

Publications of the research group Prof. Ulrich Straumann January 1, 2010 - September 29, 2016

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1 Habilitation Theses

- *Experiments in Beauty*
Olaf Steinkamp, Habilitation Thesis, Universität Zürich, 2015

2 PhD Theses

- *Z Bosons in LHCb*
Albert Bursche, PhD Thesis, Universität Zürich, 2014
- *Advances in Solar Radiometry*
Markus Suter, PhD Thesis, Universität Zürich, 2014
- *Low mass Drell-Yan Cross Section Measurements with the LHCb Experiment*
Nicola Chiapolini, PhD Thesis, Universität Zürich, 2014
- *The Rare Decays $B(s)^0 \rightarrow \mu^+ \mu^-$ and Z Boson Production at LHCb and Radiation Damage in its Silicon Tracker*
Christian Elsasser, PhD Thesis, Universität Zürich, 2014
- *Towards the First Imaging Atmospheric Cherenkov Telescope Camera with Continuous Signal Digitization*
Arno Gadola, PhD Thesis, Universität Zürich, 2013
- *Track Reconstruction Efficiency and Analysis of $B^0 \rightarrow K^{*0} \mu^+ \mu^-$ at the LHCb Experiment*
Michel De Cian, PhD Thesis, Universität Zürich, 2013
- *Contributions to High Energy and Very High Energy Gamma-Ray Astronomy*
Ben Huber, PhD Thesis, Universität Zürich, 2012
- *Mass Resolution Study of the B_s -Meson with First LHCb Data*
Angela Büchler, PhD Thesis, Universität Zürich, 2012
- *LHCb Spectrometer Alignment and Verification of its Performance using the Decay $B_d^0 \rightarrow K^{*0} J/\Psi$*
Christophe Salzmann, PhD Thesis, Universität Zürich, 2012
- *Metrology of Solar Irradiance*
Andre Fehlmann, PhD Thesis, Universität Zürich, 2011
- *X-ray Phase Contrast Imaging by Grating Interferometry*
Vincent Revol, PhD Thesis, Universität Zürich, 2011

3 Bachelor and Master Theses

- *Kabel Test fr die FlashCam des Cherenkov Telescope Array*
Oliver Dahme, Bachelor Thesis, Universität Zürich, March 2015
- *Development of a fault tolerant CAN bus interface based on the Raspberry Pi single board computer*
Timothy Dominik Widmer, Bachelor Thesis, Universität Zürich, December 2015
- *Characterisation of mechanical properties of the FlashCam camera housing with respect to external mechanical influences*
Christian Emmanuel Huber, Bachelor Thesis, Universität Zürich, July 2015
- *Measurement of $\sigma(pp \rightarrow b\bar{b}X)$ at 8 TeV in the forward region of the LHCb experiment*
Dario Biasini, Master Thesis, Universität Zürich, June 2015

- *Measurement of W production cross section in proton-lead collisions*
Chris Marentini, Bachelor Thesis, Universität Zürich, September 2014
- *Measurement of the $Z\gamma$ production cross section at $\sqrt{s} = 8$ TeV at the LHCb experiment*
Moritz Küng, Master Thesis, Universität Zürich, August 2014
- *Comparison of Measured and Simulated Light Yield in Plastic Scintillators*
Markus Baumgartner, Bachelor Thesis, Universität Zürich, November 2013
- *Höhenmyonenspektroskopie*
Nathalie Chételat, Bachelor Thesis, Universität Zürich, September 2013
- *Aufbau eines Teststandes für die Produktion einer AMC Kleinserie*
Michael Hochstrasser, Bachelor Thesis, Universität Zürich, July 2013
- *Aufbau eines Praktikumsversuchs zu Siliziumstreifendetektoren*
Silvio Ernesto Navarro, Bachelor Thesis, Universität Zürich, October 2012
- *Suppression of excited Onia States at the LHCb Experiment*
Moritz Küng, Master Thesis, Universität Zürich, August 2012
- *Measurement of Asymmetries in the Decay $B^0 \rightarrow K^{*0} \mu^+ \mu^-$ at the LHCb experiment*
Marco Tresch, Master Thesis, Universität Zürich, August 2012
- *Study of charge sharing in the LHCb Tracker Turicensis using proton-proton collisions at the LHC*
Philipp Gloor, Bachelor Thesis, Universität Zürich, May 2012
- *Design and Development of an Automatic Mirror Segment Alignment System for the CTA Telescopes*
Roman Gredig, Master Thesis, Universität Zürich, November 2011
- *Extended Measurements of Charge Sharing at the TT Test Stand*
Marco Tresch, Bachelor Thesis, Universität Zürich, August 2011
- *Determination of the Invariant Mass Distribution for $B_s^0 \rightarrow \mu^+ \mu^-$ at the LHCb Experiment*
Christian Elsasser, Master Thesis, Universität Zürich, August 2011

4 Conference contributions and invited talks

4.1 on B physics and LHCb data analysis

- *Quark flavour anomalies of the SM*
Marcin Chrzaszcz, 12th Quark Confinement and the Hadron Spectrum, Thessaloniki, Greece, August 29 - September 2 2016
- *Search for massive neutrinos at LHCb and discovery potential of the FCC*
Marcin Chrzaszcz, International Workshop on Neutrino Factories, Super Beams and Beta Beams , Quy Nhon, Vietnam, August 21 - 27 2016
- *Impact of LHC measurements on parton density functions*
Katharina Müller, QCD@LHC International Conference, Zurich, Switzerland, August 22 - 26 2016
- *Anomalies in electroweak penguins at LHCb*
Marcin Chrzaszcz, Meson-Nucleon Physics and the Structure of the Nucleon, Kyoto, Japan, July 25 - 30 2016

- *Impact of LHC measurements on parton density functions*
Katharina Müller, 4th Conference on Large Hadron Collider Physics 2016 (LHCP 2016), Lund, Sweden, June 13 - 18 2016
- *Overview of LHCb results*
Marcin Chrzaszcz, Collider Physics. 2nd Symposium of the Division for Physics of Fundamental Interactions of the Polish Physical Society, Katowice, Poland, May 13- 15 2016
- *Overview of recent experimental results in flavour physics*
Marcin Chrzaszcz, Standard Model at LHC 2016, Pittsburgh, United States Of America, May 3- 6 2016
- *QCD at colliders*
Katharina Müller, 24th International Workshop on Deep Inelastic Scattering and related subjects, Hamburg, Germany, April 11 - 15 2016
- *Direct CP violation searches using prompt 2-body charm decays at LHCb*
Andreas Weiden, 51st rencontres de Moriond, La Thuile, France, March 12 - 19 2016
- *Anomalies in Flavour physics*
Marcin Chrzaszcz, Miami 2015, Fort Lauderdale, Florida, USA, December 16 - 22 2015
- *Overview of LHCb results, including pentaquarks*
Albert Bursche, XV Mexican Workshop on Particles and Fields, Maxatlan, Mexico, November 2-6 2015
- *$B \rightarrow K^{(*)}\mu^+\mu^-$, $\Phi \rightarrow \mu^+\mu^-$ and R measurements*
Marcin Chrzaszcz, 5th KEK Flavor Factory Workshop, Tokyo, Japan, October 26 - 27 2015
- *Anomalies in Flavour Physics*
Marcin Chrzaszcz, Particle Phenomenology, Particle Astrophysics and Cosmology Seminar, Cambridge, UK, October 15 2015
- *LHCb trigger and reconstruction optimization for Run II: real-time alignment and calibration, and the TURBO stream*
Barbara Storaci, LHC Detector Seminar, CERN, Geneva, October 9 2015
- *Extracting angular observables with the Method of Moments*
Marcin Chrzaszcz, Novel aspects of b to s transitions, Marseille, France, October 5-7 2015
- *Review of low x physics results at LHCb*
Albert Bursche, 23rd Low x Meeting, Sandomierz, Poland, September 1-5 2015
- *Searches for long-lived particles at LHCb*
Marcin Chrzaszcz, SUSY 2015, Lake Tahoe, California, USA, August 23 - 29 2015
- *Electroweak penguin decays to leptons and Radiative decays at LHCb*
Marcin Chrzaszcz, SUSY 2015, Lake Tahoe, California, USA, August 23 - 29 2015
- *Measurement of direct CP-violation at LHCb*
Andreas Weiden, XXX. International Conference of Physics Students, Zagreb, Croatia, August 12 - 19 2015
- *Rare electroweak B decays at LHCb*
Espen Bowen, DPF 2015, Ann Arbor, Michigan, USA, August 4 - 8 2015
- *Rare B decays*
Marcin Chrzaszcz, QCD 2015, Montpellier, France, June 29 - 3 July 3 2015

- *Method of moments*
Marcin Chrzaszcz, Rare B decays in experiment and theory, Edinburgh, UK, May 11-13 2015
- *LHCb - Highlights from Run I, Prospects for Run II and beyond*
Olaf Steinkamp, Particle Physics Seminar, Universität Bern, May 13 2015
- *LHCb results in proton-nucleus collisions at the LHC*
Katharina Müller, STARS 2015: 3rd Caribbean Symposium on Cosmology, Gravitation, Nuclear and Astroparticle Physics, Havana, Cuba, May 2015 10-16,
proceedings published in *Astronomische Nachrichten* Volume 336, Issue 8-9 773
- *Rare b and c decays at LHCb*
Marcin Chrzaszcz, XXIII International Workshop on Deep-Inelastic Scattering and Related Subjects (DIS 2015), Dallas, USA, April 27-May 1 2015
- *LHCb results in proton-nucleus collisions at the LHC*
Katharina Müller, Kruger 2014: The International Workshop on Discovery Physics at the LHC, Skukuza, South Africa, December 1-5 2014,
proceedings published in *Journal of Physics Conference Series* 06/2015; 623(1). DOI:10.1088/1742-6596/623/1/012023
- *Central exclusive quarkonia production in the forward region at LHCb*
Katharina Müller, Kruger 2014: The International Workshop on Discovery Physics at the LHC, December 1-5 2014, Skukuza, South Africa,
proceedings published in *Journal of Physics Conference Series* 06/2015; 623(1). DOI:10.1088/1742-6596/623/1/012022
- *Proton-Ion Physics with LHCb - Results and Prospects*
Christian Elsasser, The 2nd International Conference on the Initial Stages in High-Energy Nuclear Collisions, December 3-7 2014, Napa, California, United States Of America
- *Associated Boson Production in the forward acceptance*
Albert Bursche, 6th International Workshop on Multiple Partonic Interactions at the LHC, November 3-7 2014, Krakow, Poland
- *Lepton flavour violation in tau decays at LHCb*
Marcin Chrzaszcz, The 13th International Workshop on Tau Lepton Physics, September 15-19, 2014, Aachen, Germany
- *Measurements with electroweak bosons at LHCb*
Katharina Müller, 20th Particles and Nuclei International Conference, August 24-29 2014, Hamburg, Germany,
proceedings published at DESY as DESY-PROC-2014-04
- *LHCb results in proton-nucleus collisions at the LHC*
Katharina Müller, 20th Particles and Nuclei International Conference, August 24-29 2014, Hamburg, Germany,
proceedings published at DESY as DESY-PROC-2014-04
- *Lepton flavour and number violation measurements at LHCb*
Marcin Chrzaszcz, XIIth International Conference on Heavy Quarks and Leptons 2014, August 25-29 2014, Mainz, Germany
- *Rare B and charm decays at LHCb*
Marcin Chrzaszcz, XIIth International Conference on Heavy Quarks and Leptons 2014, August 25-29 2014, Mainz, Germany

- *The LHCb Upgrades*
Olaf Steinkamp, Rencontres du Vietnam 2014: Physics at LHC and beyond, August 10-17 2014, Quy-nhon, Vietnam
- *Electroweak penguin decays to leptons at LHCb*
Marco Tresch, 10th Rencontres du Vietnam - Flavour Physics Conference, July 27- August 2 2014, Quy Nhon, Vietnam
- *Electroweak and central exclusive measurements in the forward region at LHCb*
Katharina Müller, Seminar, July 8 2014, Heidelberg, Germany
- *QCD and forward physics at LHCb*
Albert Bursche, Low x workshop, June 17-21 2014, Kyoto, Japan
- *Heavy Ion Physics at LHCb*
Christian Elsasser, Large Hadron Collider Physics (LHCP) Conference, June 2-7 2014, New York, USA
- *QCD and electroweak measurements in the forward region at LHCb*
Katharina Müller, 26th Rencontres de Blois on Particle Physics and Cosmology, May 18-23 2014, Blois, France
- *Searches for New Physics with LHCb*
Marcin Chrzaszcz, 26th Rencontres de Blois on Particle Physics and Cosmology, May 18-23 2014, Blois, France
- *New LHCb measurement: Z plus D meson cross section*
Albert Bursche, The top charm frontier at the LHCb, January 14 2014, CERN, Switzerland
- *Measurements with electroweak gauge bosons at LHCb*
Albert Bursche, MPI@LHC, December 2-6 2013, Antwerp, Belgium
- *Latest results on Z boson production from LHCb*
Jonathan Anderson, LHC seminar, October 8 2013, CERN, Switzerland
- *LHCb overview talk*
Olaf Steinkamp, 16th Lomonosov Conference on Elementary Particle Physics, August 22-28 2013, Moscow, Russia
- *Studies of the electroweak penguin transitions and radiative B decays at LHCb*
Espen E. Bowen, DPF 13, August 13-17 2013, Santa Cruz, USA
- *Latest results on $B_s/B_d \rightarrow \mu\mu$ from CMS and LHCb*
Christian Elsasser, Collider Cross Talk, July 25 2013, CERN, Switzerland
- *Studies of the electroweak penguin transitions $b_s \rightarrow \mu\mu$ and $b_d \rightarrow \mu\mu$ at LHCb*
Nicola Serra, EPS, July 2013 17-24, Stockholm, Sweden
- *LHCb physics results*
Christian Elsasser, 2013 CHIPP Annual Plenary Meeting, June 25 2013, Sursee, Switzerland
- *Results and prospects on central exclusive production at LHCb*
Katharina Müller, Low-x workshop, May 30-June 4 2013, Rehovot and Eilat, Israel
- *Rare decays*
Christian Elsasser, Large Hadron Collider Physics Conference, May 13-18 2013, Barcelona, Spain
- *Rare decays at LHCb*
Marco Tresch, Phenomenology Symposium, May 6-8 2013, Pittsburgh, USA

