\mathit{\Xi}}{}^-_c$
	\Omegac	$\mathit{\Omega}^0_c$	\Omegacbar	$\overline{\mathit{\Omega}}{}^0_c$	\Omegab	$\mathit{\Omega}^-_b$
	\Omegabbar	$\overline{\mathit{\Omega}}{}^+_b$				

199

C.3 Physics symbols

200

C.3.1 Decays

201	\BF	$\mathcal{B}$	\BRvis	$\mathcal{B}_{\text{vis}}$	\BR	$\mathcal{B}$
	\decay[2] \decay{a }{b c }	$a \to bc$	\ra	$\rightarrow$	\to	$\rightarrow$

202

C.3.2 Lifetimes

	\tauBs	$\tau_{B^0_s}$	\tauBd	τ_{B^0}	\tauBz	τ_{B^0}
203	\tauBu	τ_{B^+}	\tauDp	τ_{D^+}	\tauDz	τ_{D^0}
	\tauL	τ_{L}	\tauH	τ_{H}		

204

C.3.3 Masses

205	\mBd	m_{B^0}	\mBp	m_{B^+}	\mBs	$m_{B^0_s}$
	\mBc	$m_{B_c^+}$	\mLb	$m_{\mathit{\Lambda}^0_b}$		

206

C.3.4 EW theory, groups

	\grpsuthree	$\mathrm{SU}(3)$	\grpsutw	$\mathrm{SU}(2)$	\grpuone	$\mathrm{U}(1)$
	\ssqtw	$\sin^2\theta_{\mathrm{W}}$	\csqtw	$\cos^2\theta_{\mathrm{W}}$	\stw	$\sin\theta_{\mathrm{W}}$
	\ctw	$\cos\theta_{\mathrm{W}}$	\ssqtwef	$\sin^2\theta^{\mathrm{eff}}_{\mathrm{W}}$	\csqtwef	$\cos^2\theta^{\mathrm{eff}}_{\mathrm{W}}$
207	\stwef	$\sin\theta^{\mathrm{eff}}_{\mathrm{W}}$	\ctwef	$\cos\theta^{\mathrm{eff}}_{\mathrm{W}}$	\gv	g_{V}
	\ga	g_{A}	\order	$\mathcal{O}$	\ordalph	$\mathcal{O}(\alpha)$
	\ordalsq	$\mathcal{O}(\alpha^2)$	\ordalcb	$\mathcal{O}(\alpha^3)$		

208

C.3.5 QCD parameters

209	\as	α_s	\MSb	$\overline{\mathrm{MS}}$	\lqcd	Λ_{QCD}
	\qsq	q^2				

210 C.3.6 CKM, CP violation

	`\eps`	ε	`\epsK`	ε_K	`\epsB`	ε_B
	`\epsp`	ε'_K	`\CP`	CP	`\CPT`	CPT
	`\rhobar`	$\overline{\rho}$	`\etabar`	$\overline{\eta}$	`\Vud`	V_{ud}
	`\Vcd`	V_{cd}	`\Vtd`	V_{td}	`\Vus`	V_{us}
211	`\Vcs`	V_{cs}	`\Vts`	V_{ts}	`\Vub`	V_{ub}
	`\Vcb`	V_{cb}	`\Vtb`	V_{tb}	`\Vuds`	V_{ud}^*
	`\Vcds`	V_{cd}^*	`\Vtds`	V_{td}^*	`\Vuss`	V_{us}^*
	`\Vcss`	V_{cs}^*	`\Vtss`	V_{ts}^*	`\Vubs`	V_{ub}^*
	`\Vcbs`	V_{cb}^*	`\Vtbs`	V_{tb}^*		

212 C.3.7 Oscillations

	`\dm`	Δm	`\dms`	Δm_s	`\dmd`	Δm_d
	`\DG`	$\Delta\Gamma$	`\DGs`	$\Delta\Gamma_s$	`\DGd`	$\Delta\Gamma_d$
	`\Gs`	Γ_s	`\Gd`	Γ_d	`\MBq`	M_{B_q}
	`\DGq`	$\Delta\Gamma_q$	`\Gq`	Γ_q	`\dmq`	Δm_q
	`\GL`	$\Gamma_{\rm L}$	`\GH`	$\Gamma_{\rm H}$	`\DGsGs`	$\Delta\Gamma_s/\Gamma_s$
213	`\Delm`	Δm	`\ACP`	$\mathcal{A}^{CP}$	`\Adir`	$\mathcal{A}^{\rm dir}$
	`\Amix`	$\mathcal{A}^{\rm mix}$	`\ADelta`	$\mathcal{A}^{\Delta}$	`\phid`	ϕ_d
	`\sinphid`	$\sin\phi_d$	`\phis`	ϕ_s	`\betas`	β_s
	`\sbetas`	$\sigma(\beta_s)$	`\stbetas`	$\sigma(2\beta_s)$	`\stphis`	$\sigma(\phi_s)$
	`\sinphis`	$\sin\phi_s$				

214 C.3.8 Tagging

	`\edet`	$\varepsilon_{\rm det}$	`\erec`	$\varepsilon_{\rm rec/det}$	`\esel`	$\varepsilon_{\rm sel/rec}$
	`\etrg`	$\varepsilon_{\rm trg/sel}$	`\etot`	$\varepsilon_{\rm tot}$	`\mistag`	ω
215	`\wcomb`	$\omega^{\rm comb}$	`\etag`	$\varepsilon_{\rm tag}$	`\etagcomb`	$\varepsilon_{\rm tag}^{\rm comb}$
	`\effeff`	$\varepsilon_{\rm eff}$	`\effeffcomb`	$\varepsilon_{\rm eff}^{\rm comb}$	`\efftag`	$\varepsilon_{\rm tag}(1-2\omega)^2$
	`\effD`	$\varepsilon_{\rm tag}D^2$	`\etagprompt`	$\varepsilon_{\rm tag}^{\rm Pr}$	`\etagLL`	$\varepsilon_{\rm tag}^{\rm LL}$

216 C.3.9 Key decay channels

	`\BdToKstmm`	$B^0\to K^{*0}\mu^+\mu^-$	`\BdbToKstmm`	$\overline{B}^0\to \overline{K}^{*0}\mu^+\mu^-$	`\BsToJPsiPhi`	$B_s^0\to J/\psi\,\phi$
	`\BdToJPsiKst`	$B^0\to J/\psi\,K^{*0}$	`\BdbToJPsiKst`	$\overline{B}^0\to J/\psi\,\overline{K}^{*0}$	`\BsPhiGam`	$B_s^0\to \phi\gamma$
217	`\BdKstGam`	$B^0\to K^{*0}\gamma$	`\BTohh`	$B\to h^+h'^-$	`\BdTopipi`	$B^0\to \pi^+\pi^-$
	`\BdToKpi`	$B^0\to K^+\pi^-$	`\BsToKK`	$B_s^0\to K^+K^-$	`\BsTopiK`	$B_s^0\to \pi^+K^-$

218 C.3.10 Rare decays

	`\BdKstee`	$B^0\to K^{*0}e^+e^-$	`\BdbKstee`	$\overline{B}^0\to \overline{K}^{*0}e^+e^-$	`\bsll`	$b\to s\ell^+\ell^-$
	`\AFB`	$A_{\rm FB}$	`\FL`	$F_{\rm L}$	`\AT#1 \AT2`	$A_{\rm T}^2$
219	`\btosgam`	$b\to s\gamma$	`\btodgam`	$b\to d\gamma$	`\Bsmm`	$B_s^0\to \mu^+\mu^-$
	`\Bdmm`	$B^0\to \mu^+\mu^-$	`\ctl`	$\cos\theta_\ell$	`\ctk`	$\cos\theta_K$

C.3.11 Wilson coefficients and operators

`\C#1 \C9`	$\mathcal{C}_9$	`\Cp#1 \Cp7`	$\mathcal{C}_7'$	`\Ceff#1 \Ceff9`	$\mathcal{C}_9^{(\mathrm{eff})}$
`\Cpeff#1 \Cpeff7`	$\mathcal{C}_7^{\prime(\mathrm{eff})}$	`\Ope#1 \Ope2`	$\mathcal{O}_2$	`\Opep#1 \Opep7`	$\mathcal{O}_7'$

C.3.12 Charm

`\xprime`	x'	`\yprime`	y'	`\ycp`	y_{CP}
`\agamma`	A_{Γ}	`\dkpicf`	$D^0 \to K^-\pi^+$		

C.3.13 QM

`\bra[1] \bra{a}`	$\langle a\vert$	`\ket[1] \ket{b}`	$\vert b\rangle$	`\braket[2] \braket{a}{b}`	$\langle a\vert b\rangle$

C.4 Units

`\unit[1] \unit{kg}` kg

C.4.1 Energy and momentum

`\tev`	TeV	`\gev`	GeV	`\mev`	MeV
`\kev`	keV	`\ev`	eV	`\gevc`	GeV/c
`\mevc`	MeV/c	`\gevcc`	GeV/c^2	`\gevgevcccc`	GeV^2/c^4
`\mevcc`	MeV/c^2				

C.4.2 Distance and area

`\km`	km	`\m`	m	`\ma`	m^2
`\cm`	cm	`\cma`	cm^2	`\mm`	mm
`\mma`	mm^2	`\mum`	μm	`\muma`	μm^2
`\nm`	nm	`\fm`	fm	`\barn`	b
`\mbarn`	mb	`\mub`	μb	`\nb`	nb
`\invnb`	nb^{-1}	`\pb`	pb	`\invpb`	pb^{-1}
`\fb`	fb	`\invfb`	fb^{-1}	`\ab`	ab
`\invab`	ab^{-1}				

C.4.3 Time

`\sec`	s	`\ms`	ms	`\mus`	μs
`\ns`	ns	`\ps`	ps	`\fs`	fs
`\mhz`	MHz	`\khz`	kHz	`\hz`	Hz
`\invps`	ps^{-1}	`\invns`	ns^{-1}	`\yr`	yr
`\hr`	hr				

C.4.4 Temperature

`\degc`	°C	`\degk`	K

C.4.5 Material lengths, radiation

`\Xrad`	X_0	`\NIL`	λ_{int}	`\mip`	MIP
`\neutroneq`	$\mathrm{n_{eq}}$	`\neqcmcm`	$\mathrm{n_{eq}/cm^2}$	`\kRad`	kRad
`\MRad`	MRad	`\ci`	Ci	`\mci`	mCi

C.4.6 Uncertainties

`\sx`	σ_x	`\sy`	σ_y	`\sz`	σ_z
`\stat`	(stat)	`\syst`	(syst)		

C.4.7 Maths

`\order`	$\mathcal{O}$	`\chisq`	χ^2	`\chisqndf`	χ^2/ndf
`\chisqip`	χ^2_{IP}	`\chisqvs`	χ^2_{VS}	`\chisqvtx`	χ^2_{vtx}
`\chisqvtxndf`	$\chi^2_{\mathrm{vtx}}/\mathrm{ndf}$	`\deriv`	d	`\gsim`	$\gtrsim$
`\lsim`	$\lesssim$	`\mean[1] \mean{x}`	$\langle x\rangle$	`\abs[1] \abs{x}`	$\|x\|$
`\Real`	$\mathcal{R}e$	`\Imag`	$\mathcal{I}m$	`\PDF`	PDF
`\sPlot`	*sPlot*				

C.5 Kinematics

C.5.1 Energy, Momenta

`\Ebeam`	E_{BEAM}	`\sqs`	$\sqrt{s}$	`\ptot`	p
`\pt`	p_{T}	`\et`	E_{T}	`\mt`	M_{T}
`\dpp`	$\Delta p/p$	`\msq`	m^2	`\dedx`	$\mathrm{d}E/\mathrm{d}x$

C.5.2 PID

`\dllkpi`	$\mathrm{DLL}_{K\pi}$	`\dllppi`	$\mathrm{DLL}_{p\pi}$	`\dllepi`	$\mathrm{DLL}_{e\pi}$
`\dllmupi`	$\mathrm{DLL}_{\mu\pi}$				

C.5.3 Geometry

`\degrees`	$^\circ$	`\krad`	krad	`\mrad`	mrad
`\rad`	rad				

C.5.4 Accelerator

`\betastar`	β^*	`\lum`	$\mathcal{L}$	`\intlum[1] \intlum{2 fb`$^{-1}$`}`	$\int\mathcal{L} = 2\ \mathrm{fb}^{-1}$

C.6 Software

C.6.1 Programs

`\bcvegpy`	BCVEGPY	`\boole`	BOOLE	`\brunel`	BRUNEL
`\davinci`	DAVINCI	`\dirac`	DIRAC	`\evtgen`	EVTGEN
`\fewz`	FEWZ	`\fluka`	FLUKA	`\ganga`	GANGA
`\gaudi`	GAUDI	`\gauss`	GAUSS	`\geant`	GEANT4
`\hepmc`	HEPMC	`\herwig`	HERWIG	`\moore`	MOORE
`\neurobayes`	NEUROBAYES	`\photos`	PHOTOS	`\powheg`	POWHEG
`\pythia`	PYTHIA	`\resbos`	RESBOS	`\roofit`	ROOFIT
`\root`	ROOT	`\spice`	SPICE	`\urania`	URANIA