- *Particle production in the forward region*
Albert Bursche, Lake Louise Winter Institute, February 17- 23 2013, Lake Louise, Alberta, Canada
- *Flavour Physics*
Olaf Steinkamp, CHIPP PhD Winter School 2013, January 20- 25 2013, Grindelwald, Switzerland
- *Electroweak physics, QCD and jets in the forward region*
Nicola Chiapolini, Cracow Epiphany conference on the Physics after the First Phase of the LHC, January 7-9 2013, Cracow, Poland,
proceedings published in Acta Physica Polonica B, 44(7):1385
- *CP Violation at LHCb*
Olaf Steinkamp, International Workshop on Discovery Physics at the LHC, Kruger, South Africa, December 3-7 2012,
proceedings published in Journal of Physics Conference Series 455 (2013)
- *Measurements with electroweak bosons in the forward region at LHCb*
Katharina Müller, DESY physics seminars, Berlin, Germany, November 28 2012
- *Measurements with electroweak bosons in the forward region at LHCb*
Katharina Müller, DESY physics seminars, Hamburg, Germany, November 27 2012
- *Physics with electroweak penguins at LHCb*
Michel De Cian, 7th International Workshop on the CKM Unitarity Triangle, Cincinnati, Ohio, United States of America, September 28- October 2 2012
- *Rare B decays at LHCb*
Michel De Cian, CHIPP annual plenary meeting, Karthause Ittingen, September 13- 14 2012
- *Measurements with electroweak bosons at LHCb*
Katharina Müller, QCD@LHC, East-Lansing, Michigan, United States of America, August 19- 24 2012
- *Measurements with electroweak bosons at LHCb*
Jonathan Anderson, International Conference on High Energy Physics 2012, Melbourne, Australia, July 4- 11 2012
- *QCD and electroweak measurements at LHCb*
Albert Bursche, HSQCD, Gatchina, Russia, July 4-8, 2012
- *Search for the Rare Decays $B_{(s)}^0 \rightarrow \mu^+ \mu^-$ at LHCb*
Christian Elsasser, Annual meeting of the Swiss Physical Society, Zürich, June 22 2012
- *Electroweak results at LHCb*
Katharina Müller, CERN seminar, Geneva Switzerland, June 5 2012
- *$B_s \rightarrow \mu\mu$ and $B \rightarrow K^* \mu\mu$*
Nicola Serra, Flavour Physics and CP Violation (FPCP) 2012, Hefei, Anhui, China, May 21- 25 2012,
proceedings published online on SLAC-eConf <http://www.slac.stanford.edu/econf/editors.html>
- *Rare electroweak penguin decays at LHCb*
Michel De Cian, LHCb-Theory Workshop: Implications of LHCb measurements and future prospects, CERN, Switzerland, April 16- 18 2012
- *Electroweak results at LHCb*
Katharina Müller, SM@LHC, Copenhagen, Denmark, April 10- 13 2012

- *Inclusive low mass Drell-Yan production in the forward region at $\sqrt{s} = 7 \text{ TeV}$*
Jonathan Anderson, XX International Workshop on Deep-Inelastic Scattering and Related Subjects (DIS 2012), Bonn, Germany, April 11 - 15 2012
- *Jet reconstruction with LHCb*
Albert Bursche, XX International Workshop on Deep-Inelastic Scattering and Related Subjects (DIS 2012), Bonn, Germany, April 11 - 15 2012
- *Ricerca di Nuova Fisica in decadimenti Rari*
Nicola Serra, Incontri di Fisica delle Alte Energie (IFAE) 2012, Ferrara, Italy, April 11 - 13 2012, to be published on Nuovo Cimento
- *Elektroschwache Bosonen im LHCb Experiment*
Albert Bursche, Frühjahrstagung der Deutschen Physikalischen Gesellschaft, Göttingen, Deutschland, February 27 - March 2 2012
- *The LHCb experiment*
U. Straumann, 50. International Winter Meeting on Nuclear Physics, Bormio (Italy), January 23 - 27 2012
- *The LHCb Experiment: Operation, performance and results*
Ulrich Straumann, ETH Kolloquium, Zurich, November 23 2011
- *Physics at LHCb*
N. Serra, Amsterdam Particle Physics Symposium, Amsterdam, Netherlands, November 30 - December 2 2011
- *LHCb Physics*
Nicola Serra, CHIPP plenary meeting, Leysin, 1st September 2011
- *Flavour physics results*
Nicola Serra, EPS Summary Workshop CERN, August 2 2011
- *W and Z production in the forward region with the LHCb experiment*
Jonathan Anderson, Meeting of the Division of Particles and Fields of the American Physical Society, Providence, Rhode Island, United States Of America, August 9 - 13 2011
- *LHCb Physics, Performance, Prospects*
Olaf Steinkamp, 7th Patras Workshop on Axions, WIMPs and WISPs, Mykonos, Greece, June 26 - July 1 2011
- *W and Z production in the forward region at LHCb*
Jonathan Anderson, 2nd Workshop on Standard Model Benchmarks at Hadron Colliders, Zeuthen, Germany, June 15 - 17 2011
- *An inquiry into the nature and distribution of proton partons*
Nicola Chiapolini, Joint annual meeting of the OePG/SPS, Lausanne, June 15 - 17 2011
- *LHCb also likes the flavour of electroweak bosons (Poster)*
Albert Bursche, Joint annual meeting of the OePG/SPS, Lausanne, June 15 - 17 2011
- *Peak performance at LHCb*
Michel De Cian, Joint annual meeting of the SPS, OePG/SPS, Lausanne, June 15 - 17 2011
- *Searching for new physics in $B \rightarrow K^* \mu \mu$ at LHCb*
Christophe Salzmann, Phenomenology 2011 Symposium: The Curtain Rises..for Particle Discoveries, Madison, Wisconsin, May 9 - 11 2011
- *LHCb: Results and Performance*
Ulrich Straumann, Kolloquium Paul-Scherrer-Institut, May 12 2011

- *Electroweak physics: results and prospects*
Katharina Müller, Physics at LHCb, 479 WE-Heraeus Seminar, Bad Honnef, Germany, April 26 - 29 2011
- *First Mass Measurements at LHCb*
Michel De Cian, XIX International Workshop on Deep-Inelastic Scattering and Related Subjects (DIS 2011), Newport News, Virginia, United States Of America, April 11 - 15 2011, proceedings published in American Institute of Physics
- *Rare B decays at LHC*
Christian Elsasser, SM@LHC, Workshop, IPPP Durham, Great Britain, April 11 - 14 2011
- *Understanding Cryptography: From Caesar to Public-Key*
Nicola Chiapolini, iCSC (inverted Cern School of Computing) 2011, CERN, Geneva, Switzerland, March 3-4 2011
- *Prospects for indirect luminosity measurements at LHCb*
Jonathan Anderson, Workshop LHC Lumi Days, CERN, Geneva, Switzerland, January 13 - 14 2011
- *W and Z production in forward region at LHCb*
Katharina Müller, Epiphany 2011 conference, Cracow, Poland, January 2011 10 - 12, proceedings published in Acta Physica Polonica B vol. 42 (2011) page 1531
- *Search for New Physics with Rare Heavy Flavour Decays at LHCb*
Angela Büchler, SILAFAE conference, Valparaiso, Chile, December 6 - 12 2011

4.2 on CTA

- *FlashCam: A novel camera for the Cherenkov Telescope Array*
Arno Gadola, Joint Institute Seminar, Innsbruck 2015, Innsbruck (Österreich), June 15 2015
- *FlashCam: die erste Cherenkov Teleskop Kamera mit komplett digitaler Auslese*
Arno Gadola, Outreach: visit of IWAZ at UZH, Zurich, June 4 2015
- *FlashCam: A Novel Cherenkov Telescope Camera with Continuous Signal Digitization (poster)*
Arno Gadola, TWEPP 2014, Aix en Provence, France, September 23 2014
proceedings: JINST 10 C01014 doi:10.1088/1748-0221/10/01/C01014
- *FlashCam: A novel camera for the Cherenkov Telescope Array*
Arno Gadola, SPS Annual Meeting 2014, Fribourg, Switzerland, July 2 2014
- *Handling large dynamic PMT signals with high precision in ground-based gamma-ray detectors*
Arno Gadola, Annual Meeting of the Swiss Physical Society, Zürich, June 22 2012
- *Solid light concentrators for small-sized photosensors used in Cherenkov telescopes*
Ben Huber *et al.*,
proceedings 32nd International cosmic ray conference, Beijing, China, August 11 - 18 2011[arXiv:1111.2183].
- *Solid light concentrators for a G-APD- based Cherenkov camera*
Ben Huber, Joint annual meeting of the SPS, OePG/SPS, Lausanne, Switzerland, June 15 - 17 2011

4.3 on experimental techniques

- *The LHCb Upstream Tracker Project*
Olaf Steinkamp, 10th International Hiroshima Symposium on the Development and Application of Semiconductor Tracking Detectors, Xi'an, China, September 25 - 29, 2015

- *Novel real-time calibration and alignment and tracking performance for LHCb Run IIb*
Espen Bowen, DPF 2015, Ann Arbor, Michigan, USA, August 4-8 2015
- *Optimization of the LHCb track reconstruction*
Barbara Storaci, CHEP1015, Okinawa, Japan, April 13-17 2015
- *Vertexing and tracking software at LHCb*
Espen Bowen, VERTEX2014: The 23rd International Workshop on Vertex Detectors, Macha Lake, The Czech Republic, September 15-19 2014
- *LHCb Silicon Detectors: Operational Experience and Run I \rightarrow Run II Transition*
Christian Elsasser, VERTEX2014: The 23rd International Workshop on Vertex Detectors, Macha Lake, The Czech Republic, September 15-19 2014
- *Performance of the LHCb Silicon Tracker during LHC Run I*
Christian Elsasser, Annual meeting of the Swiss Physical Society, Universit de Fribourg, Fribourg, Switzerland, July 2 2014
- *Simulation of the performance of the scintillation fibres for the Mu3e experiment*
Roman Gredig, SPS Annual Meeting 2014, Fribourg, Switzerland, July 2 2014
- *The LHCb Silicon Tracker*
Christian Elsasser, 13th Topical Seminar on Innovative Particle and Radiation Detectors, Siena, Italy, October 7-10 2013
- *The LHCb Silicon Tracker - Performance & Radiation Damage*
Christian Elsasser, 9th International Conference on Radiation Effects on Semiconductor Materials Detectors and Devices, Florence, Italie, October 9-12 2012
- *Performance of the LHCb Tracking Detectors*
Mark Tobin, Vertex 2012, Jeju, Korea, September 1-7 2012
- *Performance of the LHCb Tracking Detectors*
Mark Tobin, Vertex 2012, Jeju, Republic Of Korea, September 16-21 2012
- *Performance of the LHCb Silicon Tracker*
Mark Tobin, CHIPP Centre of Advanced Studies in Particle Physics, Workshop on Mid-Term Results Universitt Zurich, Zurich, July 28 2011

4.4 on other experiments

- *Physics Prize Awards Announcement*
Marcin Chrzaszcz, Twenty-ninth Annual Conference on Neural Information Processing Systems, Montreal, Canada, December 7-12 2015
- *Search for the decay $\mu^+ \rightarrow e^+ ee^+$*
Roman Gredig, NuFact15, Workshop on neutrino factories and future neutrino facilities, Rio de Janeiro, Brazil, August 10-15 2015
- *Recent BaBar results on CP violation in B-meson decays*
Marcin Chrzaszcz, XXIII International Workshop on Deep-Inelastic Scattering and Related Subjects (DIS 2015), Dallas, USA, April 27-May 1 2015
- *Search for the rare decay $\mu \rightarrow e^+ e^- e^+$*
Roman Gredig, 2nd CHIPP Workshop on Detector R&D, PSI, Villigen AG, September 13 2013
- *Measurement of Charged Triple Gauge Boson Couplings with DELPHI at LEP2*
Mark Tobin, Photon 2011, Spa, Belgium, May 22-27 2011

5 Publications and Talks on Science Policy and for the general public

- *CERN - Technische Herausforderung und wissenschaftliches Abenteuer*
Ulrich Straumann, Vortrag fuer die "Clurr" Gruppe, Zuerich, 8. Juli 2012
- *Matter and antimatter: very similar, but not exactly equal*
Ulrich Straumann, Vortrag fuer die Netcetera AG, Zuerich, June 15 2012
- *The Large Hadron Collider at CERN*
Ulrich Straumann, Denkfest 2011, Volkshaus Zürich, 9. September 2011

6 Articles in refereed journals

6.1 Articles with the LHCb collaboration

- **"Measurement of the forward Z boson production cross-section in pp collisions at $\sqrt{s} = 13$ TeV"**,
R. Aaij *et al.* [LHCb Collaboration], JHEP **09** (2016) 136, arXiv:1607.06495.
- **"Evidence for exotic hadron contributions to $\Lambda_b^0 \rightarrow J/\psi p \pi^-$ decays"**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Rev. Lett. **117** (2016) no.8, 082003
Addendum: [Phys. Rev. Lett. **117** (2016) no.10, 109902], arXiv:1606.06999.
- **"Measurement of the CP asymmetry in $B_s^0 - \bar{B}_s^0$ mixing"**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Rev. Lett. **117** (2016) no.6, 061803, arXiv:1605.09768.
- **"Measurement of forward W and Z boson production in association with jets in proton-proton collisions at $\sqrt{s} = 8$ TeV"**,
R. Aaij *et al.* [LHCb Collaboration],
JHEP **1605** (2016) 131, arXiv:1605.00951.
- **"Model-independent evidence for $J/\psi p$ contributions to $\Lambda_b^0 \rightarrow J/\psi p K^-$ decays"**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Rev. Lett. **117** (2016) no.8, 082002, arXiv:1604.05708.
- **"Measurement of the properties of the Ξ_b^{*0} baryon"**,
R. Aaij *et al.* [LHCb Collaboration],
JHEP **1605** (2016) 161, arXiv:1604.03896.
- **"A precise measurement of the B^0 meson oscillation frequency"**,
R. Aaij *et al.* [LHCb Collaboration],
Eur. Phys. J. C **76** (2016) no.7, 412, arXiv:1604.03475.
- **"Model-independent measurement of the CKM angle γ using $B^0 \rightarrow DK^{*0}$ decays with $D \rightarrow K_S^0 \pi^+ \pi^-$ and $K_S^0 K^+ K^-$ "**,
R. Aaij *et al.* [LHCb Collaboration],
JHEP **1606** (2016) 131 arXiv:1604.01525.
- **"Measurement of the mass and lifetime of the Ω_b^- baryon"**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Rev. D **93** (2016) no.9, 092007, arXiv:1604.01412.

- **“Measurement of CP observables in $B^\pm \rightarrow DK^\pm$ and $B^\pm \rightarrow D\pi^\pm$ with two- and four-body D decays”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Lett. B **760** (2016) 117, arXiv:1603.08993.
- **“Search for B_c^+ decays to the $p\bar{p}\pi^+$ final state”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Lett. B **759** (2016) 313, arXiv:1603.07037.
- **“Observation of $\Lambda_b^0 \rightarrow \psi(2S)pK^-$ and $\Lambda_b^0 \rightarrow J/\psi\pi^+\pi^-pK^-$ decays and a measurement of the Λ_b^0 baryon mass”**,
R. Aaij *et al.* [LHCb Collaboration],
JHEP **1605** (2016) 132, arXiv:1603.06961.
- **“Search for violations of Lorentz invariance and CPT symmetry in $B_{(s)}^0$ mixing”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Rev. Lett. **116** (2016) no.24, 241601, arXiv:1603.04804.
- **“Observation of the $\Lambda_b^0 \rightarrow \Lambda\phi$ decay”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Lett. B **759** (2016) 282, arXiv:1603.02870.
- **“Observation of $B_s^0 \rightarrow \bar{D}^0 K_S^0$ and evidence for $B_s^0 \rightarrow \bar{D}^{*0} K_S^0$ decays”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Rev. Lett. **116** (2016) no.16, 161802, arXiv:1603.02408.
- **“Observations of $\Lambda_b^0 \rightarrow \Lambda K^+\pi^-$ and $\Lambda_b^0 \rightarrow \Lambda K^+K^-$ decays and searches for other Λ_b^0 and Ξ_b^0 decays to $\Lambda h^+h'^-$ final states”**,
R. Aaij *et al.* [LHCb Collaboration],
JHEP **1605** (2016) 081, arXiv:1603.00413.
- **“Measurement of the $B_s^0 \rightarrow D_s^{(*)+}D_s^{(*)-}$ branching fractions”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Rev. D **93** (2016) no.9, 092008, arXiv:1602.07543.
- **“A new algorithm for identifying the flavour of B_s^0 mesons at LHCb”**,
R. Aaij *et al.* [LHCb Collaboration],
JINST **11** (2016) no.05, P05010, arXiv:1602.07252.
- **“First observation of $D^0-\bar{D}^0$ oscillations in $D^0 \rightarrow K^+\pi^-\pi^+\pi^-$ decays and measurement of the associated coherence parameters”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Rev. Lett. **116** (2016) no.24, 241801, arXiv:1602.07224.
- **“Constraints on the unitarity triangle angle γ from Dalitz plot analysis of $B^0 \rightarrow DK^+\pi^-$ decays”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Rev. D **93** (2016) no.11, 112018, arXiv:1602.03455.
- **“Measurement of the difference of time-integrated CP asymmetries in $D^0 \rightarrow K^-K^+$ and $D^0 \rightarrow \pi^-\pi^+$ decays”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Rev. Lett. **116** (2016) no.19, 191601 arXiv:1602.03160.
- **“Study of $\psi(2S)$ production and cold nuclear matter effects in pPb collisions at $\sqrt{s_{NN}} = 5$ TeV”**,
R. Aaij *et al.* [LHCb Collaboration],
JHEP **1603** (2016) 133, arXiv:1601.07878 [nucl-ex].

- **“Observation of the $B_s^0 \rightarrow J/\psi\phi\phi$ decay”**,
R. Aaij *et al.* [LHCb Collaboration],
JHEP **1603** (2016) 040,
[arXiv:1601.05284].
- **“Study of $D_{sJ}^{(*)+}$ mesons decaying to $D^+ K_S^0$ and $D^{*0} K^+$ final states”**,
R. Aaij *et al.* [LHCb Collaboration],
JHEP **1602** (2016) 133, arXiv:1601.01495.
- **“Angular analysis of the $B^0 \rightarrow K^{*0}\mu^+\mu^-$ decay using 3 fb^{-1} of integrated luminosity”**,
R. Aaij *et al.* [LHCb Collaboration],
JHEP **1602** (2016) 104, arXiv:1512.04442.
- **“First observation of the rare $B^+ \rightarrow D^+ K^+ \pi^-$ decay”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Rev. D **93** (2016) no.5, 051101
Erratum: [Phys. Rev. D **93** (2016) no.11, 119902], arXiv:1512.02494.
- **“Search for the lepton-flavour violating decay $D^0 \rightarrow e^\pm \mu^\mp$ ”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Lett. B **754** (2016) 167, arXiv:1512.00322.
- **“Measurement of forward W and Z boson production in pp collisions at $\sqrt{s} = 8 \text{ TeV}$ ”**,
R. Aaij *et al.* [LHCb Collaboration],
JHEP **1601** (2016) 155,
[arXiv:1511.08039].
- **“First observation of the decay $D^0 \rightarrow K^-\pi^+\mu^+\mu^-$ in the ρ^0 - ω region of the dimuon mass spectrum”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Lett. B **757** (2016) 558, arXiv:1510.08367.
- **“Production of associated Y and open charm hadrons in pp collisions at $\sqrt{s} = 7$ and 8 TeV via double parton scattering”**,
R. Aaij *et al.* [LHCb Collaboration],
JHEP **1607** (2016) 052, arXiv:1510.05949.
- **“Search for the rare decays $B^0 \rightarrow J/\psi\gamma$ and $B_s^0 \rightarrow J/\psi\gamma$ ”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Rev. D **92** (2015) no.11, 112002, arXiv:1510.04866.
- **“Evidence for the strangeness-changing weak decay $\Xi_b^- \rightarrow \Lambda_b^0 \pi^-$ ”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Rev. Lett. **115** (2015) no.24, 241801, arXiv:1510.03829.
- **“Model-independent confirmation of the $Z(4430)^-$ state”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Rev. D **92** (2015) no.11, 112009, arXiv:1510.01951.
- **“Measurements of prompt charm production cross-sections in pp collisions at $\sqrt{s} = 13 \text{ TeV}$ ”**,
R. Aaij *et al.* [LHCb Collaboration],
JHEP **1603** (2016) 159
Erratum: [JHEP **1609** (2016) 013], arXiv:1510.01707.
- **“Model-independent measurement of mixing parameters in $D^0 K_S^0$ decays”**,
R. Aaij *et al.* [LHCb Collaboration],
JHEP **1604** (2016) 033, arXiv:1510.01664.

- **“Measurement of the forward-backward asymmetry in $Z/\gamma^* \rightarrow \mu^+\mu^-$ decays and determination of the effective weak mixing angle”,**
R. Aaij *et al.* [LHCb Collaboration],
JHEP **1511** (2015) 190, arXiv:1509.07645.
- **“Studies of the resonance structure in $D^0 \rightarrow K_S^0 K^\pm \pi^\mp$ decays”,**
R. Aaij *et al.* [LHCb Collaboration],
Phys. Rev. D **93** (2016) no.5, 052018, arXiv:1509.06628.
- **“Forward production of Υ mesons in pp collisions at $\sqrt{s} = 7$ and 8TeV”,**
R. Aaij *et al.* [LHCb Collaboration],
JHEP **1511** (2015) 103, arXiv:1509.02372.
- **“Measurement of forward J/ψ production cross-sections in pp collisions at $\sqrt{s} = 13$ TeV”,**
R. Aaij *et al.* [LHCb Collaboration],
JHEP **1510** (2015) 172, arXiv:1509.00771.
- **“First measurement of the differential branching fraction and CP asymmetry of the $B^\pm \rightarrow \pi^\pm \mu^+ \mu^-$ decay”,**
R. Aaij *et al.* [LHCb Collaboration],
JHEP **1510** (2015) 034, arXiv:1509.00414.
- **“Measurement of CP violation parameters and polarisation fractions in $B_s^0 \rightarrow J/\psi \bar{K}^{*0}$ decays”,**
R. Aaij *et al.* [LHCb Collaboration],
JHEP **1511** (2015) 082, arXiv:1509.00400.
- **“Study of the production of Λ_b^0 and \bar{B}^0 hadrons in pp collisions and first measurement of the $\Lambda_b^0 \rightarrow J/\psi p K^-$ branching fraction”,**
R. Aaij *et al.* [LHCb Collaboration],
Chin. Phys. C **40** (2016) no.1, 011001, arXiv:1509.00292.
- **“Measurement of the time-integrated CP asymmetry in $D^0 \rightarrow K_S^0 K_S^0$ decays”,**
R. Aaij *et al.* [LHCb Collaboration],
JHEP **1510** (2015) 055, arXiv:1508.06087.
- **“Search for hidden-sector bosons in $B^0 \rightarrow K^{*0} \mu^+ \mu^-$ decays”,**
R. Aaij *et al.* [LHCb Collaboration],
Phys. Rev. Lett. **115** (2015) 16, 161802, arXiv:1508.04094.
- **“Measurement of the $B_s^0 \rightarrow \phi \phi$ branching fraction and search for the decay $B^0 \rightarrow \phi \phi$ ”,**
R. Aaij *et al.* [LHCb Collaboration],
JHEP **1510** (2015) 053, arXiv:1508.00788.
- **“ B flavour tagging using charm decays at the LHCb experiment”,**
R. Aaij *et al.* [LHCb Collaboration],
JINST **10** (2015) 10, P10005, arXiv:1507.07892.
- **“Measurement of the branching fraction ratio $\mathcal{B}(B_c^+ \rightarrow \psi(2S)\pi^+)/\mathcal{B}(B_c^+ \rightarrow J/\psi\pi^+)$ ”,**
R. Aaij *et al.* [LHCb Collaboration],
Phys. Rev. D **92** (2015) 7, 072007, arXiv:1507.03516.
- **“Observation of $J/\Psi p$ Resonances Consistent with Pentaquark States in $\Lambda_b^0 \rightarrow J/\Psi K^- p$ Decays”,**
R. Aaij *et al.* [LHCb Collaboration],
Phys. Rev. Lett. **115** (2015) 072001, arXiv:1507.03414.

- **“Search for long-lived heavy charged particles using a ring imaging Cherenkov technique at LHCb”**,
R. Aaij *et al.* [LHCb Collaboration],
Eur. Phys. J. C **75** (2015) no.12, 595, arXiv:1506.09173.
- **“Angular analysis and differential branching fraction of the decay $B_s^0 \rightarrow \phi\mu^+\mu^-$ ”**,
R. Aaij *et al.* [LHCb Collaboration],
JHEP **1509** (2015) 179, arXiv:1506.08777.
- **“First observation of the decay $B_s^0 \rightarrow K_S^0 K^*(892)^0$ ”**,
R. Aaij *et al.* [LHCb Collaboration],
JHEP **1601** (2016) 012, arXiv:1506.08634.
- **“Measurement of the ratio of branching fractions $\mathcal{B}(\bar{B}^0 \rightarrow D^{*+}\tau^-\bar{\nu}_\tau)/\mathcal{B}(\bar{B}^0 \rightarrow D^{*+}\mu^-\bar{\nu}_\mu)$ ”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Rev. Lett. **115** (2015) 11, 111803 [Phys. Rev. Lett. **115** (2015) 15, 159901], arXiv:1506.08614.
- **“First observation of top quark production in the forward region”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Rev. Lett. **115** (2015) 11, 112001, arXiv:1506.00903.
- **“Measurement of the ratio of branching fractions $\mathcal{B}(\bar{B}^0 \rightarrow D^{*+}\tau^-\bar{\nu}_\tau)/\mathcal{B}(\bar{B}^0 \rightarrow D^{*+}\mu^-\bar{\nu}_\mu)$ ”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Rev. Lett. **115** (2015) no.11, 111803, Addendum: [Phys. Rev. Lett. **115** (2015) no.15, 159901], arXiv:1506.08614
- **“First observation of top quark production in the forward region”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Rev. Lett. **115** (2015) no.11, , arXiv:1506.00903.
- **“Measurement of the exclusive Υ production cross-section in pp collisions at $\sqrt{s} = 7$ TeV and 8 TeV”**,
R. Aaij *et al.* [LHCb Collaboration],
JHEP **1509** (2015) 084, arXiv:1505.08139.
- **“Measurement of the forward Z boson production cross-section in pp collisions at $\sqrt{s} = 7$ TeV”**,
R. Aaij *et al.* [LHCb Collaboration],
JHEP **1508** (2015) 039, arXiv:1505.07024.
- **“Study of $B^- \rightarrow DK^-\pi^+\pi^-$ and $B^- \rightarrow D\pi^-\pi^+\pi^-$ decays and determination of the CKM angle γ ”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Lett. B **747** (2015) 484, arXiv:1503.07112.
- **“Measurement of CP violation in $B^0 \rightarrow J/\psi K_S^0$ decays”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Rev. Lett. **115** (2015) 3, 031601, arXiv:1503.07089.
- **“Measurement of the time-dependent CP asymmetries in $B_s^0 \rightarrow J/\psi K_S^0$ ”**,
R. Aaij *et al.* [LHCb Collaboration],
JHEP **1506** (2015) 131, arXiv:1503.07055.
- **“Measurement of CP asymmetries and polarisation fractions in $B_s^0 \rightarrow K^{*0}\bar{K}^{*0}$ decays”**,
R. Aaij *et al.* [LHCb Collaboration],
JHEP **1507** (2015) 166, arXiv:1503.05362. R. Aaij *et al.* [LHCb Collaboration],