C.6.2 Languages

`\cpp`	C++	`\ruby`	RUBY	`\fortran`	FORTRAN
`\svn`	SVN				

C.6.3 Data processing

`\kbytes`	kbytes	`\kbsps`	kbits/s	`\kbits`	kbits
`\kbsps`	kbits/s	`\mbsps`	Mbytes/s	`\mbytes`	Mbytes
`\mbps`	Mbyte/s	`\mbsps`	Mbytes/s	`\gbsps`	Gbytes/s
`\gbytes`	Gbytes	`\gbsps`	Gbytes/s	`\tbytes`	Tbytes
`\tbpy`	Tbytes/yr	`\dst`	DST		

C.7 Detector related

C.7.1 Detector technologies

`\nonn`	n^+-on-n	`\ponn`	p^+-on-n	`\nonp`	n^+-on-p
`\cvd`	CVD	`\mwpc`	MWPC	`\gem`	GEM

C.7.2 Detector components, electronics

`\tell1`	TELL1	`\ukl1`	UKL1	`\beetle`	Beetle
`\otis`	OTIS	`\croc`	CROC	`\carioca`	CARIOCA
`\dialog`	DIALOG	`\sync`	SYNC	`\cardiac`	CARDIAC
`\gol`	GOL	`\vcsel`	VCSEL	`\ttc`	TTC
`\ttcrx`	TTCrx	`\hpd`	HPD	`\pmt`	PMT
`\specs`	SPECS	`\elmb`	ELMB	`\fpga`	FPGA
`\plc`	PLC	`\rasnik`	RASNIK	`\elmb`	ELMB
`\can`	CAN	`\lvds`	LVDS	`\ntc`	NTC
`\adc`	ADC	`\led`	LED	`\ccd`	CCD
`\hv`	HV	`\lv`	LV	`\pvss`	PVSS
`\cmos`	CMOS	`\fifo`	FIFO	`\ccpc`	CCPC

C.7.3 Chemical symbols

`\cfourften`	C_4F_{10}	`\cffour`	CF_4	`\cotwo`	CO_2
`\csixffouteen`	C_6F_{14}	`\mgftwo`	MgF_2	`\siotwo`	SiO_2

C.8 Special Text

`\eg`	*e.g.*	`\ie`	*i.e.*	`\etal`	*et al.*
`\etc`	*etc.*	`\cf`	*cf.*	`\ffp`	*ff.*
`\vs`	*vs.*				

D Supplementary material for LHCb-PAPER-20XX-YYY

This appendix contains supplementary material that will posted on the public cds record but will not appear in the paper.

Please leave the above sentence in your draft for first and second circulation and replace what follows by your actual supplementary material. For more information about other types of supplementary material, see Section ??. Plots and tables that follow should be well described, either with captions or with additional explanatory text.

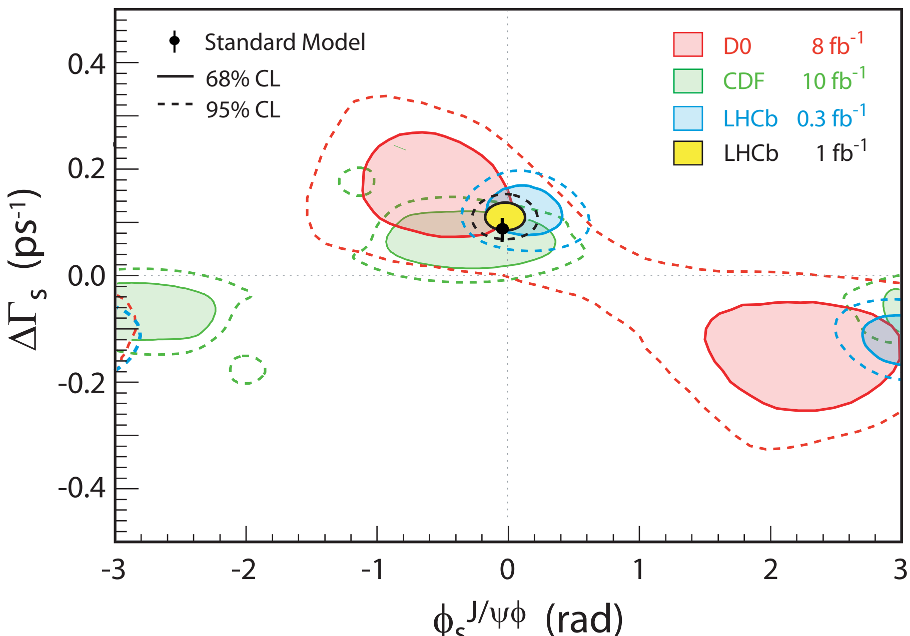

Figure 1: Comparison of our result to those from other experiments. Note that the style of this figure differs slightly from that of Figure ??

References

[1] LHCb collaboration, A. A. Alves Jr. *et al.*, *The LHCb detector at the LHC*, JINST **3** (2008) S08005.

[2] American Physical Society, *APS REVTEX package*, https://journals.aps.org/revtex.

[3] V. V. Gligorov and M. Williams, *Efficient, reliable and fast high-level triggering using a bonsai boosted decision tree*, JINST **8** (2013) P02013, `arXiv:1210.6861`.

[4] T. Sjöstrand, S. Mrenna, and P. Skands, *PYTHIA 6.4 physics and manual*, JHEP **05** (2006) 026, `arXiv:hep-ph/0603175`; T. Sjöstrand, S. Mrenna, and P. Skands, *A brief introduction to PYTHIA 8.1*, Comput. Phys. Commun. **178** (2008) 852, `arXiv:0710.3820`.

[5] I. Belyaev *et al.*, *Handling of the generation of primary events in Gauss, the LHCb simulation framework*, J. Phys. Conf. Ser. **331** (2011) 032047.

[6] D. J. Lange, *The EvtGen particle decay simulation package*, Nucl. Instrum. Meth. **A462** (2001) 152.

[7] P. Golonka and Z. Was, *PHOTOS Monte Carlo: A precision tool for QED corrections in Z and W decays*, Eur. Phys. J. **C45** (2006) 97, `arXiv:hep-ph/0506026`.

[8] Geant4 collaboration, J. Allison *et al.*, *Geant4 developments and applications*, IEEE Trans. Nucl. Sci. **53** (2006) 270; Geant4 collaboration, S. Agostinelli *et al.*, *Geant4: A simulation toolkit*, Nucl. Instrum. Meth. **A506** (2003) 250.

[9] M. Clemencic *et al.*, *The LHCb simulation application, Gauss: Design, evolution and experience*, J. Phys. Conf. Ser. **331** (2011) 032023.

[10] Particle Data Group, K. A. Olive *et al.*, *Review of particle physics*, Chin. Phys. **C38** (2014) 090001, and 2015 update.

[11] Heavy Flavor Averaging Group, Y. Amhis *et al.*, *Averages of b-hadron, c-hadron, and τ-lepton properties as of summer 2014*, `arXiv:1412.7515`, updated results and plots available at `http://www.slac.stanford.edu/xorg/hfag/`.

[12] A. Tsaregorodtsev *et al.*, *DIRAC3: The new generation of the LHCb grid software*, J. Phys. Conf. Ser. **219** (2010) 062029; R. Graciani Diaz *et al.*, *Belle-DIRAC setup for using Amazon Elastic Compute Cloud*, Journal of Grid Computing **9** (2011) 65.

[13] T. Skwarnicki, *A study of the radiative cascade transitions between the Upsilon-prime and Upsilon resonances*, PhD thesis, Institute of Nuclear Physics, Krakow, 1986, DESY-F31-86-02.

[14] S. S. Wilks, *The large-sample distribution of the likelihood ratio for testing composite hypotheses*, Ann. Math. Stat. **9** (1938) 60.

[15] L. Breiman, J. H. Friedman, R. A. Olshen, and C. J. Stone, *Classification and regression trees*, Wadsworth international group, Belmont, California, USA, 1984.

[16] R. E. Schapire and Y. Freund, *A decision-theoretic generalization of on-line learning and an application to boosting*, J. Comput. Syst. Sci. **55** (1997) 119.

[17] W. D. Hulsbergen, *Decay chain fitting with a Kalman filter*, Nucl. Instrum. Meth. **A552** (2005) 566, `arXiv:physics/0503191`.

[18] M. Pivk and F. R. Le Diberder, *sPlot: A statistical tool to unfold data distributions*, Nucl. Instrum. Meth. **A555** (2005) 356, `arXiv:physics/0402083`.

[19] G. Punzi, *Sensitivity of searches for new signals and its optimization*, in *Statistical Problems in Particle Physics, Astrophysics, and Cosmology* (L. Lyons, R. Mount, and R. Reitmeyer, eds.), p. 79, 2003. `arXiv:physics/0308063`.

[20] LHCb collaboration, R. Aaij *et al.*, *Measurement of the fragmentation fraction ratio f_s/f_d and its dependence on B meson kinematics*, JHEP **04** (2013) 001, `arXiv:1301.5286`, f_s/f_d value updated in LHCb-CONF-2013-011.

[21] LHCb collaboration, R. Aaij *et al.*, *Search for structure in the $B_s^0\pi^{\pm}$ invariant mass spectrum*, LHCb-PAPER-2016-029, in preparation.

[22] LHCb collaboration, R. Aaij *et al.*, *Observation of the decays $B_s^0 \to \phi\pi^+\pi^-$ and $B^0 \to \phi\pi^+\pi^-$*, LHCb-PAPER-2016-028, in preparation.

[23] LHCb collaboration, R. Aaij *et al.*, *Measurement of the CP violating phase and decay-width difference in $B_s^0 \to \psi(2S)\phi$ decays*, LHCb-PAPER-2016-027, in preparation.

[24] LHCb collaboration, R. Aaij *et al.*, *Amplitude analysis of $B^- \to D^+\pi^-\pi^-$ decays*, LHCb-PAPER-2016-026, in preparation.

[25] LHCb collaboration, R. Aaij *et al.*, *Differential branching fraction and angular analysis of the decay $B^0 \to K^+\pi^-\mu^+\mu^-$ in the $K^*(1430)$ region*, LHCb-PAPER-2016-025, in preparation.

[26] LHCb collaboration, R. Aaij *et al.*, *Measurement of forward $W \to e\nu$ production in pp collisions at $\sqrt{s} = 8\ TeV$*, LHCb-PAPER-2016-024, in preparation.

[27] LHCb collaboration, R. Aaij *et al.*, *Search for the suppressed decays $B^+ \to K^+K^+\pi^-$ and $B^+ \to \pi + \pi^+K^-$*, LHCb-PAPER-2016-023, in preparation.

[28] LHCb collaboration, R. Aaij *et al.*, *Study of B_c^+ decays to the $K^+K^-\pi^+$ final state and evidence for the decay $B_c^+ \to \chi_{c0}\pi^+$*, LHCb-PAPER-2016-022, in preparation.

[29] LHCb collaboration, R. Aaij *et al.*, *Measurement of the forward Z boson production cross-section in pp collisions at $\sqrt{s} = 13\ TeV$*, LHCb-PAPER-2016-021, in preparation.

[30] LHCb collaboration, R. Aaij *et al.*, *Measurement of $BR(B_c \to J/\psi K^+)/BR(B_c \to J/\psi\pi^+)$*, LHCb-PAPER-2016-020, in preparation.

[31] LHCb collaboration, R. Aaij *et al.*, *Amplitude analysis of $B^+ \to J/\psi\phi K^+$ decays*, `arXiv:1606.07898`, submitted to PRD.

[32] LHCb collaboration, R. Aaij *et al.*, *Observation of exotic $J/\psi\phi$ structures from amplitude analysis of $B^+ \to J/\psi\phi K^+$ decays*, `arXiv:1606.07895`, submitted to Phys. Rev. Lett.

[33] LHCb collaboration, R. Aaij *et al.*, *Measurement of the $B_s^0 \to J/\psi\eta$ lifetime*, LHCb-PAPER-2016-017, in preparation.

[34] LHCb collaboration, R. Aaij *et al.*, *Observation of $\eta_c(2S) \to p\bar{p}$ and search for $X(3872) \to p\bar{p}$ decays*, LHCb-PAPER-2016-016, in preparation.

[35] LHCb collaboration, R. Aaij *et al.*, *Evidence for exotic hadron contributions to $\Lambda_b^0 \to J/\psi p\pi^-$ decays*, `arXiv:1606.06999`, submitted to Phys. Rev. Lett.

[36] LHCb collaboration, R. Aaij *et al.*, *Search for Higgs-like boson decaying into pair of long-lived particles*, LHCb-PAPER-2016-014, in preparation.

[37] LHCb collaboration, R. Aaij *et al.*, *Measurement of the CP asymmetry in $B_s^0-\overline{B}_s^0$ mixing*, `arXiv:1605.09768`, submitted to Phys. Rev. Lett.

[38] LHCb collaboration, R. Aaij *et al.*, *Measurement of the S-wave fraction in $B^0 \to K^+\pi^-\mu^+\mu^-$ decays and the $B^0 \to K^*(892)^0\mu^+\mu^-$ differential branching fraction*, `arXiv:1606.04731`, submitted to JHEP.

[39] LHCb collaboration, R. Aaij *et al.*, *Measurement of forward W and Z boson production in association with jets in proton-proton collisions at $\sqrt{s} = 8$ TeV*, JHEP **05** (2016) 131, `arXiv:1605.00951`.

[40] LHCb collaboration, R. Aaij *et al.*, *Measurement of the properties of the Ξ_b^{*0} baryon*, JHEP **05** (2016) 161, `arXiv:1604.03896`.

[41] LHCb collaboration, R. Aaij *et al.*, *Model-independent evidence for $J/\psi p$ contributions to $\Lambda_b \to J/\psi pK^-$ decays*, `arXiv:1604.05708`, submitted to Phys. Rev. Lett.

[42] LHCb collaboration, R. Aaij *et al.*, *Measurements of the mass and lifetime of the Ω_b^- baryon*, Phys. Rev. **D93** (2016) 092007, `arXiv:1603.01412`.

[43] LHCb collaboration, R. Aaij *et al.*, *Measurement of the CKM angle γ using $B^0 \to DK^{*0}$ with $D \to K_S^0\pi^+\pi^-$ decays*, `arXiv:1605.01082`, submitted to JHEP.

[44] LHCb collaboration, R. Aaij *et al.*, *Model-independent measurement of the CKM angle γ using $B^0 \to DK^{*0}$ decays with $D \to K_S^0\pi^+\pi^-$ and $K_S^0K^+K^-$*, `arXiv:1604.01525`, to appear in JHEP.

[45] LHCb collaboration, R. Aaij *et al.*, *Search for violations of Lorentz invariance and CPT symmetry in $B_{(s)}^0$ mixing*, Phys. Rev. Lett. **116** (2016) 241601, `arXiv:1603.04804`.

[46] LHCb collaboration, R. Aaij *et al.*, *Observations of $\Lambda_b^0 \to \Lambda K^+\pi^-$ and $\Lambda_b^0 \to \Lambda K^+K^-$ decays and searches for other Λ_b^0 and Ξ_b^0 decays to Λh^+h^- final states*, JHEP **05** (2016) 081, `arXiv:1603.00413`.

[47] LHCb collaboration, R. Aaij *et al.*, *Measurement of CP observables in $B^{\pm} \to DK^{\pm}$ and $B^{\pm} \to D\pi^{\pm}$ with two- and four-body D meson decays*, `arXiv:1603.08993`, submitted to Phys. Lett. B.

[48] LHCb collaboration, R. Aaij *et al.*, *Observation of the $\Lambda_b \to \Lambda\phi$ decay*, Phys. Lett. **B759** (2016) 282, `arXiv:1603.02870`.

[49] LHCb collaboration, R. Aaij *et al.*, *Search for B_c decays to the $p\bar{p}\pi$ final state*, Phys. Lett. **B759** (2016) 313, `arXiv:1603.07037`.

[50] LHCb collaboration, R. Aaij *et al.*, *Observation of $\Lambda_b^0 \to \psi(2S)pK^-$ and $\Lambda_b^0 \to J\psi\pi^+\pi^-pK^-$ decays and a measurement of the Λ_b^0 baryon mass*, JHEP **05** (2016) 132, `arXiv:1603.06961`.

[51] LHCb collaboration, R. Aaij *et al.*, *Constraints on the unitarity triangle angle γ from Dalitz plot analysis of $B^0 \to DK^+\pi^-$ decays*, `arXiv:1602.03455`, to appear in Phys. Rev. D.

[52] LHCb collaboration, R. Aaij *et al.*, *Study of $\psi(2S)$ production cross-sections and cold nuclear matter effects in pPb collisions at $\sqrt{s_{NN}} = 5$ TeV*, JHEP **03** (2016) 133, `arXiv:1601.07878`.

[53] LHCb collaboration, R. Aaij *et al.*, *First observation of D^0–$\overline{D}^0$ oscillations in $D^0 \to K^+\pi^+\pi^-\pi^-$ decays and a measurement of the associated coherence parameters*, Phys. Rev. Lett. **116** (2016) 241801, `arXiv:1602.07224`.

[54] LHCb collaboration, R. Aaij *et al.*, *Neural-network-based same side kaon tagging algorithm calibrated with $B_s^0 \to D_s^-\pi^+$ and $B_{s2}^*(5840)^0 \to B^+K^-$ decays*, JINST **11** (2015) P05010, `arXiv:1602.07252`.

[55] LHCb collaboration, R. Aaij *et al.*, *Measurement of the difference of time-integrated CP asymmetries in $D^0 \to K^-K^+$ and $D^0 \to \pi^-\pi^+$ decays*, Phys. Rev. Lett. **116** (2016) 191601, `arXiv:1602.03160`.

[56] LHCb collaboration, R. Aaij *et al.*, *First observation of the rare $B^+ \to D^+K^+\pi^-$ decay*, Phys. Rev. **D93** (2015) 051101(R), Erratum ibid. **D93** (2016) 119902, `arXiv:1512.02494`.

[57] LHCb collaboration, R. Aaij *et al.*, *Measurement of the inclusive $B_s^0 \to D_s^{(*)+}D_s^{(*)-}$ branching fraction*, Phys. Rev. **D93** (2016) 092008, `arXiv:1602.07543`.

[58] LHCb collaboration, R. Aaij *et al.*, *Study of D_{sJ}^+ mesons decaying to $D^{*+}K_S^0$ and $D^{*0}K^+$ final states*, JHEP **02** (2015) 133, `arXiv:1601.01495`.

[59] LHCb collaboration, R. Aaij *et al.*, *Angular analysis of the $B^0 \to K^{*0}\mu^+\mu^-$ decay using 3 fb^{-1} of integrated luminosity*, JHEP **02** (2016) 104, `arXiv:1512.04442`.

[60] LHCb collaboration, R. Aaij *et al.*, *Observation of $B_s^0 \to \overline{D}^0K_S^0$ and evidence for $B_s^0 \to \overline{D}^{*0}K_S^0$ decays*, Phys. Rev. Lett. **116** (2016) 161802, `arXiv:1603.02408`.

[61] LHCb collaboration, R. Aaij *et al.*, *Measurement of forward W and Z boson production in pp collisions at $\sqrt{s} = 8$ TeV*, JHEP **01** (2015) 155, `arXiv:1511.08039`.

[62] LHCb collaboration, R. Aaij *et al.*, *Search for the lepton-flavour violating decay $D^0 \to e^{\pm}\mu^{\mp}$*, Phys. Lett. **B754** (2015) 167, `arXiv:1512.00322`.

[63] LHCb collaboration, R. Aaij *et al.*, *Evidence for the strangeness-changing weak decay $\Xi_b^- \to \Lambda_b^0 \pi^-$*, Phys. Rev. Lett. **115** (2015) 241801, `arXiv:1510.03829`.

[64] LHCb collaboration, R. Aaij *et al.*, *Production of associated Υ and open charm hadrons in pp collisions at $\sqrt{s} = 7$ and 8 TeV via double parton scattering*, `arXiv:1510.05949`, submitted to JHEP.

[65] LHCb collaboration, R. Aaij *et al.*, *Forward production of Υ mesons in pp collisions at $\sqrt{s} = 7$ and 8 TeV*, JHEP **11** (2015) 103, `arXiv:1509.02372`.

[66] LHCb collaboration, R. Aaij *et al.*, *Search for the decays $B^0 \to J/\psi\gamma$ and $B_s^0 \to J/\psi\gamma$* , Phys. Rev. **D92** (2015) 112002, `arXiv:1510.04866`.

[67] LHCb collaboration, R. Aaij *et al.*, *First observation of the decay $D^0 \to K^-\pi^+\mu^+\mu^-$ in the $\rho^0 - \omega$ region of the dimuon mass spectrum*, Phys. Lett. **B757** (2016) 558, `arXiv:1510.08367`.

[68] LHCb collaboration, R. Aaij *et al.*, *Model-independent measurement of mixing parameters in $D^0 \to K_S^0\pi^+\pi^-$ decays*, JHEP **04** (2016) 033, `arXiv:1510.01664`.

[69] LHCb collaboration, R. Aaij *et al.*, *Measurements of prompt charm production cross-sections in pp collisions at $\sqrt{s} = 13$ TeV*, JHEP **03** (2016) 159, `arXiv:1510.01707`.

[70] LHCb collaboration, R. Aaij *et al.*, *Measurement of two-particle correlations in proton-ion collisions at $\sqrt{s_{NN}} = 5$ TeV*, `arXiv:1512.00439`, submitted to Phys.Lett.B.

[71] LHCb collaboration, R. Aaij *et al.*, *Measurement of the forward-backward asymmetry in $Z/\gamma^* \to \mu^+\mu^-$ decays and determination of the effective weak mixing angle*, JHEP **11** (2015) 190, `arXiv:1509.07645`.

[72] LHCb collaboration, R. Aaij *et al.*, *A model-independent confirmation of the $Z(4430)^-$ state*, Phys. Rev. **D92** (2015) 112009, `arXiv:1510.01951`.

[73] LHCb collaboration, R. Aaij *et al.*, *Measurement of forward J/ψ production cross-sections in pp collisions at $\sqrt{s} = 13$ TeV*, JHEP **10** (2015) 172, `arXiv:1509.00771`.

[74] LHCb collaboration, R. Aaij *et al.*, *Search for hidden-sector bosons in $B^0 \to K^{*0}\mu^+\mu^-$ decays*, Phys. Rev. Lett. **115** (2015) 161802, `arXiv:1508.04094`.

[75] LHCb collaboration, R. Aaij *et al.*, *First measurement of the differential branching fraction and CP asymmetry of the $B^+ \to \pi^+\mu^+\mu^-$ decay*, JHEP **10** (2015) 034, `arXiv:1509.00414`.

[76] LHCb collaboration, R. Aaij *et al.*, *Measurement of CP violation parameters and polarisation fractions in $B_s^0 \to J/\psi\overline{K}^{*0}$ decays*, JHEP **11** (2015) 082, `arXiv:1509.00400`.

[77] LHCb collaboration, R. Aaij *et al.*, *Observation of the $B_s \to J/\psi\phi\phi$ decay*, JHEP **03** (2016) 040, `arXiv:1601.05284`.

[78] LHCb collaboration, R. Aaij *et al.*, *Study of the productions of Λ_b^0 and $\bar{B}^0$ hadrons in pp collisions and first measurement of the $\Lambda_b^0 \to J/\psi pK^-$ branching fraction*, Chin. Phys. C **40** (2015) 011001, `arXiv:1509.00292`.

[79] LHCb collaboration, R. Aaij *et al.*, *A precise measurement of the B^0 meson oscillation frequency*, `arXiv:1604.03475`, submitted to Eur. Phys. J. C.

[80] LHCb collaboration, R. Aaij *et al.*, *Measurement of the time-integrated CP asymmetry in $D^0 \to K_S^0 K_S^0$ decays*, JHEP **10** (2015) 055, `arXiv:1508.06087`.

[81] LHCb collaboration, R. Aaij *et al.*, *Observation of $J/\psi p$ resonances consistent with pentaquark states in $\Lambda_b^0 \to J/\psi pK^-$ decays*, Phys. Rev. Lett. **115** (2015) 072001, `arXiv:1507.03414`.

[82] LHCb collaboration, R. Aaij *et al.*, *Measurement of the $B_s^0 \to \phi\phi$ branching fraction and search for the decay $B^0 \to \phi\phi$*, JHEP **10** (2015) 053, `arXiv:1508.00788`.

[83] LHCb collaboration, R. Aaij *et al.*, *B flavour tagging using charm decays at the LHCb experiment*, JINST **10** (2015) P10005, `arXiv:1507.07892`.

[84] LHCb collaboration, R. Aaij *et al.*, *Studies of the resonance structure in $D^0 \to K_S^0 K^\pm \pi^\mp$ decays*, Phys. Rev. **D93** (2016) 052018, `arXiv:1509.06628`.

[85] LHCb collaboration, R. Aaij *et al.*, *Measurement of the ratio of branching fractions $\mathcal{B}(\overline{B}^0 \to D^{*+}\tau^-\overline{\nu}_\tau)/\mathcal{B}(\overline{B}^0 \to D^{*+}\mu^-\overline{\nu}_\mu)$*, Phys. Rev. Lett. **115** (2015) 111803, `arXiv:1506.08614`.

[86] LHCb collaboration, R. Aaij *et al.*, *Measurement of the branching fraction ratio $\mathcal{B}(B_c^+ \to \psi(2S)\pi^+)/\mathcal{B}(B_c^+ \to J/\psi\pi^+)$*, Phys. Rev. **D92** (2015) 057007, `arXiv:1507.03516`.

[87] LHCb collaboration, R. Aaij *et al.*, *Angular analysis and differential branching fraction of the decay $B_s^0 \to \phi\mu^+\mu^-$*, JHEP **09** (2015) 179, `arXiv:1506.08777`.

[88] LHCb collaboration, R. Aaij *et al.*, *First observation of top quark production in the forward region*, Phys. Rev. Lett. **115** (2015) 112001, `arXiv:1506.00903`.

[89] LHCb collaboration, R. Aaij *et al.*, *Study of W boson production in association with beauty and charm*, Phys. Rev. **D92** (2015) 052012, `arXiv:1505.04051`.

[90] LHCb collaboration, R. Aaij *et al.*, *Study of $B^- \to DK^-\pi^+\pi^-$ and $B^- \to D\pi^-\pi^+\pi^-$ decays and determination of the CKM angle γ*, Phys. Rev. **D92** (2015) 112005, `arXiv:1505.07044`.

[91] LHCb collaboration, R. Aaij *et al.*, *Search for the $\Lambda_b^0 \to \Lambda\eta$ and $\Lambda_b^0 \to \Lambda\eta'$ decays with the LHCb detector*, JHEP **09** (2015) 006, `arXiv:1505.03295`.