- **“First observation and amplitude analysis of the $B^- \rightarrow D^+ K^- \pi^-$ decay”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Rev. D **91** (2015) 9, 092002, arXiv:1503.02995.
- **“Measurement of forward $Z \rightarrow e^+e^-$ production at $\sqrt{s} = 8$ TeV”**,
R. Aaij *et al.* [LHCb Collaboration],
JHEP **1505** (2015) 109, arXiv:1503.00963.
- **“Precise measurements of the properties of the $B_1(5721)^{0,+}$ and $B_2^*(5747)^{0,+}$ states and observation of $B^{+,0}\pi^{-,+}$ mass structures”**,
R. Aaij *et al.* [LHCb Collaboration],
JHEP **1504** (2015) 024, arXiv:1502.02638.
- **“Measurement of indirect CP asymmetries in $D^0 \rightarrow K^- K^+$ and $D^0 \rightarrow \pi^- \pi^+$ decays using semileptonic B decays”**,
R. Aaij *et al.* [LHCb Collaboration],
JHEP **1504** (2015) 043, arXiv:1501.06777.
- **“Angular analysis of the $B^0 \rightarrow K^{*0} e^+ e^-$ decay in the low- q^2 region”**,
R. Aaij *et al.* [LHCb Collaboration],
JHEP **1504** (2015) 064, arXiv:1501.03038.
- **“Determination of the branching fractions of $B_S^0 \rightarrow D_S K$ and $B^0 \rightarrow D_S K^+$ ”**, JHEP **1505** (2015) 019, arXiv:1412.7654.
- **“Study of the rare B_s^0 and B^0 decays into the $\pi^+ \pi^- \mu^+ \mu^-$ final state”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Lett. B **743** (2015) 46, arXiv:1412.6433.
- **“Search for long-lived particles decaying to jet pairs”**,
R. Aaij *et al.* [LHCb Collaboration],
Eur. Phys. J. C **75** (2015) 4, 152, arXiv:1412.3021.
- **“Measurement of the inelastic pp cross-section at a centre-of-mass energy of $\sqrt{s} = 7$ TeV”**,
R. Aaij *et al.* [LHCb Collaboration],
JHEP **1502** (2015) 129, arXiv:1412.2500.
- **“Measurement of the lifetime of the B_c^+ meson using the $B_c^+ \rightarrow J/\psi \pi^+$ decay mode”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Lett. B **742** (2015) 29, arXiv:1411.6899.
- **“Observation of the rare $B_s^0 \rightarrow \mu^+ \mu^-$ decay from the combined analysis of CMS and LHCb data”**,
V. Khachatryan *et al.* [CMS and LHCb Collaboration],
Nature **522** (2015) 68, arXiv:1411.4413.
- **“Measurement of B_c^+ production in proton-proton collisions at $\sqrt{s} = 8$ TeV”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Rev. Lett. **114** (2015) 132001, arXiv:1411.2943.
- **“LHCb Detector Performance”**,
R. Aaij *et al.* [LHCb Collaboration],
Int. J. Mod. Phys. A **30** (2015) 1530022, arXiv:1412.6352.
- **“Observation of two new Ξ_b^- baryon resonances”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Rev. Lett. **114** (2015) 6, 062004, arXiv:1411.4849.

- **“Precision measurement of CP violation in $B_s^0 \rightarrow J/\psi K^+ K^-$ decays”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Rev. Lett. **114** (2015) 4, 041801, arXiv:1411.3104.
- **“Measurement of the CP -violating phase β in $B^0 \rightarrow J/\psi \pi^+ \pi^-$ decays and limits on penguin effects”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Lett. B **742** (2015) 38, arXiv:1411.1634.
- **“Measurement of the Z + b -jet cross-section in pp collisions at $\sqrt{s} = 7$ TeV in the forward region”**,
R. Aaij *et al.* [LHCb Collaboration],
JHEP **1501** (2015) 064, arXiv:1411.1264.
- **“Study of $\eta - \eta'$ mixing from measurement of $B_{(s)}^0 \rightarrow J/\psi \eta^{(\prime)}$ decay rates”**,
R. Aaij *et al.* [LHCb Collaboration],
JHEP **1501** (2015) 024, arXiv:1411.0943.
- **“Search for CP violation in $D^0 \rightarrow \pi^- \pi^+ \pi^0$ decays with the energy test”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Lett. B **740** (2015) 158, arXiv:1410.4170.
- **“Precision luminosity measurements at LHCb”**,
R. Aaij *et al.* [LHCb Collaboration],
JINST **9** (2014) 12, P12005, arXiv:1410.0149.
- **“Measurement of the semileptonic CP asymmetry in $B^0 - \bar{B}^0$ mixing”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Rev. Lett. **114** (2015) 041601, arXiv:1409.8586.
- **“Precision Measurement of the Mass and Lifetime of the Ξ_b^- Baryon”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Rev. Lett. **113** (2014) 24, 242002, arXiv:1409.8568.
- **“Search for the lepton flavour violating decay $\tau \rightarrow \mu^- \mu^+ \mu^-$ ”**,
R. Aaij *et al.* [LHCb Collaboration],
JHEP **1502** (2015) 121, arXiv:1409.8548.
- **“Measurement of the CP -violating phase ϕ_s in $\bar{B}_s^0 \rightarrow D_s^+ D_s^-$ decays”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Rev. Lett. **113** (2014) 21, 211801, arXiv:1409.4619.
- **“Measurement of the $\chi_b(3P)$ mass and of the relative rate of $\chi_{b1}(1P)$ and $\chi_{b2}(1P)$ production”**,
R. Aaij *et al.* [LHCb Collaboration],
JHEP **1410** (2014) 88, arXiv:1409.1408.
- **“Measurements of CP violation in the three-body phase space of charmless B^\pm decays”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Rev. D **90** (2014) 11, 112004, arXiv:1408.5373.
- **“Determination of γ and $-2\beta_s$ from charmless two-body decays of beauty mesons”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Lett. B **741** (2015) 1, arXiv:1408.4368.
- **“Measurement of the forward W boson cross-section in pp collisions at $\sqrt{s} = 7$ TeV”**,
R. Aaij *et al.* [LHCb Collaboration],
JHEP **1412** (2014) 079, arXiv:1408.4354.

- **“Measurement of the CKM angle γ using $B^\pm \rightarrow DK^\pm$ with $D \rightarrow K_S^0\pi^+\pi^-, K_S^0K^+K^-$ decays”**,
R. Aaij *et al.* [LHCb Collaboration],
JHEP **1410** (2014) 97, arXiv:1408.2748.
- **“Search for CP violation using T -odd correlations in $D^0 \rightarrow K^+K^-\pi^+\pi^-$ decays”**,
R. Aaij *et al.* [LHCb Collaboration],
JHEP **1410** (2014) 005, arXiv:1408.1299.
- **“Measurement of the track reconstruction efficiency at LHCb”**,
R. Aaij *et al.* [LHCb Collaboration],
JINST **10** (2015) 02, P02007, arXiv:1408.1251.
- **“First observations of the rare decays $B^+ \rightarrow K^+\pi^+\pi^-\mu^+\mu^-$ and $B^+ \rightarrow \phi K^+\mu^+\mu^-$ ”**
R. Aaij *et al.* [LHCb Collaboration],
JHEP **1410** (2014) 064, arXiv:1408.1137.
- **“Measurement of CP asymmetries in the decays $B^0 \rightarrow K^{*0}\mu^+\mu^-$ and $B^+ \rightarrow K^+\mu^+\mu^-$ ”**,
R. Aaij *et al.* [LHCb Collaboration],
JHEP **1409** (2014) 177, arXiv:1408.0978.
- **“First observation of a baryonic B_c^+ decay”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Rev. Lett. **113** (2014) 15, 152003, arXiv:1408.0971.
- **“Measurement of the $\bar{B}^0 - B^0$ and $\bar{B}_s^0 - B_s^0$ production asymmetries in pp collisions at $\sqrt{s} = 7$ TeV”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Lett. B **739** (2014) 218, arXiv:1408.0275.
- **“Measurement of CP violation parameters in $B^0 \rightarrow DK^{*0}$ decays”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Rev. D **90** (2014) 11, 112002, arXiv:1407.8136.
- **“Study of χ_b meson production in pp collisions at $\sqrt{s} = 7$ and 8 TeV and observation of the decay $\chi_b(3P) \rightarrow \Upsilon(3S)\gamma$ ”**
R. Aaij *et al.* [LHCb Collaboration],
Eur. Phys. J. C **74** (2014) 10, 3092, arXiv:1407.7734.
- **“Dalitz plot analysis of $B_s^0 \rightarrow \bar{D}^0 K^- \pi^+$ decays”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Rev. D **90** (2014) 7, 072003, arXiv:1407.7712.
- **“Observation of $B_s^0 \rightarrow K^{*\pm} K^\mp$ and evidence for $B_s^0 \rightarrow K^{*-} \pi^+$ decays”**,
R. Aaij *et al.* [LHCb Collaboration],
New J. Phys. **16** (2014) 12, 123001, arXiv:1407.7704.
- **“Observation of overlapping spin-1 and spin-3 $\bar{D}^0 K^-$ resonances at mass $2.86\text{GeV}/c^2$ ”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Rev. Lett. **113** (2014) 162001, arXiv:1407.7574.
- **“Measurement of CP violation and constraints on the CKM angle γ in $B^\pm \rightarrow DK^\pm$ with $D \rightarrow K_S^0\pi^+\pi^-$ decays”**
R. Aaij *et al.* [LHCb Collaboration],
Nucl. Phys. B **888** (2014) 169, arXiv:1407.6211.
- **“Measurement of CP asymmetry in $B_s^0 \rightarrow D_s^\mp K^\pm$ decays”**
R. Aaij *et al.* [LHCb Collaboration],
JHEP **1411** (2014) 060, arXiv:1407.6127.

- **“Evidence for CP violation in $B^+ \rightarrow p\bar{p}K^+$ decays”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Rev. Lett. **113** (2014) 14, 141801 arXiv:1407.5907.
- **“Measurement of the \bar{B}_s^0 meson lifetime in $D_s^+\pi^-$ decays”**
R. Aaij *et al.* [LHCb Collaboration],
Phys. Rev. Lett. **113** (2014) 17, 172001, arXiv:1407.5873.
- **“Measurement of CP violation in $B_s^0 \rightarrow \phi\phi$ decays”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Rev. D **90** (2014) 5, 052011, arXiv:1407.2222.
- **“Measurement of the ratio of B_c^+ branching fractions to $J/\psi\pi^+$ and $J/\psi\mu^+\nu_\mu$ ”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Rev. D **90** (2014) 032009, arXiv:1407.2126.
- **“Effective lifetime measurements in the $B_s^0 \rightarrow K^+K^-$, $B^0 \rightarrow K^+\pi^-$ and $B_s^0 \rightarrow \pi^+K^-$ decays”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Lett. B **736** (2014) 446, arXiv:1406.7204.
- **“First measurement of the charge asymmetry in beauty-quark pair production at a hadron collider”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Rev. Lett. **113** (2014) 082003, arXiv:1406.4789.
- **“Observation of Z production in proton-lead collisions at LHCb”**,
R. Aaij *et al.* [LHCb Collaboration],
JHEP **1407** (2014) 094, arXiv:1406.2885.
- **“Observation of the $\Lambda_b^0 \rightarrow J/\psi p\pi^-$ decay”**,
R. Aaij *et al.* [LHCb Collaboration],
JHEP **1407** (2014) 103, arXiv:1406.0755.
- **“Precision measurement of the mass and lifetime of the Ξ_b^0 baryon”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Rev. Lett. **113** (2014) 032001, arXiv:1405.7223.
- **“Study of the kinematic dependences of Λ_b^0 production in pp collisions and a measurement of the $\Lambda_b^0 \rightarrow \Lambda_c^+ \pi^-$ branching fraction”**,
R. Aaij *et al.* [LHCb Collaboration],
JHEP **1408** (2014) 143, arXiv:1405.6842.
- **“Study of Υ production and cold nuclear matter effects in $p\text{Pb}$ collisions at $\sqrt{s_{NN}} = 5$ TeV”**,
R. Aaij *et al.* [LHCb Collaboration],
JHEP **1407** (2014) 094, arXiv:1405.5152.
- **“Measurement of the CP-violating phase ϕ_s in $\bar{B}_s^0 \rightarrow J/\psi\pi^+\pi^-$ decays”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Lett. B **736** (2014) 186, arXiv:1405.4140.
- **“Observation of the $B_s^0 \rightarrow J/\psi K_s^0 K^\pm \pi^\mp$ decay”**,
R. Aaij *et al.* [LHCb Collaboration],
JHEP **1407** (2014) 140, arXiv:1405.3219.
- **“Measurement of CP asymmetry in $D^0 \rightarrow K^-K^+$ and $D^0 \rightarrow \pi^-\pi^+$ decays”**,
R. Aaij *et al.* [LHCb Collaboration],
JHEP **1407** (2014) 041, arXiv:1405.2797.