[92] LHCb collaboration, R. Aaij *et al.*, *First observation of the decay $B_s^0 \to K_S^0 K^*(892)^0$*, JHEP **01** (2015) 012, `arXiv:1506.08634`.

[93] LHCb collaboration, R. Aaij *et al.*, *Amplitude analysis of $B^0 \to \overline{D}^0 K^+\pi^-$ decays*, Phys. Rev. **D92** (2015) 012012, `arXiv:1505.01505`.

[94] LHCb collaboration, R. Aaij *et al.*, *Identification of beauty and charm quark jets at LHCb*, JINST **10** (2015) P06013, `arXiv:1504.07670`.

[95] LHCb collaboration, R. Aaij *et al.*, *Quantum numbers of the $X(3872)$ state and orbital angular momentum in its $\rho^0 J/\psi$ decays*, Phys. Rev. **D92** (2015) 011102(R), `arXiv:1504.06339`.

[96] LHCb collaboration, R. Aaij *et al.*, *A study of CP violation in $B^\mp \to Dh^\mp$ $(h = K, \pi)$ with the modes $D \to K^\mp\pi^\pm\pi^0$, $D \to \pi^+\pi^-\pi^0$ and $D \to K^+K^-\pi^0$*, Phys. Rev. **D91** (2015) 112014, `arXiv:1504.05442`.

[97] LHCb collaboration, R. Aaij *et al.*, *Determination of the quark coupling strength $|V_{ub}|$ using baryonic decays*, Nature Physics **11** (2015) 743, `arXiv:1504.01568`.

[98] LHCb collaboration, R. Aaij *et al.*, *Search for the decay $B^0_s \to \overline{D}^0 f_0(980)$*, JHEP **08** (2015) 005, `arXiv:1505.01654`.

[99] LHCb collaboration, R. Aaij *et al.*, *Measurement of the exclusive $\Upsilon(nS)$ production cross-section in pp collisions at $\sqrt{s} = 7$ TeV and 8 TeV*, JHEP **09** (2015) 084, `arXiv:1505.08139`.

[100] LHCb collaboration, R. Aaij *et al.*, *Observation of the decay $\overline{B}^0_s \to \psi(2S)K^+\pi^-$*, Phys. Lett. **B747** (2015) 484, `arXiv:1503.07112`.

[101] LHCb collaboration, R. Aaij *et al.*, *Differential branching fraction and angular anaysis of $\Lambda^0_b \to \Lambda\mu^+\mu^-$ decays*, JHEP **06** (2015) 115, `arXiv:1503.07138`.

[102] LHCb collaboration, R. Aaij *et al.*, *First observation and measurement of the branching fraction for the decay $B^0_s \to D^{*\mp}_s K^\pm$*, JHEP **06** (2015) 130, `arXiv:1503.09086`.

[103] LHCb collaboration, R. Aaij *et al.*, *First observation and amplitude analysis of the $B^- \to D^+K^-\pi^-$ decay*, Phys. Rev. **D91** (2015) 092002, Erratum ibid. **D93** (2016) 119901, `arXiv:1503.02995`.

[104] LHCb collaboration, R. Aaij *et al.*, *Observation of the $B^0 \to \rho^0\rho^0$ decay from an amplitude analysis of $B^0 \to (\pi^+\pi^-)(\pi^+\pi^-)$ decays*, Phys. Lett. **B747** (2015) 468, `arXiv:1503.07770`.

[105] LHCb collaboration, R. Aaij *et al.*, *Measurement of the time-dependent CP asymmetries in $B^0_s \to J/\psi K^0_S$*, JHEP **06** (2015) 131, `arXiv:1503.07055`.

[106] LHCb collaboration, R. Aaij *et al.*, *Measurement of CP violation in $B^0 \to J/\psi K^0_S$ decays*, Phys. Rev. Lett. **115** (2015) 031601, `arXiv:1503.07089`.

[107] LHCb collaboration, R. Aaij *et al.*, *Measurement of $Z \to e^+e^-$ production at $\sqrt{s} = 8$ TeV*, JHEP **05** (2015) 109, `arXiv:1503.00963`.

[108] LHCb collaboration, R. Aaij *et al.*, *Search for long-lived heavy charged particles using a ring-imaging Cherenkov technique at LHCb*, Eur. Phys. J. **C75** (2015) 595, `arXiv:1506.09173`.

[109] LHCb collaboration, R. Aaij *et al.*, *Measurement of the forward Z boson cross-section in pp collisions at $\sqrt{s} = 7$ TeV*, JHEP **08** (2015) 039, `arXiv:1505.07024`.

[110] LHCb collaboration, R. Aaij *et al.*, *Dalitz plot analysis of $B^0 \to \overline{D}^0 \pi^+\pi^-$ decays*, Phys. Rev. **D92** (2015) 032002, `arXiv:1505.01710`.

[111] LHCb collaboration, R. Aaij *et al.*, *Measurement of indirect CP asymmetries in $D^0 \to K^-K^+$ and $D^0 \to \pi^-\pi^+$ decays*, JHEP **04** (2015) 043, `arXiv:1501.06777`.

[112] LHCb collaboration, R. Aaij *et al.*, *Measurement of CP asymmetries and polarisation fractions in $B^0_s \to K^{*0}\overline{K}^{*0}$ decays*, JHEP **07** (2015) 166, `arXiv:1503.05362`.

[113] LHCb collaboration, R. Aaij *et al.*, *Precise measurements of the properties of the $B_1(5721)^{0,+}$ and $B^*_2(5747)^{0,+}$ states and observation of structure at higher invariant mass in the $B^+\pi^-$ and $B^0\pi^+$ spectra*, JHEP **04** (2015) 024, `arXiv:1502.02638`.

[114] LHCb collaboration, R. Aaij *et al.*, *Angular analysis of the $B^0 \to K^{*0}e^+e^-$ decay in the low-q^2 region*, JHEP **04** (2015) 064, `arXiv:1501.03038`.

[115] LHCb collaboration, R. Aaij *et al.*, *Observation of the $B^0_s \to \eta'\eta'$ decay*, Phys. Rev. Lett. **115** (2015) 051801, `arXiv:1503.07483`.

[116] LHCb collaboration, R. Aaij *et al.*, *Determination of the branching fractions of $B^0_s \to D^\mp_s K^\pm$ and $B^0 \to D^-_s K^+$*, JHEP **02** (2015) 029, `arXiv:1412.7654`.

[117] LHCb collaboration, R. Aaij *et al.*, *Study of the rare B^0_s and B^0 decays into the $\pi^+\pi^-\mu^+\mu^-$ final state*, Phys. Lett. **B743** (2015) 46, `arXiv:1412.6433`.

[118] LHCb collaboration, R. Aaij *et al.*, *Search for long-lived particles decaying to jet pairs*, Eur. Phys. J. **C75** (2014) 152, `arXiv:1412.3021`.

[119] LHCb collaboration, R. Aaij *et al.*, *Observation of two new Ξ^-_b baryon resonances*, Phys. Rev. Lett. **114** (2015) 062004, `arXiv:1411.4849`.

[120] LHCb collaboration, R. Aaij *et al.*, *Measurement of the lifetime of the B^+_c meson using the $B^+_c \to J/\psi\pi^+$ decay mode*, Phys. Lett. **B742** (2015) 29, `arXiv:1411.6899`.

[121] LHCb collaboration, R. Aaij *et al.*, *Precision measurement of CP violation in $B^0_s \to J/\psi K^+K^-$ decays*, Phys. Rev. Lett. **114** (2015) 041801, `arXiv:1411.3104`.

[122] LHCb collaboration, R. Aaij *et al.*, *Measurement of the CP-violating phase β in $\overline{B}^0 \to J/\psi\pi^+\pi^-$ decays and limits on penguin effects*, Phys. Lett. **B742** (2015) 38, `arXiv:1411.1634`.

[123] LHCb collaboration, R. Aaij *et al.*, *Measurement of the inelastic pp cross-section at a centre-of-mass energy of $\sqrt{s} = 7$ TeV*, JHEP **02** (2014) 029, `arXiv:1412.2500`.

[124] LHCb collaboration, R. Aaij *et al.*, *Study of η–η' mixing from measurement of $B^0_{(s)} \to J/\psi\eta^{(\prime)}$ decay rates*, JHEP **01** (2015) 024, arXiv:1411.0943.

[125] LHCb collaboration, R. Aaij *et al.*, *Measurement of the Z+b-jet cross-section in pp collisions at $\sqrt{s} = 7$ TeV in the forward region*, JHEP **01** (2015) 064, arXiv:1411.1264.

[126] LHCb collaboration, R. Aaij *et al.*, *Search for CP violation in $D^0 \to \pi^-\pi^+\pi^0$ decays with the energy test*, Phys. Lett. **B740** (2015) 158, arXiv:1410.4170.

[127] LHCb collaboration, R. Aaij *et al.*, *Measurement of the semileptonic CP asymmetry in B^0–$\overline{B}^0$ mixing*, Phys. Rev. Lett. **114** (2015) 041601, arXiv:1409.8586.

[128] LHCb collaboration, R. Aaij *et al.*, *Search for the lepton flavour violating decay $\tau^- \to \mu^-\mu^+\mu^-$*, JHEP **02** (2015) 121, arXiv:1409.8548.

[129] LHCb collaboration, R. Aaij *et al.*, *Measurement of the CP-violating phase ϕ_s in $\overline{B}^0_s \to D^+_s D^-_s$ decays*, Phys. Rev. Lett. **113** (2014) 211801, arXiv:1409.4619.

[130] LHCb collaboration, R. Aaij *et al.*, *Measurement of B^+_c production at $\sqrt{s} = 8$ TeV*, Phys. Rev. Lett. **114** (2014) 132001, arXiv:1411.2943.

[131] CMS and LHCb collaborations, V. Khachatryan *et al.*, *Observation of the rare $B^0_s \to \mu^+\mu^-$ decay from the combined analysis of CMS and LHCb data*, Nature **522** (2015) 68, arXiv:1411.4413.

[132] LHCb collaboration, R. Aaij *et al.*, *Precision measurement of the mass and lifetime of the Ξ^-_b baryon*, Phys. Rev. Lett. **113** (2014) 242002, arXiv:1409.8568.

[133] LHCb collaboration, R. Aaij *et al.*, *Precision luminosity measurements at LHCb*, JINST **9** (2014) P12005, arXiv:1410.0149.

[134] LHCb collaboration, R. Aaij *et al.*, *Search for CP violation using T-odd correlations in $D^0 \to K^+K^-\pi^+\pi^-$ decays*, JHEP **10** (2014) 005, arXiv:1408.1299.

[135] LHCb collaboration, R. Aaij *et al.*, *Determination of γ and $-2\beta_s$ from charmless two-body decays of beauty mesons*, Phys. Lett. **B739** (2014) 1, arXiv:1408.4368.

[136] LHCb collaboration, R. Aaij *et al.*, *Measurement of CP violation in the three-body phase space of charmless $B^\pm$ decays*, Phys. Rev. **D90** (2014) 112004, arXiv:1408.5373.

[137] LHCb collaboration, R. Aaij *et al.*, *Observation of $B^0_s \to K^{*\pm}K^\mp$ and evidence of $B^0_s \to K^{*-}\pi^+$ decays*, New J. Phys. **16** (2014) 123001, arXiv:1407.7704.

[138] LHCb collaboration, R. Aaij *et al.*, *Measurement of the $\overline{B}^0$–B^0 and $\overline{B}^0_s$–B^0_s production asymmetries in pp collisions at $\sqrt{s} = 7$ TeV*, Phys. Lett. **B739** (2014) 218, arXiv:1408.0275.

[139] LHCb collaboration, R. Aaij *et al.*, *Measurement of the CKM angle γ using $B^\pm \to DK^\pm$ with $D \to K^0_S\pi^+\pi^-$, $K^0_S K^+K^-$ decays*, JHEP **10** (2014) 097, arXiv:1408.2748.

[140] LHCb collaboration, R. Aaij *et al.*, *Measurement of the $\chi_b(3P)$ mass and of the relative rate of $\chi_{b1}(1P)$ and $\chi_{b2}(1P)$ production*, JHEP **10** (2014) 088, `arXiv:1409.1408`.

[141] LHCb collaboration, R. Aaij *et al.*, *First observation of a baryonic B_c^+ decay*, Phys. Rev. Lett. **113** (2014) 152003, `arXiv:1408.0971`.

[142] LHCb collaboration, R. Aaij *et al.*, *Measurement of CP asymmetry in $B_s^0 \to D_s^{\mp} K^{\pm}$ decays*, JHEP **11** (2014) 060, `arXiv:1407.6127`.

[143] LHCb collaboration, R. Aaij *et al.*, *Measurement of the $\overline{B}{}_s^0$ meson lifetime in $D_s^+\pi^-$ decays*, Phys. Rev. Lett. **113** (2014) 172001, `arXiv:1407.5873`.

[144] LHCb collaboration, R. Aaij *et al.*, *Dalitz plot analysis of $B_s^0 \to \overline{D}{}^0 K^-\pi^+$ decays*, Phys. Rev. **D90** (2014) 072003, `arXiv:1407.7712`.

[145] LHCb collaboration, R. Aaij *et al.*, *Observation of overlapping spin-1 and spin-3 $\overline{D}{}^0 K^-$ resonances at mass 2.86 GeV/c^2*, Phys. Rev. Lett. **113** (2014) 162001, `arXiv:1407.7574`.