- **“Measurement of the Ξ_b^- and Ω_b^- baryon lifetimes”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Lett. B **736** (2014) 154, arXiv:1405.1543.
- **“Measurement of the resonant and CP components in $\bar{B}^0 \rightarrow J/\psi\pi^+\pi^-$ decays”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Rev. D **90** (2014) 012003, arXiv:1404.5673.
- **“Observation of the resonant character of the $Z(4430)^-$ state”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Rev. Lett. **112** (2014) 222002, arXiv:1404.1903.
- **“Evidence for the decay $B_c^+ \rightarrow J/\psi 3\pi^+ 2\pi^-$ ”**,
R. Aaij *et al.* [LHCb Collaboration],
JHEP **1405** (2014) 148, arXiv:1404.0287.
- **“Evidence for the decay $X(3872) \rightarrow \psi(2S)\gamma$ ”**,
R. Aaij *et al.* [LHCb Collaboration],
Nucl. Phys. B **886** (2014) 665, arXiv:1404.0275.
- **“Angular analysis of charged and neutral $B \rightarrow K\mu^+\mu^-$ decays”**,
R. Aaij *et al.* [LHCb Collaboration],
JHEP **1405** (2014) 082, arXiv:1403.8045.
- **“Differential branching fractions and isospin asymmetries of $B \rightarrow K^{(*)}\mu^+\mu^-$ decays”**,
R. Aaij *et al.* [LHCb Collaboration],
JHEP **1406** (2014) 133, arXiv:1403.8044.
- **“Study of beauty hadron decays into pairs of charm hadrons”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Rev. Lett. **112** (2014) 202001, arXiv:1403.3606.
- **“Measurement of polarization amplitudes and CP asymmetries in $B^0 \rightarrow \phi K^*(892)^0$ ”**,
R. Aaij *et al.* [LHCb Collaboration],
JHEP **1405** (2014) 069, arXiv:1403.2888.
- **“Measurement of $\psi(2S)$ polarisation in pp collisions at $\sqrt{s} = 7$ TeV”**,
R. Aaij *et al.* [LHCb Collaboration],
Eur. Phys. J. C **74** (2014) 2872, arXiv:1403.1339.
- **“Observation of photon polarization in the $b \rightarrow s\gamma$ transition”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Rev. Lett. **112** (2014) 161801, arXiv:1402.6852.
- **“Measurement of resonant and CP components in $\bar{B}_s^0 \rightarrow J/\psi\pi^+\pi^-$ decays”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Rev. D **89** (2014) 092006, arXiv:1402.6248.
- **“Precision measurement of the ratio of the Λ_b^0 to \bar{B}^0 lifetimes”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Lett. B **734** (2014) 122, arXiv:1402.6242.
- **“Measurement of charged particle multiplicities and densities in pp collisions at $\sqrt{s}=7$ TeV in the forward region”**,
R. Aaij *et al.* [LHCb Collaboration],
Eur. Phys. J. C **74** (2014) 2888, arXiv:1402.4430.

- **“A study of CP violation in $B^\pm \rightarrow DK^\pm$ and $B^\pm \rightarrow D\pi^\pm$ decays with $D \rightarrow K_S^0 K^\pm \pi^\mp$ final states”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Lett. B **733** (2014) 36, arXiv:1402.2982.
- **“Measurements of the B^+ , B^0 , B_s^0 meson and Λ_b^0 baryon lifetimes”**,
R. Aaij *et al.* [LHCb Collaboration],
JHEP **1404** (2014) 114, arXiv:1402.2554.
- **“Measurement of Υ production in pp collisions at $\sqrt{s} = 2.76$ TeV”**,
R. Aaij *et al.* [LHCb Collaboration],
Eur. Phys. J. C **74** (2014) 2835, arXiv:1402.2539.
- **“Searches for Λ_b^0 and Ξ_b^0 decays to $K_S^0 p \pi^-$ and $K_S^0 p K^-$ final states with first observation of the $\Lambda_b^0 \rightarrow K_S^0 p \pi^-$ decay”**,
R. Aaij *et al.* [LHCb Collaboration],
JHEP **1404** (2014) 087, arXiv:1402.0770.
- **“Measurement of the B_c^+ meson lifetime using $B_c^+ \rightarrow J/\psi \mu^+ \nu_\mu X$ decays”**,
R. Aaij *et al.* [LHCb Collaboration],
Eur. Phys. J. C **74** (2014) 2839, arXiv:1401.6932.
- **“Observation of associated production of a Z boson with a D meson in the forward region”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Rev. Lett. **112** (2014) 131802, arXiv:1401.3245.
- **“Observation of $B_s^0 \rightarrow J/\psi f_1(1285)$ decays and measurement of the $f_1(1285)$ mixing angle”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Rev. Lett. **112** (2014) 091802, arXiv:1310.2145.
- **“Search for Majorana neutrinos in $B^- \rightarrow \pi^+ \mu^- \mu^-$ decays”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Rev. Lett. **112** (2014) 131802, arXiv:1401.5361.
- **“Updated measurements of exclusive J/ψ and $\psi(2S)$ production cross-sections in pp collisions at $\sqrt{s} = 7$ TeV”**
R. Aaij *et al.* [LHCb Collaboration],
J. Phys. G **41** (2014) 055002, arXiv:1401.3288.
- **“Studies of beauty baryon decays to $D^0 p h^-$ and $\Lambda_c^+ h^-$ final states”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Rev. D **89** (2014) 032001, arXiv:1311.4823.
- **“Measurement of the $\bar{B}_s^0 \rightarrow D_s^- D_s^+$ and $\bar{B}_s^0 \rightarrow D^- D_s^+$ effective lifetimes”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Rev. Lett. **112** (2014) 111802, arXiv:1312.1217.
- **“Study of forward Z + jet production in pp collisions at $\sqrt{s} = 7$ TeV”**,
R. Aaij *et al.* [LHCb Collaboration],
HEP **1401** (2014) 033, arXiv:1310.8197.
- **“Search for CP violation in the decay $D^+ \rightarrow \pi^- \pi^+ \pi^+ s$ ”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Lett. B **728** (2014) 585, arXiv:1310.7953.

- **“Measurements of indirect CP asymmetries in $D^0 \rightarrow K^-K^+$ and $D^0 \rightarrow \pi^-\pi^+$ decays”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Rev. Lett. **112** (2014) 011801, arXiv:1310.7201.
- **“Search for the doubly charmed baryon Ξ_{cc}^+ ”**,
R. Aaij *et al.* [LHCb Collaboration],
JHEP **1312** (2013) 090, arXiv:1310.2538.
- **“Measurement of CP violation in the phase space of $B^\pm \rightarrow K^+K^-\pi^\pm$ and $B^\pm \rightarrow \pi^+\pi^-\pi^\pm$ decays”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Rev. Lett. **112** (2014) 011801, arXiv:1310.4740.
- **“Search for the decay $D^0 \rightarrow \pi^+\pi^-\mu^+\mu^-$ ”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Lett. B **728** (2014) 234, arXiv:1310.2535.
- **“Measurement of $D^0-\bar{D}^0$ mixing parameters and search for CP violation using $D^0 \rightarrow K^+\pi^-$ decays”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Rev. Lett. **111** (2013) 251801, arXiv:1309.6534.
- **“Measurement of the charge asymmetry in $B^\pm \rightarrow \phi K^\pm$ and search for $B^\pm \rightarrow \phi\pi^\pm$ decays”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Lett. B **728** (2014) 85, arXiv:1309.3742.
- **“First observation of $\bar{B}^0 \rightarrow J/\Psi K^+K^-$ and search for $\bar{B}^0 \rightarrow J/\Psi\phi$ decays”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Rev. D **88** (2013) 072005, arXiv:1308.5916.
- **“Observation of the decay $B_s^0 D^0$ ”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Rev. D **88** (2013) 072005, arXiv:1308.4583.
- **“Observation of the decay $B_c^+ \rightarrow B_s^0\pi^+$ ”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Rev. Lett. **111** (2013) 181801, arXiv:1308.4544.
- **“Model-independent search for CP violation in $D^0 \rightarrow K^-K^+\pi^-\pi^+$ and $D^0 \rightarrow \pi^-\pi^+\pi^+\pi^-$ decays”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Lett. B **726** (2013) 623-633, arXiv:1308.3189.
- **“Measurement of form-factor independent observables in the decay $B^0 \rightarrow K^{*0}\mu^+\mu^-$ ”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Rev. Lett. **111** (2013) 191801, arXiv:1308.1707.
- **“First measurement of time-dependent CP violation in $B_s^0 K^+K^-$ decays”**,
R. Aaij *et al.* [LHCb Collaboration],
JHEP **1310** (2013) 183, arXiv:1308.1428.
- **“Measurement of the CP asymmetry in $B^+ \rightarrow K^+\mu^+\mu^-$ decays”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Rev. Lett. **111** (2013) 151801, arXiv:1308.1340.
- **“Observation of $B_s^0 - B_0$ mixing and measurement of mixing frequencies using semileptonic B decays”**,
R. Aaij *et al.* [LHCb Collaboration],
Eur. Phys. J. C **73** (2013) 2655, arXiv:1308.1302.

- **“Branching fraction and CP asymmetry of the decays $B^+ \rightarrow K_s^0 \pi^+$ and $B^+ \rightarrow K_s^0 K^+$ ”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Lett. B **726** (2013) 646-655, arXiv:1308.1277.
- **“Measurement of the flavour-specific CP -violating asymmetry a_{sl} in B_s^0 decays”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Lett. B **728** (2014) 607, arXiv:1308.1048.
- **“First evidence for the two-body charmless baryonic decay $B^0 \rightarrow p \bar{p}$ ”**,
R. Aaij *et al.* [LHCb Collaboration],
J. High Energy Phys. **10** (2013) 005, arXiv:1308.0961.
- **“Study of $B_{(s)}^0 \rightarrow K_s^0 h^+ h'^-$ decays with first observation of $B_s^0 \rightarrow K_s^0 K^\pm \pi^\mp$ and $B_s^0 \rightarrow K_s^0 \pi^+ \pi^-$ ”**,
R. Aaij *et al.* [LHCb Collaboration],
J. High Energy Phys. **10** (2013) 143, arXiv:1307.7648.
- **“Observation of a resonance in $B^+ \rightarrow K^+ \mu^+ \mu^-$ decays at low recoil”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Rev. Lett. **111** (2013) 112003, arXiv:1307.7595.
- **“Measurement of J/Ψ polarization in pp collisions at $\sqrt{7} = 7$ TeV”**,
R. Aaij *et al.* [LHCb Collaboration],
Eur. Phys. J. C **73** (2013) 2631, arXiv:1307.6379.
- **“Studies of the decays $B^+ \rightarrow p \bar{p} h^+$ and observation of $B^+ \rightarrow \bar{\Lambda}(1520) p$ ”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Rev. D **88** (2013) 052015, arXiv:1307.6379.
- **“Measurement of the $B_s^0 \rightarrow \mu^+ \mu^-$ branching fraction and search for $B^0 \rightarrow \mu^+ \mu^-$ decays at the LHCb experiment”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Rev. Lett. **111** (2013) 101805, arXiv:1307.5024.
- **“Search for the lepton-flavor violating decays $B_s^0 \rightarrow e^\pm \mu^\mp$ and $B^0 \rightarrow e^\pm \mu^\mp$ ”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Rev. Lett. **111** (2013) 141801, arXiv:1307.4889.
- **“Study of D_J meson decays to $D^+ \pi^-$, $D^0 \pi^+$ and $D^{*+} \pi^-$ final states in pp collisions”**,
R. Aaij *et al.* [LHCb Collaboration],
J. High Energy Phys. **09** (2013) 145, arXiv:1307.4556.
- **“Measurement of the relative rate of prompt χ_{c0} , χ_{c1} and χ_{c2} production at $\sqrt{s} = 7$ TeV”**,
R. Aaij *et al.* [LHCb Collaboration],
J. High Energy Phys. **10** (2013) 115, arXiv:1307.4285.
- **“Measurement of the polarization amplitudes in $B^0 \rightarrow J/\Psi K^*(892)^0$ decays”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Rev. D **88** (2013) 052002, arXiv:1307.2782.
- **“Precision measurement of the λ_b^0 baryon lifetime”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Rev. Lett. **111** (2013) 102003, arXiv:1307.2476.
- **“Measurement of B meson production cross-sections in proton-proton collisions at $\sqrt{s} = 7$ TeV”**,
R. Aaij *et al.* [LHCb Collaboration],
J. High Energy Phys. **08** (2013) 117, arXiv:1306.3663.

- **“First observation of the decay $B_c^+ \rightarrow J/\Psi K^+$ ”**,
R. Aaij *et al.* [LHCb Collaboration],
J. High Energy Phys. **09** (2013) 075, arXiv:1306.6723.
- **“Observation of $B_c^+ \rightarrow J/\Psi D_s^+$ and $B_c^+ \rightarrow J/\Psi D_s^{*+}$ decays”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Rev. D **87** (2013) 112012, arXiv:1304.4530.
- **“Searches for $B_{(s)}^0 \rightarrow J/\Psi p\bar{p}$ and $B^+ \rightarrow J/\Psi p\bar{p}\pi^+$ decays”**,
R. Aaij *et al.* [LHCb Collaboration],
J. High Energy Phys. **09** (2013) 006, arXiv:1306.4489.
- **“Measurement of the differential branching fraction of the decay $\Lambda_b^0 \rightarrow \Lambda\mu^+\mu^-$ ”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Lett. B **725** (2013) 2535, arXiv:1306.2577.
- **“First observation of the decay $B_s^0 \rightarrow \phi\bar{K}^{*0}$ ”**,
R. Aaij *et al.* [LHCb Collaboration],
JHEP **1311** (2013) **092** arXiv:1306.2239.
- **“Measurement of CP violation in the phase space of $B^\pm \rightarrow K^\pm\pi^+\pi^-$ and $B^\pm \rightarrow K^\pm K^+K^-$ ”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Rev. Lett. **111** (2013) 101801, arXiv:1306.1246.
- **“Observation of $B_s^0 \rightarrow \chi_{c1}\phi$ decay and study of $B^0 \rightarrow \chi_{c1,2}K^{*0}$ decays”**,
R. Aaij *et al.* [LHCb Collaboration],
Nucl. Phys. B **874** (2013) 663-678, arXiv:1305.6511.
- **“Search for the rare decay $D^0 \rightarrow \mu^+\mu^-$ ”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Lett. B **725** (2013) 15-24, arXiv:1305.5059.
- **“Study of $B^0 \rightarrow D^*\pi^+\pi^-\pi^+$ and $B^0 \rightarrow D^*K^+\pi^-\pi^+$ decays”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Rev. D **87** (2013) 092001, arXiv:1303.6861.
- **“Measurement of the CKM angle γ from a combination of $B^\pm \rightarrow Dh^\pm$ analyses”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Lett. B **726** (2013) 151-163, arXiv:1305.2050.
- **“Differential branching fraction and angular analysis of the decay $B_s^0 \rightarrow \phi\mu^+\mu^-$ ”**,
R. Aaij *et al.* [LHCb Collaboration],
J. High Energy Phys. **07** (2013) 084, arXiv:1305.2168.
- **“Production of J/Ψ and Υ mesons in pp collisions at $\sqrt{s} = 8$ TeV”**,
R. Aaij *et al.* [LHCb Collaboration],
J. High Energy Phys. **06** (2013) 064, arXiv:1304.6977.
- **“Measurement of the $B^0 \rightarrow K^{*0}e^+e^-$ branching fraction at low dilepton mass”**,
R. Aaij *et al.* [LHCb Collaboration],
J. High Energy Phys. **05** (2013) 159, arXiv:1304.3035.
- **“Precision measurement of D meson mass differences”**,
R. Aaij *et al.* [LHCb Collaboration],
J. High Energy Phys. **06** (2013) 065, arXiv:1304.6865.
- **“First observation of CP violation in the decays of B_s^0 mesons”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Rev. Lett. **110** (2013) 221601, arXiv:1304.6173.

- **“Measurements of the branching fractions of $B^+ \rightarrow p\bar{p}K^+$ decays”**,
R. Aaij *et al.* [LHCb Collaboration],
Eur. Phys. J. C **73** (2013) 2462, arXiv:1303.7133.
- **“Search for $D_{(s)}^+ \rightarrow \pi^+\mu^+\mu^-$ and $D_{(s)}^+ \rightarrow \pi^-\mu^+\mu^+$ decays”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Lett. B **724** (2013) 203-212, arXiv:1304.6365.
- **“Measurement of the branching fractions of the decays $B_s^0 \rightarrow \bar{D}^0 K^-\pi^+$ and $B^0 \rightarrow \bar{D}^0 K^+\pi^-$ ”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Rev. D **87** (2013) 112009, arXiv:1304.6317.
- **“Precision measurement of the $B_s^0 - \bar{B}_s^0$ oscillation frequency with the decay $B_s^0 \rightarrow D_s^-\pi^+$ ”**,
R. Aaij *et al.* [LHCb Collaboration],
New J. Phys. **15** (2013) 053021, arXiv:1304.4741.
- **“Searches for violation of lepton flavour and baryon number in tau lepton decays at LHCb”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Lett. B **724** (2013) 36-45, arXiv:1304.4518.
- **“Measurement of the effective $B_s^0 \rightarrow J/\Psi K_s^0$ lifetime”**,
R. Aaij *et al.* [LHCb Collaboration],
Nucl. Phys. B **873** (2013) 275-292, arXiv:1304.4500.
- **“Differential branching fraction and angular analysis of the decay $B^0 \rightarrow K^{*0}\mu^+\mu^-$ ”**,
R. Aaij *et al.* [LHCb Collaboration],
J. High Energy Phys. **08** (2013) 131, arXiv:1304.6325.
- **“Limits on neutral Higgs boson production in the forward region in pp collisions at $\sqrt{s} = 7$ TeV”**,
R. Aaij *et al.* [LHCb Collaboration],
J. High Energy Phys. **05** (2013) 132, arXiv:1304.2591.
- **“Measurement of CP violation and the B_s^0 meson decay width difference with $B_s^0 \rightarrow J/\Psi K^+K^-$ and $B_s^0 \rightarrow J/\Psi\pi^+\pi^-$ decays”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Rev. D **87** (2013) 112010, arXiv:1304.2600.
- **“First measurement of the CP-violating phase in $B_s^0 \rightarrow \phi\phi$ decays”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Rev. Lett. **110** (2013) 241802, arXiv:1303.7125.
- **“Search for CP violation in $D^+ \rightarrow \phi\pi^+$ and $D_s^+ \rightarrow K_s^0\pi^+$ decays”**,
R. Aaij *et al.* [LHCb Collaboration],
J. High Energy Phys. **06** (2013) 112, arXiv:1303.4906.
- **“Observation of the suppressed ADS modes $B^\pm \rightarrow [\pi^\pm K^\mp\pi^+\pi^-]_D K^\pm$ and $B^\pm \rightarrow [\pi^\pm K^\mp\pi^+\pi^-]_D \pi^\pm$ ”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Lett. B **723** (2013) 44-53, arXiv:1303.4646.
- **“Search for rare $B_{(s)}^0 \rightarrow \mu^+\mu^-\mu^+\mu^-$ decays”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Rev. Lett. **110** (2013) 1528276, arXiv:1303.1092.

- **“First observations of $\bar{B}_s^0 \rightarrow D^+D^-$, $D_s^+D^-$ and $D^0\bar{D}^0$ decays”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Rev. D **87** (2013) 092007, arXiv:1302.5854.
- **“Search for the decay $B_s^0 \rightarrow D^{*\mp}\pi^\pm$ ”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Rev. D **87** (2013) 071101, arXiv:1302.6446.
- **“Search for direct CP violation in $D^0 \rightarrow h^-h^+$ modes using semileptonic B decays”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Lett. B **723** (2013) 33-43, arXiv:1303.2614.
- **“Observation of the decay $B_c^+ \rightarrow \Psi(2S)\pi^+$ ”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Rev. D **87** (2013) 071103, arXiv:1303.1737.
- **“Measurements of the $\Lambda_b^0 \rightarrow J/\Psi\Lambda$ decay amplitudes and the Λ_b^0 polarisation in pp collisions at $\sqrt{s} = 7$ TeV”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Lett. B **724** (2013) 27, arXiv:1302.5578.
- **“Observation of the $B_s^0 \rightarrow \Psi(2S)\eta$ and $B_{(s)}^0 \rightarrow \Psi(2S)\pi^+\pi^-$ decays”**,
R. Aaij *et al.* [LHCb Collaboration],
Nucl. Phys. B **871** (2013) 403-419, arXiv:1302.6354.
- **“Determination of the $X(3872)$ meson quantum numbers”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Rev. Lett. **110** (2013) 222001, arXiv:1302.6269.
- **“Prompt charm production in pp collisions at $\sqrt{s} = 7$ TeV”**,
R. Aaij *et al.* [LHCb Collaboration],
Nucl. Phys. B **871** (2013) 1-20, arXiv:1302.2864.
- **“Amplitude analysis and the branching fraction measurement of $B_{0_s} \rightarrow J/\Psi K^+K^-$ ”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Rev. D **87** (2013) 072004, arXiv:1302.1213.
- **“Measurement of the Λ_b^0 , Ξ_b^- and Ω_b^- baryon masses”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Rev. Lett. **110** (2013) 182001, arXiv:1302.1072.
- **“Exclusive J/Ψ and $\Psi(2S)$ production in pp collisions at $\sqrt{s} = 7$ TeV”**,
R. Aaij *et al.* [LHCb Collaboration],
J. Phys. G **40** (2013) 045001, arXiv:1301.7084.
- **“Analysis of the resonant components in $\bar{B}^0 \rightarrow J/\Psi\pi^+\pi^-$ ”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Rev. D **87** (2013) 052001, arXiv:1301.5347.
- **“Measurement of the fragmentation fraction ratio f_s/f_d and its dependence on B meson kinematics”**,
R. Aaij *et al.* [LHCb Collaboration],
J. High Energy Phys. **04** (2013) 001, arXiv:1301.5286.
- **“Measurement of CP observables in $B^0 \rightarrow DK^{*0}$ with $D \rightarrow K^+K^-$ ”**,
R. Aaij *et al.* [LHCb Collaboration],
J. High Energy Phys. **03** (2013) 067, arXiv:1212.5205.

- **“Measurement of the cross-section for $Z \rightarrow e^+e^-$ production in pp collisions at $\sqrt{s} = 7$ TeV”**,
R. Aaij *et al.* [LHCb Collaboration],
J. High Energy Phys. **02** (2013) 106, arXiv:1212.4620.
- **“Measurement of the forward energy flow in pp collisions at $\sqrt{s} = 7$ TeV”**,
R. Aaij *et al.* [LHCb Collaboration],
Eur. Phys. J. C **73** (2013) 2421, arXiv:1212.4755.
- **“Measurement of J/Ψ production in pp collisions at $\sqrt{s} = 2.76$ TeV”**,
R. Aaij *et al.* [LHCb Collaboration],
J. High Energy Phys. **02** (2013) 041, arXiv:1212.1045.
- **“First observation of the $B_{s2}^*(5840)^0 \rightarrow B^{*+}K^-$ and studies of excited B_s^0 mesons”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Rev. Lett. **110** (2013) 151803, arXiv:1211.5994.
- **“Measurement of the time-dependent CP asymmetry in $B^0 \rightarrow J/\Psi K_s^0$ decays”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Lett. B **721** (2013) 24-31, arXiv:1211.6093.
- **“First Evidence for the Decay $B_s^0 \rightarrow \mu^+\mu^-$ ”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Rev. Lett. **110** (2013) 021801, arXiv:1211.2674.
- **“A study of the Z production cross-section in pp collisions at $\sqrt{s} = 7$ TeV using tau final states”**,
R. Aaij *et al.* [LHCb Collaboration],
J. High Energy Phys. **01** (2013) 111, arXiv:1210.6289.
- **“Measurement of the $\bar{B}^0 B^0$ oscillation frequency Δm_d with the decays $B^0 \rightarrow D^- \pi^+$ and $B^0 \rightarrow J/\Psi K^{*0}$ ”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Lett. B **719** (2013) 318-325, arXiv:1210.6750.
- **“First observation of the decay $B^+ \rightarrow \pi^+ \mu^+ \mu^-$ ”**,
R. Aaij *et al.* [LHCb Collaboration],
JHEP **12** (2012) 125, arXiv:1210.2645.
- **“Observation of $D^0 - \bar{D}^0$ oscillations”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Rev. Lett. **110** (2013) 101802, arXiv:1211.1230.
- **“First observation of the decays $\bar{B}_{(s)}^0 \rightarrow D_s^+ K^- \pi^+ \pi^-$ and $\bar{B}_s^0 \rightarrow D_{s1}(2536)^+ \pi^-$ ”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Rev. D **86** 112005 (2012), arXiv:1211.1541.
- **“Measurement of the CP asymmetry in $B^0 \rightarrow K^{*0} \mu^+ \mu^-$ decays”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Rev. Lett. **110** (2013) 031801, arXiv:1210.4492.
- **“Measurement of the D^\pm production asymmetry in 7 TeV pp collisions”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Lett. B **718** (2013) 902-909, arXiv:1210.4112.
- **“Evidence for the decay $B^0 \rightarrow J/\Psi \omega$ and measurement of the relative branching fractions of B_s^0 meson decays to $J/\Psi \eta$ and $J/\Psi \eta'$ ”**,
R. Aaij *et al.* [LHCb Collaboration],
Nucl. Phys. B **867** (2013) 547-566, arXiv:1210.2631.