[146] LHCb collaboration, R. Aaij *et al.*, *Evidence for CP violation in $B^+ \to p\overline{p}K^+$ decays*, Phys. Rev. Lett. **113** (2014) 141801, `arXiv:1407.5907`.

[147] LHCb collaboration, R. Aaij *et al.*, *Measurement of the forward W boson production cross-section in pp collisions at $\sqrt{s} = 7$ TeV*, JHEP **12** (2014) 079, `arXiv:1408.4354`.

[148] LHCb collaboration, R. Aaij *et al.*, *Measurement of CP asymmetries in the decays $B^0 \to K^{*0}\mu^+\mu^-$ and $B^+ \to K^+\mu^+\mu^-$*, JHEP **09** (2014) 177, `arXiv:1408.0978`.

[149] LHCb collaboration, R. Aaij *et al.*, *Study of χ_b meson production in pp collisions at $\sqrt{s}$=7 and 8 TeV and observation of the decay $\chi_b \to \Upsilon(3S)\gamma$*, Eur. Phys. J. **C74** (2014) 3092, `arXiv:1407.7734`.

[150] LHCb collaboration, R. Aaij *et al.*, *First observations of the rare decays $B^+ \to K^+\pi^+\pi^-\mu^+\mu^-$ and $B^+ \to \phi K^+\mu^+\mu^-$*, JHEP **10** (2014) 064, `arXiv:1408.1137`.

[151] LHCb collaboration, R. Aaij *et al.*, *Measurement of the $\eta_c(1S)$ production cross-section in proton-proton collisions via the decay $\eta_c(1S) \to p\overline{p}$*, Eur. Phys. J. **C75** (2015) 311, `arXiv:1409.3612`.

[152] LHCb collaboration, R. Aaij *et al.*, *Measurement of CP violation parameters in $B^0 \to DK^{*0}$ decays*, Phys. Rev. **D90** (2014) 112002, `arXiv:1407.8136`.

[153] LHCb collaboration, R. Aaij *et al.*, *Observation of charmonium pairs produced exclusively in pp collisions*, J. Phys. **G41** (2014) 115002, `arXiv:1407.5973`.

[154] LHCb collaboration, R. Aaij *et al.*, *Measurement of CP violation in $B_s^0 \to \phi\phi$ decays*, Phys. Rev. **D90** (2014) 052011, `arXiv:1407.2222`.

[155] LHCb collaboration, R. Aaij *et al.*, *Measurement of the ratio of B_c^+ branching fractions to $J/\psi\pi^+$ and $J/\psi\mu^+\nu_\mu$*, Phys. Rev. **D90** (2014) 032009, `arXiv:1407.2126`.

[156] LHCb collaboration, R. Aaij *et al.*, *Test of lepton universality using $B^+ \to K^+\ell^+\ell^-$ decays*, Phys. Rev. Lett. **113** (2014) 151601, arXiv:1406.6482.

[157] LHCb collaboration, R. Aaij *et al.*, *First measurement of the charge asymmetry in beauty-quark pair production*, Phys. Rev. Lett. **113** (2014) 082003, arXiv:1406.4789.

[158] LHCb collaboration, R. Aaij *et al.*, *Observation of Z production in proton-lead collisions at LHCb*, JHEP **09** (2014) 030, arXiv:1406.2885.

[159] LHCb collaboration, R. Aaij *et al.*, *Precision measurement of the mass and lifetime of the Ξ_b^0 baryon*, Phys. Rev. Lett. **113** (2014) 032001, arXiv:1405.7223.

[160] LHCb collaboration, R. Aaij *et al.*, *Observation of the $\Lambda_b^0 \to J/\psi p\pi^-$ decay*, JHEP **07** (2014) 103, arXiv:1406.0755.

[161] LHCb collaboration, R. Aaij *et al.*, *Measurement of the CP-violating phase ϕ_s in $\overline{B}{}_s^0 \to J/\psi\pi^+\pi^-$ decays*, Phys. Lett. **B736** (2014) 186, arXiv:1405.4140.

[162] LHCb collaboration, R. Aaij *et al.*, *Search for CP violation in $D^\pm \to K_S^0K^\pm$ and $D_s^\pm \to K_S^0\pi^\pm$ decays*, JHEP **10** (2014) 025, arXiv:1406.2624.

[163] LHCb collaboration, R. Aaij *et al.*, *Measurement of CP violation and constraints on the CKM angle γ in $B^\pm \to DK^\pm$ with $D \to K_S^0\pi^+\pi^-$ decays*, Nucl. Phys. **B888** (2014) 169, arXiv:1407.6211.

[164] LHCb collaboration, R. Aaij *et al.*, *Observation of the $B_s^0 \to J/\psi K_S^0K^\pm\pi^\mp$ decay*, JHEP **07** (2014) 140, arXiv:1405.3219.

[165] LHCb collaboration, R. Aaij *et al.*, *Study of Υ production and cold nuclear effects in pPb collisions at $\sqrt{s_{NN}} = 5$ TeV*, JHEP **07** (2014) 094, arXiv:1405.5152.

[166] LHCb collaboration, R. Aaij *et al.*, *Observation of the resonant character of the $Z(4430)^-$ state*, Phys. Rev. Lett. **112** (2014) 222002, arXiv:1404.1903.

[167] LHCb collaboration, R. Aaij *et al.*, *Measurement of CP asymmetry in $D^0 \to K^-K^+$ and $D^0 \to \pi^-\pi^+$ decays*, JHEP **07** (2014) 041, arXiv:1405.2797.

[168] LHCb collaboration, R. Aaij *et al.*, *Measurement of the resonant and CP components in $\overline{B}{}^0 \to J/\psi\pi^+\pi^-$ decays*, Phys. Rev. **D90** (2014) 012003, arXiv:1404.5673.

[169] LHCb collaboration, R. Aaij *et al.*, *Effective lifetime measurements in the $B_s^0 \to K^+K^-$, $B^0 \to K^+\pi^-$ and $B_s^0 \to \pi^+K^-$ decays*, Phys. Lett. **B736** (2014) 446, arXiv:1406.7204.

[170] LHCb collaboration, R. Aaij *et al.*, *Measurement of the Ξ_b^- and Ω_b^- baryon lifetimes*, Phys. Lett. **B736** (2014) 154, arXiv:1405.1543.

[171] LHCb collaboration, R. Aaij *et al.*, *Evidence for the decay $B_c^+ \to J/\psi 3\pi^+2\pi^-$*, JHEP **05** (2014) 148, arXiv:1404.0287.

[172] LHCb collaboration, R. Aaij *et al.*, *Evidence for the decay $X(3872) \to \psi(2S)\gamma$*, Nucl. Phys. **B886** (2014) 665, arXiv:1404.0275.

[173] LHCb collaboration, R. Aaij *et al.*, *Angular analysis of charged and neutral $B \to K\mu^+\mu^-$ decays*, JHEP **05** (2014) 082, `arXiv:1403.8045`.

[174] LHCb collaboration, R. Aaij *et al.*, *Differential branching fractions and isospin asymmetries of $B \to K^{(*)}\mu^+\mu^-$ decays*, JHEP **06** (2014) 133, `arXiv:1403.8044`.

[175] LHCb collaboration, R. Aaij *et al.*, *Measurement of polarization amplitudes and CP asymmetries in $B^0 \to \phi K^*(892)^0$*, JHEP **05** (2014) 069, `arXiv:1403.2888`.

[176] LHCb collaboration, R. Aaij *et al.*, *Study of the kinematic dependences of Λ_b^0 production in pp collisions and a measurement of the $\Lambda_b^0 \to \Lambda_c^+\pi^-$ branching fraction*, JHEP **08** (2014) 143, `arXiv:1405.6842`.

[177] LHCb collaboration, R. Aaij *et al.*, *Precision measurement of the ratio of the Λ_b^0 to $\overline{B}^0$ lifetimes*, Phys. Lett. **B734** (2014) 122, `arXiv:1402.6242`.

[178] LHCb collaboration, R. Aaij *et al.*, *Study of beauty hadron decays into pairs of charm hadrons*, Phys. Rev. Lett. **112** (2014) 202001, `arXiv:1403.3606`.

[179] LHCb collaboration, R. Aaij *et al.*, *Observation of photon polarization in the $b \to s\gamma$ transition*, Phys. Rev. Lett. **112** (2014) 161801, `arXiv:1402.6852`.

[180] LHCb collaboration, R. Aaij *et al.*, *Measurement of charged particle multiplicities and densities in pp collisions at $\sqrt{s} = 7$ TeV in the forward region*, Eur. Phys. J. **C74** (2014) 2888, `arXiv:1402.4430`.

[181] LHCb collaboration, R. Aaij *et al.*, *Measurement of resonant and CP components in $\overline{B}_s^0 \to J/\psi\pi^+\pi^-$ decays*, Phys. Rev. **D89** (2014) 092006, `arXiv:1402.6248`.

[182] LHCb collaboration, R. Aaij *et al.*, *A study of CP violation in $B^\pm \to DK^\pm$ and $B^\pm \to D\pi^\pm$ decays with $D \to K_S^0K^\pm\pi^\mp$ final states*, Phys. Lett. **B733** (2014) 36, `arXiv:1402.2982`.

[183] LHCb collaboration, R. Aaij *et al.*, *Measurement of $\psi(2S)$ polarisation in pp collisions at $\sqrt{s} = 7$ TeV*, Eur. Phys. J. **C74** (2014) 2872, `arXiv:1403.1339`.

[184] LHCb collaboration, R. Aaij *et al.*, *Measurement of Υ production in pp collisions at $\sqrt{s} = 2.76$ TeV*, Eur. Phys. J. **C74** (2014) 2835, `arXiv:1402.2539`.

[185] LHCb collaboration, R. Aaij *et al.*, *Measurements of the B^+, B^0, B_s^0 meson and Λ_b^0 baryon lifetimes*, JHEP **04** (2014) 114, `arXiv:1402.2554`.

[186] LHCb collaboration, R. Aaij *et al.*, *Search for Majorana neutrinos in $B^- \to \pi^+\mu^-\mu^-$ decays*, Phys. Rev. Lett. **112** (2014) 131802, `arXiv:1401.5361`.

[187] LHCb collaboration, R. Aaij *et al.*, *Measurement of the B_c^+ meson lifetime using $B_c^+ \to J/\psi\mu^+\nu_\mu X$ decays*, Eur. Phys. J. **C74** (2014) 2839, `arXiv:1401.6932`.

[188] LHCb collaboration, R. Aaij *et al.*, *Observation of associated production of a Z boson with a D meson in the forward region*, JHEP **04** (2014) 091, `arXiv:1401.3245`.

[189] LHCb collaboration, R. Aaij *et al.*, *Searches for Λ_b^0 and Ξ_b^0 decays to $K_S^0 p\pi^-$ and $K_S^0 pK^-$ final states with first observation of the $\Lambda_b^0 \to K_S^0 p\pi^-$ decay*, JHEP **04** (2014) 087, `arXiv:1402.0770`.

[190] LHCb collaboration, R. Aaij *et al.*, *Measurement of the $\overline{B}{}_s^0 \to D_s^- D_s^+$ and $\overline{B}{}_s^0 \to D^- D_s^+$ effective lifetimes*, Phys. Rev. Lett. **112** (2014) 111802, `arXiv:1312.1217`.

[191] LHCb collaboration, R. Aaij *et al.*, *Updated measurements of exclusive J/ψ and $\psi(2S)$ production cross-sections in pp collisions at $\sqrt{s} = 7$ TeV*, J. Phys. **G41** (2014) 055002, `arXiv:1401.3288`.

[192] LHCb collaboration, R. Aaij *et al.*, *Study of forward Z+jet production in pp collisions at $\sqrt{s} = 7$ TeV*, JHEP **01** (2014) 033, `arXiv:1310.8197`.

[193] LHCb collaboration, R. Aaij *et al.*, *Search for CP violation in the decay $D^+ \to \pi^-\pi^+\pi^+$*, Phys. Lett. **B728** (2014) 585, `arXiv:1310.7953`.

[194] LHCb collaboration, R. Aaij *et al.*, *Study of beauty baryon decays to $D^0 ph^-$ and $\Lambda_c^+ h^-$ final states*, Phys. Rev. **D89** (2014) 032001, `arXiv:1311.4823`.

[195] LHCb collaboration, R. Aaij *et al.*, *Observation of $\overline{B}{}_{(s)}^0 \to J/\psi f_1(1285)$ decays and measurement of the $f_1(1285)$ mixing angle*, Phys. Rev. Lett. **112** (2014) 091802, `arXiv:1310.2145`.

[196] LHCb collaboration, R. Aaij *et al.*, *Measurements of indirect CP asymmetries in $D^0 \to K^-K^+$ and $D^0 \to \pi^-\pi^+$ decays*, Phys. Rev. Lett. **112** (2014) 041801, `arXiv:1310.7201`.

[197] LHCb collaboration, R. Aaij *et al.*, *Measurement of D^0–$\overline{D}{}^0$ mixing parameters and search for CP violation using $D^0 \to K^+\pi^-$ decays*, Phys. Rev. Lett. **111** (2013) 251801, `arXiv:1309.6534`.