- **“First evidence for the annihilation decay mode $B^+ \rightarrow D_s^+ \phi$ ”**,
R. Aaij *et al.* [LHCb Collaboration],
J. High Energy Phys. **02** (2013) 043, arXiv:1210.1089.
- **“Measurements of B_c^+ production and mass with the $B_c^+ \rightarrow J/\Psi \pi^+$ decay”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Rev. Lett. **109** 232001 (2012), arXiv:1209.5634.
- **“A model-independent Dalitz plot analysis of $B^\pm \rightarrow DK^\pm$ with $D \rightarrow K_S^0 h^+ h^-$ ($h = \pi, K$) decays and constraints on the CKM angle γ ”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Lett. B **718** (2012) 43, arXiv:1209.5869.
- **“Differential branching fraction and angular analysis of the $B^+ \rightarrow K^+ \mu^+ \mu^-$ decay”**,
R. Aaij *et al.* [LHCb Collaboration],
J. High Energy Phys. **02** (2013) 105, arXiv:1209.4284.
- **“Search for the rare decay $K_s^0 \rightarrow \mu^+ \mu^-$ ”**,
R. Aaij *et al.* [LHCb Collaboration],
J. High Energy Phys. **01** (2013) 090, arXiv:1209.4029.
- **“Measurement of the fraction of $\Upsilon(1S)$ originating from $\chi_b(1P)$ decays in pp collisions at $\sqrt{s} = 7$ TeV”**,
R. Aaij *et al.* [LHCb Collaboration],
JHEP **1211** (2012) 031, arXiv:1209.0282.
- **“Measurement of the ratio of branching fractions $\mathcal{B}(B^0 \rightarrow K^{*0} \gamma)/\mathcal{B}(B_s^0 \rightarrow \phi \gamma)$ and the direct CP asymmetry in $B^0 \rightarrow K^{*0} \gamma$ ”**,
R. Aaij *et al.* [LHCb Collaboration],
Nucl. Phys. B **867** (2013) 1, arXiv:1209.0313.
- **“Measurement of the $B_s^0 \rightarrow J/\Psi \bar{K}^{*0}$ branching fraction and angular amplitudes”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Rev. D **86** (2012) 071102, arXiv:1208.0738.
- **“Observation of the decay $B^0 \rightarrow \bar{D}^0 K^+ K^-$ and evidence for $B_s \rightarrow \bar{D}^0 K^+ K^-$ ”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Rev. Lett. **109** (2012) 131801, arXiv:1207.5991.
- **“Measurement of the effective $B_s^0 \rightarrow K^+ K^-$ lifetime”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Lett. B **716** (2012) 393, arXiv:1207.5993.
- **“Measurement of prompt hadron production ratios in pp collisions at $\sqrt{s} = 0.9$ and 7 TeV”**,
R. Aaij *et al.* [LHCb Collaboration],
Eur. Phys. J. C **72** (2012) 2168, arXiv:1206.5160.
- **“Measurement of b -hadron branching fractions for two-body decays into charmless charged hadrons”**,
R. Aaij *et al.* [LHCb Collaboration],
JHEP **1210** (2012) 037, arXiv:1206.2794.
- **“Study of D_{sJ} decays to $D^+ K_s$ and $D^0 K^+$ final states in pp collisions”**,
R. Aaij *et al.* [LHCb Collaboration],
JHEP **1210** (2012) 151, arXiv:1207.6016.

- **“Measurement of the B_s effective lifetime in the $J/\Psi f_0(980)$ final state”,**
R. Aaij *et al.* [LHCb Collaboration],
Phys. Rev. Lett. **109** (2012) 152002, arXiv:1207.0878.
- **“Observation of excited Λ_b^0 baryons”,**
R. Aaij *et al.* [LHCb Collaboration],
Phys. Rev. Lett. **109** (2012) 172003, arXiv:1205.3452.
- **“Measurement of relative branching fractions of B decays to $\psi(2S)$ and J/ψ mesons”,**
R. Aaij *et al.* [LHCb Collaboration],
Eur. Phys. J. C **72** (2012) 2118, arXiv:1205.0918.
- **“Analysis of the resonant components in $B_s \rightarrow J/\Psi \pi^+ \pi^-$ ”,**
R. Aaij *et al.* [LHCb Collaboration],
Phys. Rev. D **86** (2012) 052006, arXiv:1204.5643.
- **“Measurement of the ratio of prompt χ_c to J/Ψ production in pp collisions at $\sqrt{s} = 7$ TeV”,**
R. Aaij *et al.* [LHCb Collaboration],
Phys. Lett. B **718** (2012) 431, arXiv:1204.1462.
- **“Measurement of $\psi(2S)$ meson production in pp collisions at $\sqrt{s} = 7$ TeV”,**
R. Aaij *et al.* [LHCb Collaboration],
Eur. Phys. J. C **72** (2012) 2100, arXiv:1204.1258.
- **“Measurement of the isospin asymmetry in $B \rightarrow K^{(*)} \mu^+ \mu^-$ decays”,**
R. Aaij *et al.* [LHCb Collaboration],
JHEP **1207** (2012) 133, arXiv:1205.3422.
- **“Observation of double charm production involving open charm in pp collisions at $\sqrt{s} = 7$ TeV”,**
R. Aaij *et al.* [LHCb Collaboration],
JHEP **1206** (2012) 141, arXiv:1205.0975.
- **“Measurement of the $B_s^0 \rightarrow J/\psi K_s^0$ branching fraction”,**
R. Aaij *et al.* [LHCb Collaboration],
Phys. Lett. B **713** (2012) 172, arXiv:1205.0934.
- **“Measurement of the $D_s^+ - D_s^-$ production asymmetry in 7 TeV pp collisions”,**
R. Aaij *et al.* [LHCb Collaboration],
Phys. Lett. B **713** (2012) 186, arXiv:1205.0897.
- **“Measurement of the CP-violating phase ϕ_s in $B_s \rightarrow J/\psi \pi^+ \pi^-$ decays”,**
R. Aaij *et al.* [LHCb Collaboration],
Phys. Lett. B **713** (2012) 378, arXiv:1204.5675.
- **“Measurement of the polarization amplitudes and triple product asymmetries in the $B_s^0 \rightarrow \phi \phi$ decay”,**
R. Aaij *et al.* [LHCb Collaboration],
Phys. Lett. B **713** (2012) 369, arXiv:1204.2813.
- **“Inclusive W and Z production in the forward region at $\sqrt{s} = 7$ TeV”,**
R. Aaij *et al.* [LHCb Collaboration],
JHEP **1206** (2012) 058, arXiv:1204.1620.
- **“Measurements of the branching fractions of the decays $B_s^0 \rightarrow D_s^\mp K^\pm$ and $B_s^0 \rightarrow D_s^- \pi^+$ ”,**
R. Aaij *et al.* [LHCb Collaboration],
JHEP **1206** (2012) 115, arXiv:1204.1237.

- **“First observation of the decay $B_c^+ \rightarrow J/\psi\pi^+\pi^-\pi^+$ ”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Rev. Lett. **108** (2012) 251802, arXiv:1204.0079.
- **“Strong constraints on the rare decays $B_s \rightarrow \mu^+\mu^-$ and $B^0 \rightarrow \mu^+\mu^-$ ”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Rev. Lett. **108** (2012) 231801, arXiv:1203.4493.
- **“Observation of CP violation in B^+ to DK^+ decays”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Lett. B **712** (2012) 203 [Erratum-ibid. B **713** (2012) 351], arXiv:1203.3662.
- **“Measurements of the branching fractions and CP asymmetries of B^+ to $J/\psi\pi^+$ and B^+ to $\psi(2S)\pi^+$ decays”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Rev. D **85** (2012) 091105, arXiv:1203.3592.
- **“Measurement of Upsilon production in pp collisions at $\sqrt{s} = 7$ TeV”**,
R. Aaij *et al.* [LHCb Collaboration],
Eur. Phys. J. C **72** (2012) 2025, arXiv:1202.6579.
- **“Measurement of the ratio of branching fractions $B(B^0 \rightarrow K^{*0}\gamma)/B(B_s^0 \rightarrow \phi\gamma)$ ”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Rev. D **85** (2012) 112013, arXiv:1202.6267.
- **“First evidence of direct CP violation in charmless two-body decays of B_s mesons”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Rev. Lett. **108** (2012) 201601, arXiv:1202.6251.
- **“Search for the $X(4140)$ state in $B^+ \rightarrow J/\psi\phi K^+$ decays”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Rev. D **85** (2012) 091103, arXiv:1202.5087.
- **“Opposite-side flavour tagging of B mesons at the LHCb experiment”**,
R. Aaij *et al.* [LHCb Collaboration],
Eur. Phys. J. C **72** (2012) 2022, arXiv:1202.4979.
- **“Determination of the sign of the decay width difference in the B_s system”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Rev. Lett. **108** (2012) 241801, arXiv:1202.4717.
- **“Measurement of the cross-section ratio $\sigma(\chi_{c2})/\sigma(\chi_{c1})$ for prompt χ_c production at $\sqrt{s} = 7$ TeV”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Lett. B **714** (2012) 215, arXiv:1202.1080.
- **“Searches for Majorana neutrinos in B -decays”**,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Rev. D **85** (2012) 112004, arXiv:1201.5600.
- **“Observation of $X(3872)$ production in pp collisions at $\sqrt{s} = 7$ TeV”**,
R. Aaij *et al.* [LHCb Collaboration],
Eur. Phys. J. C **72** (2012) 1972, arXiv:1112.5310.
- **“Measurement of charged particle multiplicities in pp collisions at $\sqrt{s} = 7$ TeV in the forward region”**,
R. Aaij *et al.* [LHCb Collaboration],
Eur. Phys. J. C **72** (2012) 1947, arXiv:1112.4592.

- “**Measurement of mixing and CP violation parameters in two-body charm decays**”,
R. Aaij *et al.* [LHCb Collaboration],
JHEP **1204** (2012) 129, arXiv:1112.4698.
- “**Measurement of the B^\pm production cross-section in pp collisions at $\sqrt{s} = 7$ TeV**”,
R. Aaij *et al.* [LHCb Collaboration],
JHEP **1204** (2012) 093, arXiv:1202.4812.
- “**First observation of the decays $\bar{B}^0 \rightarrow D^+ K^- \pi^+ \pi^-$ and $B^- \rightarrow D^0 K^- \pi^+ \pi^-$** ”,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Rev. Lett. **108** (2012) 161801, arXiv:1201.4402.
- “**Measurement of b -hadron masses**”,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Lett. B **708** (2012) 241, arXiv:1112.4896.
- “**Observation of $B_s \rightarrow J/\psi f_2'(1525)$ in $J/\psi K^+ K^-$ final states**”,
R. Aaij *et al.* [LHCb Collaboration],
Physical Review Letters, 108, **151801** (2012), arXiv:1112.4695.
- “**Measurement of the $B_s^0 - \bar{B}_s^0$ oscillation frequency Δm_s in $B_s^0 \rightarrow D_s^-(3)\pi$ decays**”,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Lett. B **709** (2012) 177, arXiv:1112.4311.
- “**Differential branching fraction and angular analysis of the decay $B^0 \rightarrow K^{*0} \mu^+ \mu^-$** ”,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Rev. Lett. **108** (2012) 181806, arXiv:1112.3515.
- “**Measurement of the CP-violating phase ϕ_s in the decay $B_s \rightarrow J/\psi \phi$** ”,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Rev. Lett. **108** (2012) 101803, arXiv:1112.3183.
- “**Measurement of the CP violating phase ϕ_s in $\bar{B}_s^0 \rightarrow J/\psi f_0(980)$** ”,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Lett. B **707** (2012) 497, arXiv:1112.3056.
- “**Search for the rare decays $B_s \rightarrow \mu^+ \mu^-$ and $B^0 \rightarrow \mu^+ \mu^-$** ”,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Lett. B **708** (2012) 55, arXiv:1112.1600.
- “**Evidence for CP violation in time-integrated $D^0 \rightarrow h^- h^+$ decay rates**”,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Rev. Lett. **108** (2012) 111602, arXiv:1112.0938.
- “**First observation of the decay $B_s^0 \rightarrow K^{*0} \bar{K}^{*0}$** ”,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Lett. B **709** (2012) 50, arXiv:1111.4183.
- “**Measurement of b hadron production fractions in 7 TeV pp collisions**”,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Rev. D **85** (2012) 032008, arXiv:1111.2357.
- “**Measurement of the effective $B_s^0 \rightarrow K^+ K^-$ lifetime**”,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Lett. B **707** (2012) 349, arXiv:1111.0521.
- “**Search for CP violation in $D^+ \rightarrow K^- K^+ \pi^+$ decays**”,
R. Aaij *et al.* [LHCb Collaboration],
, Phys. Rev. D **84** (2011) 112008, arXiv:1110.3970.

- “**First observation of the decay $\bar{B}_s^0 \rightarrow D^0 K^{*0}$ and a measurement of the ratio of branching fractions $\frac{\mathcal{B}(\bar{B}_s^0 \rightarrow D^0 K^{*0})}{\mathcal{B}(\bar{B}^0 \rightarrow D^0 \rho^0)}$ ”,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Lett. B **706** (2011) 32, arXiv:1110.3676.**
- “**Absolute luminosity measurements with the LHCb detector at the LHC**”,
R. Aaij *et al.* [The LHCb Collaboration],
JINST **7** (2012) P01010, arXiv:1110.2866.
- “**Search for the lepton number violating decays $B^+ \rightarrow \pi^- \mu^+ \mu^+$ and $B^+ \rightarrow K^- \mu^+ \mu^+$** ”,
R. Aaij *et al.* [The LHCb Collaboration],
Phys. Rev. Lett. **108** (2012) 101601, arXiv:1110.0730.
- “**Measurements of the Branching fractions for $B_{s-} \rightarrow D_s \pi \pi \pi$ and $\Lambda_b^0 \rightarrow \Lambda_c^+ \pi \pi \pi$** ”,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Rev. D **84** (2011) 092001, arXiv:1109.6831.
- “**Observation of J/ψ pair production in pp collisions at $\sqrt{s} = 7$ TeV**”,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Lett. B **707** (2012) 52, arXiv:1109.0963.
- “**Measurement of the inclusive ϕ cross-section in pp collisions at $\sqrt{s} = 7$ TeV**”,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Lett. **B703** (2011) 267-273, arXiv:1107.3935.
- “**Measurement of V^0 production ratios in pp collisions at $\sqrt{s} = 0.9$ and 7 TeV**”,
R. Aaij *et al.* [LHCb Collaboration],
JHEP **1108** (2011) 034, arXiv:1107.0882.
- “**Determination of f_s/f_d for 7 TeV pp collisions and a measurement of the branching fraction of the decay $B_d \rightarrow D^- K^+$** ”,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Rev. Lett. **107** (2011) 211801, arXiv:1106.4435.
- “**Search for the rare decays $B_s^0 \rightarrow \mu^+ \mu^-$ and $B^0 \rightarrow \mu^+ \mu^-$** ”,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Lett. B, **B699** (2011) 330, arxiv:1103.2465..
- “**Measurement of J/ψ production in pp collisions at $\sqrt{s} = 7$ TeV**”,
R. Aaij *et al.* [LHCb Collaboration],
Eur. Phys. J. **C71** (2011) 1645, arXiv:1103.0423.
- “**First observation of $B_s \rightarrow D_{s2}^{*+} X \mu \nu$ decays**”,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Lett. **B698** (2011) 14, arXiv:1102.0348.
- “**First observation of $B_s^0 \rightarrow J/\psi f_0(980)$ decays**”,
R. Aaij *et al.* [LHCb Collaboration],
Phys. Lett. **B698** (2011) 115, arXiv:1102.0206.

6.2 Articles with the H1 collaboration

- “**Search for QCD instanton-induced processes at HERA in the high- Q^2 domain**”,
V. Andreev *et al.* [H1 Collaboration],
Eur. Phys. J. C **76** (2016) no.7, 381, arXiv:1603.05567.

- **“Exclusive ρ^0 meson photoproduction with a leading neutron at HERA”**,
V. Andreev *et al.* [H1 Collaboration],
Eur. Phys. J. C **76** (2016) no.1, 41, arXiv:1508.03176.
- **“Combination of Measurements of Inclusive Deep Inelastic $e^\pm p$ Scattering Cross Sections and QCD Analysis of HERA Data”**,
H. Abramowicz *et al.* [H1 and ZEUS Collaboration],
Eur. Phys. J. C **75** (2015) 22, 65, 580, arXiv:1506.06042
- **“Combination of differential D^\pm cross-section measurements in deep-inelastic ep scattering at HERA”**,
H. Abramowicz *et al.* [H1 and ZEUS Collaboration],
JHEP **1509** (2015) 149, arXiv:1503.04042
- **“Diffractive Dijet Production with a Leading Proton in ep Collisions at HERA”**,
V. Andreev *et al.* [H1 Collaboration],
JHEP **1505** (2015) 056, arXiv:1502.01683.
- **“Measurement of Dijet Production in Diffractive Deep-Inelastic ep Scattering at HERA”**,
V. Andreev *et al.* [H1 Collaboration],
JHEP **1503** (2015) 092, arXiv:1412.0928
- **“Measurement of Multijet Production in ep Collisions at High Q^2 and Determination of the Strong Coupling α_s ”**
V. Andreev *et al.* [H1 Collaboration],
Eur. Phys. J. C **75** (2015) 2, 65, arXiv:1406.4709
- **“Measurement of Feynman- x Spectra of Photons and Neutrons in the Very Forward Direction in Deep-Inelastic Scattering at HERA”**
V. Andreev *et al.* [H1 Collaboration],
Eur. Phys. J. C **74** (2014) 2915, arXiv:1404.0201.
- **“Measurement of inclusive ep cross sections at high Q^2 at $\sqrt{s} = 225$ and 252 GeV and of the longitudinal proton structure function F_L at HERA”**
V. Andreev *et al.* [H1 Collaboration],
Eur. Phys. J. C **74** (2014) 2814, arXiv:1312.4821.
- **“Elastic and Proton-Dissociative Photoproduction of J/Ψ Mesons at HERA”**,
C. Alexa *et al.* [H1 Collaboration]
Eur. Phys. J. C **73** (2013) 2466, arXiv:1304.5162.
- **“Measurement of Charged Particle Spectra in Deep-Inelastic ep Scattering at HERA”**,
C. Alexa *et al.* [H1 Collaboration],
Eur. Phys. J. C **73** (2013) 2406, arXiv:1302.1321.
- **“Combination and QCD Analysis of Charm Production Cross Section Measurements in Deep-Inelastic ep Scattering at HERA”**,
H. Abramowicz *et al.* [H1 and ZEUS Collaborations],
Eur. Phys. J. C **73** (2013) 2311, arXiv:1211.1182.
- **“Combined inclusive diffractive cross sections measured with forward proton spectrometers in deep inelastic ep scattering at HERA”**,
F. D. Aaron *et al.* [H1 and ZEUS Collaborations],
Eur. Phys. J. C **72** (2012) 2175, arXiv:1207.4864.
- **“Inclusive Deep Inelastic Scattering at High Q^2 with Longitudinally Polarised Lepton Beams at HERA”**,

- F. D. Aaron *et al.* [H1 Collaboration],
JHEP **1209** (2012) 061, arXiv:1206.7007.
- **“Measurement of Beauty Photoproduction near Threshold using Di-electron Events with the H1 Detector at HERA”**,
F. D. Aaron *et al.* [H1 Collaboration],
Eur. Phys. J. C **72** (2012) 2148, arXiv:1206.4346.
 - **“Measurement of Beauty and Charm Photoproduction using Semi-muonic Decays in Dijet Events at HERA”**,
F. D. Aaron *et al.* [H1 Collaboration],
Eur. Phys. J. C **72** (2012) 2047, arXiv:1205.2495.
 - **“Determination of the Integrated Luminosity at HERA using Elastic QED Compton Events”**,
F. D. Aaron *et al.* [H1 Collaboration],
Eur. Phys. J. C **72** (2012) 2163, arXiv:1205.2448.
 - **“Inclusive Measurement of Diffractive Deep-Inelastic Scattering at HERA”**,
F. D. Aaron *et al.* [H1 Collaboration],
Eur. Phys. J. C **72** (2012) 2074, arXiv:1203.4495.
 - **“Measurement of Inclusive and Dijet D^* Meson Cross Sections in Photoproduction at HERA”**,
F. D. Aaron *et al.* [H1 Collaboration],
Eur. Phys. J. C **72** (2012) 1995, arXiv:1203.1170.
 - **“Measurement of the Azimuthal Correlation between the most Forward Jet and the Scattered Positron in Deep-Inelastic Scattering at HERA”**
F. D. Aaron *et al.* [H1 Collaboration],
Eur. Phys. J. C **72** (2012) 1910, arXiv:1111.4227.
 - **“Measurement of Dijet Production in Diffractive Deep-Inelastic Scattering with a Leading Proton at HERA”**,
F. D. Aaron *et al.* [H1 Collaboration],
Eur. Phys. J. C **72** (2012) 1970, arXiv:1111.0584.
 - **“Search for First Generation Leptoquarks in ep Collisions at HERA”**,
F. D. Aaron *et al.* [H1 Collaboration],
Phys. Lett. B **704** (2011) 388, arXiv:1107.3716.
 - **“Measurement of the Diffractive Longitudinal Structure Function F_L^D at HERA”**,
F. D. Aaron *et al.* [H1 Collaboration],
Eur. Phys. J. C **72** (2012) 1836, arXiv:1107.3420.
 - **“Measurement of Photon Production in the Very Forward Direction in Deep-Inelastic Scattering at HERA”**,
F. D. Aaron *et al.* [H1 Collaboration],
Eur. Phys. J. C **71** (2011) 1771, arXiv:1106.5944.
 - **“Search for Contact Interactions in $e^\pm p$ Collisions at HERA”**,
F. D. Aaron *et al.* [H1 Collaboration],
Phys. Lett. B **705** (2011) 52, arXiv:1107.2478.
 - **“Measurement of $D^{*\pm}$ Meson Production and Determination of $F_2^{c\bar{c}}$ at low Q^2 in Deep-Inelastic Scattering at HERA”**,
F. D. Aaron *et al.* [H1 Collaboration],
Eur. Phys. J. C **71** (2011) 1769, arXiv:1106.1028.

- **“Measurement of the Inclusive $e^\pm p$ Scattering Cross Section at High Inelasticity y and of the Structure Function F_L ”,**
F. D. Aaron *et al.* [H1 Collaboration],
Eur. Phys. J. C **71** (2011) 1579.
- **“Search for lepton flavour violation at HERA”,**
F. D. Aaron *et al.* [H1 Collaboration],
Phys. Lett. **B701** (2011) 20-30.
- **“Measurement of the cross section for diffractive deep-inelastic scattering with a leading proton at HERA”,**
F. D. Aaron *et al.* [H1 Collaboration],
Eur. Phys. J. C **71** (2011) 1578, arXiv:1010.1476.
- **“Measurement of Charm and Beauty Jets in Deep Inelastic Scattering at HERA”,**
F. D. Aaron *et al.* [H1 Collaboration]
Eur. Phys. J. **C71** (2011) 1509, arXiv:1008.17310.

6.3 Articles on experimental techniques

- **“Probing the cosmic-ray content of galaxy clusters by stacking Fermi-LAT count maps”,**
B. Huber, C. Tchernin, D. Eckert, C. Farnier, A. Manalaysay, U. Straumann and R. Walter
Astronomy&Astrophysics **560** A64 (2013), arXiv:1308.6278 [astro-ph.HE] **“A stacking method to study the gamma-ray emission of source samples based on the co-adding of *Fermi-LAT* count maps”**,
B. Huber, C. Farnier, A. Manalaysay, U. Straumann and R. Walter
Astronomy&Astrophysics **547**, A102 (2012)

7 Articles with the CTA consortium

- **FlashCam: a fully-digital camera for the medium-sized telescopes of the Cherenkov Telescope Array**
G. Pühlhofer *et al.* [CTA consortium]
arXiv:1509.02434 [astro-ph.IM].
- **The Optical System for the Large Size Telescope of the Cherenkov Telescope Array**
M. Hayashida *et al.* [CTA consortium]
arXiv:1508.07626 [astro-ph.IM].
- **CTA Contributions to the 34th International Cosmic Ray Conference (ICRC2015)**
A. Abchiche *et al.* [CTA consortium]
arXiv:1508.05894 [astro-ph.HE].
- **FlashCam: a novel Cherenkov telescope camera with continuous signal digitization**
A. Gadola *et al.* [CTA consortium]
JINST **10** (2015) 01, C01014, 10.1088/1748-0221/10/01/C01014
- **The FlashCam Camera for the Medium-Sized Telescopes of CTA**
Q. Weitzel *et al.* [CTA consortium]
PoS TIPP2014 (2014) 142.
- **Status of the photomultiplier-based FlashCam camera for the Cherenkov Telescope Array**
G. Pühlhofer *et al.* [CTA consortium]
SPIE.Astronomical Telescopes + Instrumentation (SPIE2014), Montreal (Canada), doi:10.1117/12.2056837

- **The Cherenkov Telescope Array Large Size Telescope**
G. Ambrosi *et al.* [CTA consortium]
arXiv:1307.4565 [astro-ph.IM].
- **CTA contributions to the 33rd International Cosmic Ray Conference (ICRC2013)**
O. Abril *et al.* [CTA consortium]
arXiv:1307.2232 [astro-ph.HE].
- **FlashCam: A fully digital camera for the Cherenkov Telescope Array**
Gerd Pühlhofer *et al.* [CTA consortium]
ICRC 2013 proceedings, arXiv:1307.3677v1 [astro-ph.IM].
- **Introducing the CTA concept**
B.S. Acharya *et al.* [CTA consortium]
Astropart.Phys. 43 (2013) 3, 10.1016/j.astropartphys.2013.01.007.
- **FlashCam: A fully digital camera for CTA telescopes**
G. Pühlhofer *et al.* [CTA consortium]
arXiv:1211.3684 [astro-ph.IM] 10.1063/1.4772375. AIP Conf.Proc. 1505 (2012) 777-780.
- **Design concepts for the Cherenkov Telescope Array CTA: an advanced facility for ground-based high-energy gamma-ray astronomy**
M. Actis *et al.* [CTA consortium]
Exp. Astron. **32**, 193 (2011).

8 Collaboration notes for LHCb

- **“Measurement of the cross-section for $Z \rightarrow \mu\mu$ production with 1 fb¹ of pp collisions at $\sqrt{s}=7$ TeV”**,
LHCb collaboration *et al.*, LHCb-CONF-2013-007.
- **“Graphical comparison of the LHCb measurements of W and Z boson production with ATLAS and CMS”**,
LHCb Collaboration *et al.*, LHCb-CONF-2013-005.
- **“Measurement of the track finding efficiency”**,
A. Jaeger *et al.*, LHCb-PUB-2011-025.
- **“Inclusive Drell-Yan production in the forward region at $\sqrt{s} = 7$ TeV”**,
LHCb collaboration, LHCb-CONF-2012-013.
- **“Differential branching fraction and angular analysis of the $B^0 \rightarrow K^0 \mu^+ \mu^-$ decay”**,
LHCb collaboration, LHCb-CONF-2012-008.
- **“Search for the rare decays $B_s^0 \rightarrow \mu^+ \mu^-$ and $B_d^0 \rightarrow \mu^+ \mu^-$ ”**,
LHCb collaboration, LHCb-CONF-2012-010.
- **“Analysis of $B^0 \rightarrow K^{*0} \mu^+ \mu^-$ at LHCb”**,
LHCb collaboration, LHCb-CONF-2011-038
- **“Search for the rare decays $B_s^0 \rightarrow \mu^+ \mu^-$ with 300 pb¹ at LHCb”**,
LHCb collaboration, LHCb-CONF-2011-037
- **“Search for the rare decay $B_s^0 \rightarrow \mu^+ \mu^-$ at the LHC with the CMS and LHCb experiments Combination of LHC results of the search for $B_s^0 \rightarrow \mu^+ \mu^-$ decays”**,
CMS and LHCb Collaborations, LHCb-CONF-2011-047

- **“Updated measurements of W and Z production at $\sqrt{s} = 7$ TeV with the LHCb experiment”**,
LHCb collaboration, LHCb-CONF-2011-039.
- **“Measurements of muon identification efficiencies for Z and W decays”**,
James Keaveney and Jonathan Anderson
CERN-LHCb-INT-2011-001

9 Publications in other fields

- **“Research Proposal for an Experiment to Search for the Decay $\mu \rightarrow eee$ ”**,
A. Blondel *et al.*
Research proposal submitted to the Paul Scherrer Institute Research Committee for Particle Physics at the Ring Cyclotron, arXiv:1301.6113 [physics.ins-det]
- **“Experimental constraints from flavour changing processes and physics beyond the Standard Model”**,
M. Gersabeck, V. V. Gligorov and N. Serra,
invited review for Top and flavour physics in the LHC era, The European Physical Journal C, Volume 72, Issue 8