[198] LHCb collaboration, R. Aaij *et al.*, *Study of J/ψ production and cold nuclear matter effects in pPb collisions at $\sqrt{s_{NN}} = 5$ TeV*, JHEP **02** (2014) 072, `arXiv:1308.6729`.

[199] LHCb collaboration, R. Aaij *et al.*, *Measurement of CP violation in the phase space of $B^\pm \to K^+K^-\pi^\pm$ and $B^\pm \to \pi^+\pi^-\pi^\pm$ decays*, Phys. Rev. Lett. **112** (2014) 011801, `arXiv:1310.4740`.

[200] LHCb collaboration, R. Aaij *et al.*, *Search for the decay $D^0 \to \pi^+\pi^-\mu^+\mu^-$*, Phys. Lett. **B728** (2014) 234, `arXiv:1310.2535`.

[201] LHCb collaboration, R. Aaij *et al.*, *Search for the doubly charmed baryon Ξ_{cc}^+*, JHEP **12** (2013) 090, `arXiv:1310.2538`.

[202] LHCb collaboration, R. Aaij *et al.*, *Measurement of the charge asymmetry in $B^\pm \to \phi K^\pm$ and search for $B^\pm \to \phi\pi^\pm$ decays*, Phys. Lett. **B728** (2014) 85, `arXiv:1309.3742`.

[203] LHCb collaboration, R. Aaij *et al.*, *Observation of the decay $B_c^+ \to J/\psi K^+K^-\pi^+$*, JHEP **11** (2013) 094, `arXiv:1309.0587`.

[204] LHCb collaboration, R. Aaij *et al.*, *Measurement of the $B_s^0 \to \mu^+\mu^-$ branching fraction and search for $B^0 \to \mu^+\mu^-$ decays at the LHCb experiment*, Phys. Rev. Lett. **111** (2013) 101805, `arXiv:1307.5024`.

[205] LHCb collaboration, R. Aaij *et al.*, *First observation of $\overline{B}^0 \to J/\psi K^+K^-$ and search for $\overline{B}^0 \to J/\psi\phi$ decays*, Phys. Rev. **D88** (2013) 072005, `arXiv:1308.5916`.

[206] LHCb collaboration, R. Aaij *et al.*, *Observation of the decay $B_c^+ \to B_s^0\pi^+$*, Phys. Rev. Lett. **111** (2013) 181801, `arXiv:1308.4544`.

[207] LHCb collaboration, R. Aaij *et al.*, *Measurement of the CP asymmetry in $B^+ \to K^+\mu^+\mu^-$ decays*, Phys. Rev. Lett. **111** (2013) 151801, `arXiv:1308.1340`.

[208] LHCb collaboration, R. Aaij *et al.*, *Study of $B_{(s)}^0 \to K_S^0 h^+ h'^-$ decays with first observation of $B_s^0 \to K_S^0 K^\pm\pi^\mp$ and $B_s^0 \to K_S^0\pi^+\pi^-$*, JHEP **10** (2013) 143, `arXiv:1307.7648`.

[209] LHCb collaboration, R. Aaij *et al.*, *Model-independent search for CP violation in $D^0 \to K^-K^+\pi^+\pi^-$ and $D^0 \to \pi^-\pi^+\pi^-\pi^+$ decays* , Phys. Lett. **B726** (2013) 623, `arXiv:1308.3189`.

[210] LHCb collaboration, R. Aaij *et al.*, *First measurement of time-dependent CP violation in $B_s^0 \to K^+K^-$ decays*, JHEP **10** (2013) 183, `arXiv:1308.1428`.

[211] LHCb collaboration, R. Aaij *et al.*, *Observation of a resonance in $B^+ \to K^+\mu^+\mu^-$ decays at low recoil*, Phys. Rev. Lett. **111** (2013) 112003, `arXiv:1307.7595`.

[212] LHCb collaboration, R. Aaij *et al.*, *First evidence for the two-body charmless baryonic decay $B^0 \to p\overline{p}$*, JHEP **10** (2013) 005, `arXiv:1308.0961`.

[213] LHCb collaboration, R. Aaij *et al.*, *Measurement of form-factor-independent observables in the decay $B^0 \to K^{*0}\mu^+\mu^-$*, Phys. Rev. Lett. **111** (2013) 191801, `arXiv:1308.1707`.

[214] LHCb collaboration, R. Aaij *et al.*, *Observation of B_s^0–$\overline{B}_s^0$ mixing and measurement of mixing frequencies using semileptonic B decays*, Eur. Phys. J. **C73** (2013) 2655, `arXiv:1308.1302`.

[215] LHCb collaboration, R. Aaij *et al.*, *Observation of the decay $B_s^0 \to \overline{D}^0\phi$*, Phys. Lett. **B727** (2013) 403, `arXiv:1308.4583`.

[216] LHCb collaboration, R. Aaij *et al.*, *Branching fraction and CP asymmetry of the decays $B^+ \to K_S^0\pi^+$ and $B^+ \to K_S^0K^+$*, Phys. Lett. **B726** (2013) 646, `arXiv:1308.1277`.

[217] LHCb collaboration, R. Aaij *et al.*, *Measurement of the flavour-specific CP-violating asymmetry $a_{\rm sl}^s$ in B_s^0 decays*, Phys. Lett. **B728** (2014) 607, `arXiv:1308.1048`.

[218] LHCb collaboration, R. Aaij *et al.*, *Precision measurement of the Λ_b^0 baryon lifetime*, Phys. Rev. Lett. **111** (2013) 102003, `arXiv:1307.2476`.

[219] LHCb collaboration, R. Aaij *et al.*, *Studies of the decays $B^+ \to p\overline{p}h^+$ and observation of $B^+ \to \overline{\Lambda}(1520)p$*, Phys. Rev. **D88** (2013) 052015, `arXiv:1307.6165`.

[220] LHCb collaboration, R. Aaij *et al.*, *Search for the lepton-flavour-violating decays $B^0_s \to e^\pm\mu^\mp$ and $B^0 \to e^\pm\mu^\mp$*, Phys. Rev. Lett. **111** (2013) 141801, `arXiv:1307.4889`.

[221] LHCb collaboration, R. Aaij *et al.*, *Searches for $B^0_{(s)} \to J/\psi p\overline{p}$ and $B^+ \to J/\psi p\overline{p}\pi^+$ decays*, JHEP **09** (2013) 006, `arXiv:1306.4489`.

[222] LHCb collaboration, R. Aaij *et al.*, *Measurement of the relative rate of prompt χ_{c0}, χ_{c1} and χ_{c2} production at $\sqrt{s} = 7$ TeV*, JHEP **10** (2013) 115, `arXiv:1307.4285`.

[223] LHCb collaboration, R. Aaij *et al.*, *Measurement of CP violation in the phase space of $B^\pm \to K^\pm\pi^+\pi^-$ and $B^\pm \to K^\pm K^+K^-$ decays*, Phys. Rev. Lett. **111** (2013) 101801, `arXiv:1306.1246`.

[224] LHCb collaboration, R. Aaij *et al.*, *Study of D_J meson decays to $D^+\pi^-$, $D^0\pi^+$ and $D^{*+}\pi^-$ final states in pp collisions*, JHEP **09** (2013) 145, `arXiv:1307.4556`.

[225] LHCb collaboration, R. Aaij *et al.*, *Measurement of the differential branching fraction of the decay $\Lambda^0_b \to \Lambda\mu^+\mu^-$*, Phys. Lett. **B725** (2013) 25, `arXiv:1306.2577`.

[226] LHCb collaboration, R. Aaij *et al.*, *Observation of $B^0_s \to \chi_{c1}\phi$ decay and study of $B^0 \to \chi_{c1,2}K^{*0}$ decays*, Nucl. Phys. **B874** (2013) 663, `arXiv:1305.6511`.

[227] LHCb collaboration, R. Aaij *et al.*, *Measurement of the polarization amplitudes in $B^0 \to J/\psi K^*(892)^0$ decays*, Phys. Rev. **D88** (2013) 052002, `arXiv:1307.2782`.

[228] LHCb collaboration, R. Aaij *et al.*, *Measurements of the branching fractions of the decays $B^0_s \to \overline{D}^0K^-\pi^+$ and $B^0 \to \overline{D}^0K^+\pi^-$*, Phys. Rev. **D87** (2013) 112009, `arXiv:1304.6317`.

[229] LHCb collaboration, R. Aaij *et al.*, *First observation of the decay $B^+_c \to J/\psi K^+$*, JHEP **09** (2013) 075, `arXiv:1306.6723`.

[230] LHCb collaboration, R. Aaij *et al.*, *A measurement of the CKM angle γ from a combination of $B^\pm \to Dh^\pm$ analyses*, Phys. Lett. **B726** (2013) 151, `arXiv:1305.2050`.

[231] LHCb collaboration, R. Aaij *et al.*, *Differential branching fraction and angular analysis of the decay $B^0 \to K^{*0}\mu^+\mu^-$*, JHEP **08** (2013) 131, `arXiv:1304.6325`.

[232] LHCb collaboration, R. Aaij *et al.*, *First observation of CP violation in the decays of B^0_s mesons*, Phys. Rev. Lett. **110** (2013) 221601, `arXiv:1304.6173`.

[233] LHCb collaboration, R. Aaij *et al.*, *Differential branching fraction and angular analysis of the decay $B^0_s \to \phi\mu^+\mu^-$*, JHEP **07** (2013) 084, `arXiv:1305.2168`.

[234] LHCb collaboration, R. Aaij *et al.*, *Production of J/ψ and Υ mesons in pp collisions at $\sqrt{s} = 8$ TeV*, JHEP **06** (2013) 064, `arXiv:1304.6977`.

[235] LHCb collaboration, R. Aaij *et al.*, *Measurement of the effective $B_s^0 \to J/\psi K_S^0$ lifetime*, Nucl. Phys. **B873** (2013) 275, arXiv:1304.4500.

[236] LHCb collaboration, R. Aaij *et al.*, *Searches for violation of lepton flavour and baryon number in tau lepton decays at LHCb*, Phys. Lett. **B724** (2013) 36, arXiv:1304.4518.

[237] LHCb collaboration, R. Aaij *et al.*, *Search for the rare decay $D^0 \to \mu^+\mu^-$*, Phys. Lett. **B725** (2013) 15, arXiv:1305.5059.

[238] LHCb collaboration, R. Aaij *et al.*, *First observation of the decay $B_s^0 \to \phi \overline{K}^{*0}$*, JHEP **11** (2013) 092, arXiv:1306.2239.

[239] LHCb collaboration, R. Aaij *et al.*, *Precision measurement of D meson mass differences*, JHEP **06** (2013) 065, arXiv:1304.6865.

[240] LHCb collaboration, R. Aaij *et al.*, *Observation of $B_c^+ \to J/\psi D_s^+$ and $B_c^+ \to J/\psi D_s^{*+}$ decays*, Phys. Rev. **D87** (2013) 112012, arXiv:1304.4530.

[241] LHCb collaboration, R. Aaij *et al.*, *Limits on neutral Higgs boson production in the forward region in pp collisions at $\sqrt{s} = 7$ TeV*, JHEP **05** (2013) 132, arXiv:1304.2591.

[242] LHCb collaboration, R. Aaij *et al.*, *Measurement of J/ψ polarization in pp collisions at $\sqrt{s} = 7$ TeV*, Eur. Phys. J. **C73** (2013) 2631, arXiv:1307.6379.

[243] LHCb collaboration, R. Aaij *et al.*, *First measurement of the CP-violating phase in $B_s^0 \to \phi\phi$ decays*, Phys. Rev. Lett. **110** (2013) 241802, arXiv:1303.7125.

[244] LHCb collaboration, R. Aaij *et al.*, *Precision measurement of the B_s^0–$\overline{B}_s^0$ oscillation frequency in the decay $B_s^0 \to D_s^- \pi^+$*, New J. Phys. **15** (2013) 053021, arXiv:1304.4741.

[245] LHCb collaboration, R. Aaij *et al.*, *Measurement of the $B^0 \to K^{*0} e^+ e^-$ branching fraction at low dilepton mass*, JHEP **05** (2013) 159, arXiv:1304.3035.

[246] LHCb collaboration, R. Aaij *et al.*, *Measurement of B meson production cross-sections in proton-proton collisions at $\sqrt{s} = 7$ TeV*, JHEP **08** (2013) 117, arXiv:1306.3663.

[247] LHCb collaboration, R. Aaij *et al.*, *Search for direct CP violation in $D^0 \to h^- h^+$ modes using semileptonic B decays*, Phys. Lett. **B723** (2013) 33, arXiv:1303.2614.

[248] LHCb collaboration, R. Aaij *et al.*, *Measurement of CP violation and the B_s^0 meson decay width difference with $B_s^0 \to J/\psi K^+ K^-$ and $B_s^0 \to J/\psi \pi^+ \pi^-$ decays*, Phys. Rev. **D87** (2013) 112010, arXiv:1304.2600.

[249] LHCb collaboration, R. Aaij *et al.*, *Determination of the $X(3872)$ meson quantum numbers*, Phys. Rev. Lett. **110** (2013) 222001, arXiv:1302.6269.

[250] LHCb collaboration, R. Aaij *et al.*, *Measurements of the $\Lambda_b^0 \to J/\psi\Lambda$ decay amplitudes and the Λ_b^0 polarisation in pp collisions at $\sqrt{s} = 7$ TeV*, Phys. Lett. **B724** (2013) 27, `arXiv:1302.5578`.

[251] LHCb collaboration, R. Aaij *et al.*, *Search for the decay $B_s^0 \to D^{*\mp}\pi^{\pm}$*, Phys. Rev. **D87** (2013) 071101(R), `arXiv:1302.6446`.

[252] LHCb collaboration, R. Aaij *et al.*, *Observation of the suppressed ADS modes $B^{\pm} \to [\pi^{\pm}K^{\mp}\pi^{+}\pi^{-}]_D K^{\pm}$ and $B^{\pm} \to [\pi^{\pm}K^{\mp}\pi^{+}\pi^{-}]_D \pi^{\pm}$*, Phys. Lett. **B723** (2013) 44, `arXiv:1303.4646`.

[253] LHCb collaboration, R. Aaij *et al.*, *Observation of the decay $B_c^+ \to \psi(2S)\pi^+$*, Phys. Rev. **D87** (2013) 071103(R), `arXiv:1303.1737`.

[254] LHCb collaboration, R. Aaij *et al.*, *Observations of $B_s^0 \to \psi(2S)\eta$ and $B_{(s)}^0 \to \psi(2S)\pi^+\pi^-$ decays*, Nucl. Phys. **B871** (2013) 403 , `arXiv:1302.6354`.

[255] LHCb collaboration, R. Aaij *et al.*, *Search for CP violation in $D^+ \to \phi\pi^+$ and $D_s^+ \to K_S^0\pi^+$ decays*, JHEP **06** (2013) 112, `arXiv:1303.4906`.

[256] LHCb collaboration, R. Aaij *et al.*, *Search for $D_{(s)}^+ \to \pi^+\mu^+\mu^-$ and $D_{(s)}^+ \to \pi^-\mu^+\mu^+$ decays*, Phys. Lett. **B724** (2013) 203, `arXiv:1304.6365`.

[257] LHCb collaboration, R. Aaij *et al.*, *First observations of $\overline{B}_s^0 \to D^+D^-$, $D_s^+D^-$ and $D^0\overline{D}^0$ decays*, Phys. Rev. **D87** (2013) 092007, `arXiv:1302.5854`.

[258] LHCb collaboration, R. Aaij *et al.*, *Search for rare $B_{(s)}^0 \to \mu^+\mu^-\mu^+\mu^-$ decays*, Phys. Rev. Lett. **110** (2013) 211801, `arXiv:1303.1092`.

[259] LHCb collaboration, R. Aaij *et al.*, *Measurements of the Λ_b^0, Ξ_b^-, and Ω_b^- baryon masses*, Phys. Rev. Lett. **110** (2013) 182001, `arXiv:1302.1072`.

[260] LHCb collaboration, R. Aaij *et al.*, *Measurements of the branching fractions of $B^+ \to p\overline{p}K^+$ decays*, Eur. Phys. J. **C73** (2013) 2462, `arXiv:1303.7133`.

[261] LHCb collaboration, R. Aaij *et al.*, *Study of $B^0 \to D^{*-}\pi^+\pi^-\pi^+$ and $B^0 \to D^{*-}K^+\pi^-\pi^+$ decays*, Phys. Rev. **D87** (2013) 092001, `arXiv:1303.6861`.

[262] LHCb collaboration, R. Aaij *et al.*, *Analysis of the resonant components in $\overline{B}^0 \to J/\psi\pi^+\pi^-$*, Phys. Rev. **D87** (2013) 052001, `arXiv:1301.5347`.

[263] LHCb collaboration, R. Aaij *et al.*, *Exclusive J/ψ and $\psi(2S)$ production in pp collisions at $\sqrt{s} = 7$ TeV*, J. Phys. **G40** (2013) 045001, `arXiv:1301.7084`.

[264] LHCb collaboration, R. Aaij *et al.*, *First evidence for the decay $B_s^0 \to \mu^+\mu^-$*, Phys. Rev. Lett. **110** (2013) 021801, `arXiv:1211.2674`.

[265] LHCb collaboration, R. Aaij *et al.*, *Measurement of CP observables in $B^0 \to DK^{*0}$ with $D \to K^+K^-$*, JHEP **03** (2013) 067, `arXiv:1212.5205`.

[266] LHCb collaboration, R. Aaij *et al.*, *Prompt charm production in pp collisions at $\sqrt{s} = 7$ TeV*, Nucl. Phys. **B871** (2013) 1, `arXiv:1302.2864`.

[267] LHCb collaboration, R. Aaij *et al.*, *Amplitude analysis and branching fraction measurement of $\overline{B}{}^0_s \to J/\psi K^+K^-$*, Phys. Rev. **D87** (2013) 072004, arXiv:1302.1213.

[268] LHCb collaboration, R. Aaij *et al.*, *Measurement of J/ψ production in pp collisions at $\sqrt{s} = 2.76$ TeV*, JHEP **02** (2013) 041, arXiv:1212.1045.

[269] LHCb collaboration, R. Aaij *et al.*, *Observation of D^0–$\overline{D}{}^0$ oscillations*, Phys. Rev. Lett. **110** (2013) 101802, arXiv:1211.1230.

[270] LHCb collaboration, R. Aaij *et al.*, *Measurement of the fragmentation fraction ratio f_s/f_d and its dependence on B meson kinematics*, JHEP **04** (2013) 001, arXiv:1301.5286.

[271] LHCb collaboration, R. Aaij *et al.*, *Measurement of the cross-section for $Z \to e^+e^-$ production in pp collisions at $\sqrt{s} = 7$ TeV*, JHEP **02** (2013) 106, arXiv:1212.4620.

[272] LHCb collaboration, R. Aaij *et al.*, *Measurement of the time-dependent CP asymmetry in $B^0 \to J/\psi K^0_S$ decays*, Phys. Lett. **B721** (2013) 24, arXiv:1211.6093.

[273] LHCb collaboration, R. Aaij *et al.*, *Measurement of the forward energy flow in pp collisions at $\sqrt{s} = 7$ TeV*, Eur. Phys. J. **C73** (2013) 2421, arXiv:1212.4755.

[274] LHCb collaboration, R. Aaij *et al.*, *First observation of the decays $\overline{B}{}^0_{(s)} \to D_s^+K^-\pi^+\pi^-$ and $\overline{B}{}^0_s \to D_{s1}(2536)^+\pi^-$*, Phys. Rev. **D86** (2012) 112005, arXiv:1211.1541.

[275] LHCb collaboration, R. Aaij *et al.*, *Measurement of the B^0–$\overline{B}{}^0$ oscillation frequency Δm_d with the decays $B^0 \to D^-\pi^+$ and $B^0 \to J/\psi K^{*0}$*, Phys. Lett. **B719** (2013) 318, arXiv:1210.6750.

[276] LHCb collaboration, R. Aaij *et al.* , and A. Bharucha *et al.*, *Implications of LHCb measurements and future prospects*, Eur. Phys. J. **C73** (2013) 2373, arXiv:1208.3355.

[277] LHCb collaboration, R. Aaij *et al.*, *First observation of the decay $B^*_{s2}(5840)^0 \to B^{*+}K^-$ and studies of excited B^0_s mesons*, Phys. Rev. Lett. **110** (2013) 151803, arXiv:1211.5994.

[278] LHCb collaboration, R. Aaij *et al.*, *A study of the Z production cross-section in pp collisions at $\sqrt{s} = 7$ TeV using tau final states*, JHEP **01** (2013) 111, arXiv:1210.6289.

[279] LHCb collaboration, R. Aaij *et al.*, *Measurements of B_c^+ production and mass with the $B_c^+ \to J/\psi\pi^+$ decay*, Phys. Rev. Lett. **109** (2012) 232001, arXiv:1209.5634.

[280] LHCb collaboration, R. Aaij *et al.*, *A model-independent Dalitz plot analysis of $B^\pm \to DK^\pm$ with $D \to K^0_S h^+h^-$ $(h = \pi, K)$ decays and constraints on the CKM angle γ*, Phys. Lett. **B718** (2012) 43, arXiv:1209.5869.

[281] LHCb collaboration, R. Aaij *et al.*, *Measurement of the $D^\pm$ production asymmetry in 7 TeV pp collisions*, Phys. Lett. **B718** (2013) 902, arXiv:1210.4112.

[282] LHCb collaboration, R. Aaij *et al.*, *First evidence for the annihilation decay mode $B^+ \to D_s^+ \phi$*, JHEP **02** (2013) 043, arXiv:1210.1089.

[283] LHCb collaboration, R. Aaij *et al.*, *Differential branching fraction and angular analysis of the $B^+ \to K^+\mu^+\mu^-$ decay*, JHEP **02** (2013) 105, arXiv:1209.4284.

[284] LHCb collaboration, R. Aaij *et al.*, *Search for the rare decay $K_S^0 \to \mu^+\mu^-$*, JHEP **01** (2013) 090, arXiv:1209.4029.

[285] LHCb collaboration, R. Aaij *et al.*, *Evidence for the decay $B^0 \to J/\psi\omega$ and measurement of the relative branching fractions of B_s^0 meson decays to $J/\psi\eta$ and $J/\psi\eta'$*, Nucl. Phys. **B867** (2013) 547, arXiv:1210.2631.

[286] LHCb collaboration, R. Aaij *et al.*, *Measurement of the CP asymmetry in $B^0 \to K^{*0}\mu^+\mu^-$ decays*, Phys. Rev. Lett. **110** (2013) 031801, arXiv:1210.4492.

[287] LHCb collaboration, R. Aaij *et al.*, *First observation of the decay $B^+ \to \pi^+\mu^+\mu^-$*, JHEP **12** (2012) 125, arXiv:1210.2645.

[288] LHCb collaboration, R. Aaij *et al.*, *Measurement of the ratio of branching fractions $\mathcal{B}(B^0 \to K^{*0}\gamma)/\mathcal{B}(B_s^0 \to \phi\gamma)$ and the direct CP asymmetry in $B^0 \to K^{*0}\gamma$*, Nucl. Phys. **B867** (2013) 1, arXiv:1209.0313.

[289] LHCb collaboration, R. Aaij *et al.*, *Observation of $B^0 \to \overline{D}^0 K^+K^-$ and evidence for $B_s^0 \to \overline{D}^0 K^+K^-$*, Phys. Rev. Lett. **109** (2012) 131801, arXiv:1207.5991.

[290] LHCb collaboration, R. Aaij *et al.*, *Measurement of the $\overline{B}_s^0$ effective lifetime in the $J/\psi f_0(980)$ final state*, Phys. Rev. Lett. **109** (2012) 152002, arXiv:1207.0878.

[291] LHCb collaboration, R. Aaij *et al.*, *Study of D_{sJ} decays to $D^+K_S^0$ and D^0K^+ final states in pp collisions*, JHEP **10** (2012) 151, arXiv:1207.6016.

[292] LHCb collaboration, R. Aaij *et al.*, *Measurement of the fraction of $\Upsilon(1S)$ originating from $\chi_b(1P)$ decays in pp collisions at $\sqrt{s} = 7$ TeV*, JHEP **11** (2012) 031, arXiv:1209.0282.

[293] LHCb collaboration, R. Aaij *et al.*, *Measurement of the $B_s^0 \to J/\psi\overline{K}^{*0}$ branching fraction and angular amplitudes*, Phys. Rev. **D86** (2012) 071102(R), arXiv:1208.0738.

[294] LHCb collaboration, R. Aaij *et al.*, *Measurement of the effective $B_s^0 \to K^+K^-$ lifetime*, Phys. Lett. **B716** (2012) 393, arXiv:1207.5993.

[295] LHCb collaboration, R. Aaij *et al.*, *Observation of excited Λ_b^0 baryons*, Phys. Rev. Lett. **109** (2012) 172003, arXiv:1205.3452.

[296] LHCb collaboration, R. Aaij *et al.*, *Measurement of the isospin asymmetry in $B \to K^{(*)}\mu^+\mu^-$ decays*, JHEP **07** (2012) 133, arXiv:1205.3422.

[297] LHCb collaboration, R. Aaij *et al.*, *Measurement of relative branching fractions of B decays to $\psi(2S)$ and J/ψ mesons*, Eur. Phys. J. **C72** (2012) 2118, arXiv:1205.0918.

[298] LHCb collaboration, R. Aaij *et al.*, *Measurement of the D_s^+–D_s^- production asymmetry in 7 TeV pp collisions*, Phys. Lett. **B713** (2012) 186, arXiv:1205.0897.

[299] LHCb collaboration, R. Aaij *et al.*, *Inclusive W and Z production in the forward region at $\sqrt{s} = 7$ TeV*, JHEP **06** (2012) 058, arXiv:1204.1620.

[300] LHCb collaboration, R. Aaij *et al.*, *Strong constraints on the rare decays $B_s^0 \to \mu^+\mu^-$ and $B^0 \to \mu^+\mu^-$*, Phys. Rev. Lett. **108** (2012) 231801, arXiv:1203.4493.

[301] LHCb collaboration, R. Aaij *et al.*, *Measurement of the CP-violating phase ϕ_s in $\overline{B}_s^0 \to J/\psi\pi^+\pi^-$ decays*, Phys. Lett. **B713** (2012) 378, arXiv:1204.5675.

[302] LHCb collaboration, R. Aaij *et al.*, *Analysis of the resonant components in $\overline{B}_s^0 \to J/\psi\pi^+\pi^-$*, Phys. Rev. **D86** (2012) 052006, arXiv:1204.5643.

[303] LHCb collaboration, R. Aaij *et al.*, *Measurement of the polarization amplitudes and triple product asymmetries in the $B_s^0 \to \phi\phi$ decay*, Phys. Lett. **B713** (2012) 369, arXiv:1204.2813.

[304] LHCb collaboration, R. Aaij *et al.*, *Observation of double charm production involving open charm in pp collisions at $\sqrt{s} = 7$ TeV*, JHEP **06** (2012) 141, Addendum ibid. **03** (2014) 108, arXiv:1205.0975.

[305] LHCb collaboration, R. Aaij *et al.*, *Measurement of b-hadron branching fractions for two-body decays into charmless charged hadrons*, JHEP **10** (2012) 037, arXiv:1206.2794.

[306] LHCb collaboration, R. Aaij *et al.*, *Observation of CP violation in $B^\pm \to DK^\pm$ decays*, Phys. Lett. **B712** (2012) 203, Erratum ibid. **B713** (2012) 351, arXiv:1203.3662.

[307] LHCb collaboration, R. Aaij *et al.*, *Measurement of $\psi(2S)$ meson production in pp collisions at $\sqrt{s} = 7$ TeV*, Eur. Phys. J. **C72** (2012) 2100, arXiv:1204.1258.

[308] LHCb collaboration, R. Aaij *et al.*, *First observation of the decay $B_c^+ \to J/\psi\pi^+\pi^-\pi^+$*, Phys. Rev. Lett. **108** (2012) 251802, arXiv:1204.0079.

[309] LHCb collaboration, R. Aaij *et al.*, *Measurement of the $B^\pm$ production cross-section in pp collisions at $\sqrt{s} = 7$ TeV*, JHEP **04** (2012) 093, arXiv:1202.4812.

[310] LHCb collaboration, R. Aaij *et al.*, *Measurement of the ratio of branching fractions $\mathcal{B}(B^0 \to K^{*0}\gamma)/\mathcal{B}(B_s^0 \to \phi\gamma)$*, Phys. Rev. **D85** (2012) 112013, arXiv:1202.6267.

[311] LHCb collaboration, R. Aaij *et al.*, *Measurement of the $B_s^0 \to J/\psi K_S^0$ branching fraction*, Phys. Lett. **B713** (2012) 172, arXiv:1205.0934.

[312] LHCb collaboration, R. Aaij *et al.*, *First observation of the decays $\overline{B}^0 \to D^+K^-\pi^+\pi^-$ and $B^- \to D^0K^-\pi^+\pi^-$*, Phys. Rev. Lett. **108** (2012) 161801, arXiv:1201.4402.

[313] LHCb collaboration, R. Aaij *et al.*, *Searches for Majorana neutrinos in B^- decays*, Phys. Rev. **D85** (2012) 112004, arXiv:1201.5600.

[314] LHCb collaboration, R. Aaij *et al.*, *Measurement of prompt hadron production ratios in pp collisions at $\sqrt{s}$ = 0.9 and 7 TeV*, Eur. Phys. J. **C72** (2012) 2168, `arXiv:1206.5160`.

[315] LHCb collaboration, R. Aaij *et al.*, *Measurement of Υ production in pp collisions at $\sqrt{s} = 7$ TeV*, Eur. Phys. J. **C72** (2012) 2025, `arXiv:1202.6579`.

[316] LHCb collaboration, R. Aaij *et al.*, *Measurement of b-hadron masses*, Phys. Lett. **B708** (2012) 241, `arXiv:1112.4896`.

[317] LHCb collaboration, R. Aaij *et al.*, *Observation of $X(3872)$ production in pp collisions at $\sqrt{s} = 7$ TeV*, Eur. Phys. J. **C72** (2011) 1972, `arXiv:1112.5310`.

[318] LHCb collaboration, R. Aaij *et al.*, *Search for the $X(4140)$ state in $B^+ \to J/\psi \phi K^+$ decays*, Phys. Rev. **D85** (2012) 091103(R), `arXiv:1202.5087`.

[319] LHCb collaboration, R. Aaij *et al.*, *Measurement of mixing and CP violation parameters in two-body charm decays*, JHEP **04** (2012) 129, `arXiv:1112.4698`.

[320] LHCb collaboration, R. Aaij *et al.*, *Measurement of the CP violating phase ϕ_s in $\overline{B}^0_s \to J/\psi f_0(980)$*, Phys. Lett. **B707** (2012) 497, `arXiv:1112.3056`.

[321] LHCb collaboration, R. Aaij *et al.*, *Measurement of the ratio of prompt χ_c to J/ψ production in pp collisions at $\sqrt{s} = 7$ TeV*, Phys. Lett. **B718** (2012) 431, `arXiv:1204.1462`.

[322] LHCb collaboration, R. Aaij *et al.*, *First evidence of direct CP violation in charmless two-body decays of B^0_s mesons*, Phys. Rev. Lett. **108** (2012) 201601, `arXiv:1202.6251`.

[323] LHCb collaboration, R. Aaij *et al.*, *Determination of the sign of the decay width difference in the B^0_s system*, Phys. Rev. Lett. **108** (2012) 241801, `arXiv:1202.4717`.

[324] LHCb collaboration, R. Aaij *et al.*, *Opposite-side flavour tagging of B mesons at the LHCb experiment*, Eur. Phys. J. **C72** (2012) 2022, `arXiv:1202.4979`.

[325] LHCb collaboration, R. Aaij *et al.*, *Observation of $\overline{B}^0_s \to J/\psi f'_2(1525)$ in $J/\psi K^+K^-$ final states*, Phys. Rev. Lett. **108** (2012) 151801, `arXiv:1112.4695`.

[326] LHCb collaboration, R. Aaij *et al.*, *Search for the rare decays $B^0_s \to \mu^+\mu^-$ and $B^0 \to \mu^+\mu^-$*, Phys. Lett. **B708** (2012) 55, `arXiv:1112.1600`.

[327] LHCb collaboration, R. Aaij *et al.*, *Measurements of the branching fractions and CP asymmetries of $B^\pm \to J/\psi\pi^\pm$ and $B^\pm \to \psi(2S)\pi^\pm$ decays*, Phys. Rev. **D85** (2012) 091105(R), `arXiv:1203.3592`.

[328] LHCb collaboration, R. Aaij *et al.*, *Evidence for CP violation in time-integrated $D^0 \to h^-h^+$ decay rates*, Phys. Rev. Lett. **108** (2012) 111602, `arXiv:1112.0938`.

[329] LHCb collaboration, R. Aaij *et al.*, *Measurements of the branching fractions of the decays $B^0_s \to D^\mp_s K^\pm$ and $B^0_s \to D^-_s \pi^+$*, JHEP **06** (2012) 115, `arXiv:1204.1237`.

[330] LHCb collaboration, R. Aaij *et al.*, *Measurement of the CP-violating phase ϕ_s in the decay $B_s^0 \to J/\psi\phi$*, Phys. Rev. Lett. **108** (2012) 101803, `arXiv:1112.3183`.

[331] LHCb collaboration, R. Aaij *et al.*, *Differential branching fraction and angular analysis of the decay $B^0 \to K^{*0}\mu^+\mu^-$*, Phys. Rev. Lett. **108** (2012) 181806, `arXiv:1112.3515`.

[332] LHCb collaboration, R. Aaij *et al.*, *Measurement of the cross-section ratio $\sigma(\chi_{c2})/\sigma(\chi_{c1})$ for prompt χ_c production at $\sqrt{s} = 7$ TeV*, Phys. Lett. **B714** (2012) 215, `arXiv:1202.1080`.

[333] LHCb collaboration, R. Aaij *et al.*, *Measurement of b hadron production fractions in 7 TeV pp collisions*, Phys. Rev. **D85** (2012) 032008, `arXiv:1111.2357`.

[334] LHCb collaboration, R. Aaij *et al.*, *Search for CP violation in $D^+ \to K^-K^+\pi^+$ decays*, Phys. Rev. **D84** (2011) 112008, `arXiv:1110.3970`.

[335] LHCb collaboration, R. Aaij *et al.*, *Measurements of the branching fractions for $B_{(s)} \to D_{(s)}\pi\pi\pi$ and $\Lambda_b^0 \to \Lambda_c^+\pi\pi\pi$*, Phys. Rev. **D84** (2011) 092001, Erratum ibid. **D85** (2012) 039904, `arXiv:1109.6831`.

[336] LHCb collaboration, R. Aaij *et al.*, *Absolute luminosity measurements with the LHCb detector at the LHC*, JINST **7** (2012) P01010, `arXiv:1110.2866`.

[337] LHCb collaboration, R. Aaij *et al.*, *Measurement of the effective $B_s^0 \to K^+K^-$ lifetime*, Phys. Lett. **B707** (2012) 349, `arXiv:1111.0521`.

[338] LHCb collaboration, R. Aaij *et al.*, *Observation of J/ψ-pair production in pp collisions at $\sqrt{s} = 7$ TeV*, Phys. Lett. **B707** (2012) 52, `arXiv:1109.0963`.

[339] LHCb collaboration, R. Aaij *et al.*, *First observation of the decay $B_s^0 \to K^{*0}\overline{K}^{*0}$*, Phys. Lett. **B709** (2012) 50, `arXiv:1111.4183`.

[340] LHCb collaboration, R. Aaij *et al.*, *Measurement of charged particle multiplicities in pp collisions at $\sqrt{s} = 7$ TeV in the forward region*, Eur. Phys. J. **C72** (2012) 1947, `arXiv:1112.4592`.

[341] LHCb collaboration, R. Aaij *et al.*, *Measurement of the B_s^0–$\overline{B}_s^0$ oscillation frequency Δm_s in $B_s^0 \to D_s^-(3)\pi$ decays*, Phys. Lett. **B709** (2012) 177, `arXiv:1112.4311`.

[342] LHCb collaboration, R. Aaij *et al.*, *Search for lepton number violating decays $B^+ \to \pi^-\mu^+\mu^+$ and $B^+ \to K^-\mu^+\mu^+$*, Phys. Rev. Lett. **108** (2012) 101601, `arXiv:1110.0730`.

[343] LHCb collaboration, R. Aaij *et al.*, *First observation of the decay $\overline{B}_s^0 \to D^0K^{*0}$ and a measurement of the ratio of branching fractions $\frac{\mathcal{B}(\overline{B}_s^0 \to D^0K^{*0})}{\mathcal{B}(\overline{B}^0 \to D^0\rho^0)}$*, Phys. Lett. **B706** (2011) 32, `arXiv:1110.3676`.

[344] LHCb collaboration, R. Aaij *et al.*, *Measurement of the inclusive ϕ cross-section in pp collisions at $\sqrt{s} = 7$ TeV*, Phys. Lett. **B703** (2011) 267, `arXiv:1107.3935`.

[345] LHCb collaboration, R. Aaij *et al.*, *Determination of f_s/f_d for 7 TeV pp collisions and measurement of the $B^0 \to D^- K^+$ branching fraction*, Phys. Rev. Lett. **107** (2011) 211801, arXiv:1106.4435.

[346] LHCb collaboration, R. Aaij *et al.*, *Measurement of V^0 production ratios in pp collisions at $\sqrt{s} = 0.9$ and 7 TeV*, JHEP **08** (2011) 034, arXiv:1107.0882.

[347] LHCb collaboration, R. Aaij *et al.*, *Search for the rare decays $B_s^0 \to \mu^+\mu^-$ and $B^0 \to \mu^+\mu^-$*, Phys. Lett. **B699** (2011) 330, arXiv:1103.2465.

[348] LHCb collaboration, R. Aaij *et al.*, *Measurement of J/ψ production in pp collisions at $\sqrt{s} = 7$ TeV*, Eur. Phys. J. **C71** (2011) 1645, arXiv:1103.0423.

[349] LHCb collaboration, R. Aaij *et al.*, *First observation of $B_s^0 \to J/\psi\, f_0(980)$ decays*, Phys. Lett. **B698** (2011) 115, arXiv:1102.0206.

[350] LHCb collaboration, R. Aaij *et al.*, *First observation of $\overline{B}_s^0 \to D_{s2}^{*+} X \mu^- \overline{\nu}$ decays*, Phys. Lett. **B698** (2011) 14, arXiv:1102.0348.

[351] LHCb collaboration, R. Aaij *et al.*, *Measurement of $\sigma(pp \to b\bar{b}X)$ at $\sqrt{s} = 7$ TeV in the forward region*, Phys. Lett. **B694** (2010) 209, arXiv:1009.2731.

[352] LHCb collaboration, R. Aaij *et al.*, *Prompt K_S^0 production in pp collisions at $\sqrt{s} = 0.9$ TeV*, Phys. Lett. **B693** (2010) 69, arXiv:1008.3105.

LHCb collaboration

A. N. Other[1].

[1] *University of nowhere*

The author list for journal publications is generated from the Membership Database shortly after 'approval to go to paper' has been given. It will be sent to you by email shortly after a paper number has been assigned. The author list should be included already at first circulation, to allow new members of the collaboration to verify that they have been included correctly. Occasionally a misspelled name is corrected, or associated institutions become full members. Therefore an updated author list will be sent to you after the final EB review of the paper. In case line numbering doesn't work well after including the authorlist, try moving the `\bigskip` after the last author to a separate line.

The authorship for Conference Reports should be "The LHCb collaboration", with a footnote giving the name(s) of the contact author(s), but without the full list of collaboration names.