

**Implications of LHCb
measurements and future
prospects**

Report of Contributions

Contribution ID: 1

Type: **not specified**

EW physics and direct searches

Contribution ID: 2

Type: **not specified**

Welcome

Wednesday, 25 October 2023 09:00 (5 minutes)

Presenter: AMHIS, Yasmine Sara (IJCLab/CERN)

Session Classification: Welcome

Contribution ID: 3

Type: **not specified**

LHCb Introduction

Wednesday, 25 October 2023 09:05 (25 minutes)

Presenter: PEPE-ALTARELLI, Monica (INFN e Laboratori Nazionali di Frascati (IT))

Session Classification: Welcome

Contribution ID: 4

Type: **not specified**

LFU measurements at LHCb

Presenter: KLAVER, Suzanne (Nikhef National institute for subatomic physics (NL))

Session Classification: Heavy Ions and Fixed Target

Contribution ID: 5

Type: **not specified**

Cabibbo angle anomaly: statistical assessment & New Physics interpretations

Presenter: PASSEMAR, Emilie

Session Classification: Heavy Ions and Fixed Target

Contribution ID: 6

Type: **not specified**

SL measurements at LHCb - focus on V_{cb}

Presenter: DELANEY, Blaise Raheem (Massachusetts Inst. of Technology (US))

Session Classification: Heavy Ions and Fixed Target

Contribution ID: 7

Type: **not specified**

V_{ub} **exclusive**

Presenters: VITTORIO, L.; VITTORIO, Ludovico (SNS, Pisa)

Session Classification: Heavy Ions and Fixed Target

Contribution ID: 8

Type: **not specified**

$$b \rightarrow cl\nu \text{ \& } V_{cb}$$

Presenter: JUNG, Martin (Università di Torino & INFN)

Session Classification: Heavy Ions and Fixed Target

Contribution ID: 9

Type: **not specified**

Experimental overview of charm

Presenter: PIETRZYK, Guillaume Max (IJCLab (Orsay, FR))

Session Classification: Mixing and CP violation

Contribution ID: **10**

Type: **not specified**

Systematics of U-spin Amplitude Sum Rules

Presenter: GAVRILOVA, Margarita (Cornell)

Session Classification: Mixing and CP violation

Contribution ID: 11

Type: **not specified**

Direct A_{CP} from charm final state interactions

Presenter: MAGALHAES, Patricia (CBPF - Brazilian Center for Physics Research (BR))

Session Classification: Mixing and CP violation

Contribution ID: 12

Type: **not specified**

Experimental overview of beauty

Presenter: LI, Peilian (CERN)

Session Classification: Mixing and CP violation

Contribution ID: 13

Type: **not specified**

NNLO for B Mixing

Presenter: SHTABOVENKO, Vladyslav (Ludwig-Maximilians-Univ. Muenchen (DE))

Session Classification: Mixing and CP violation

Contribution ID: 14

Type: **not specified**

CP violating NP in $B(s) \rightarrow D(s)K$

Presenter: MALAMI, Eleftheria

Session Classification: Mixing and CP violation

Contribution ID: 15

Type: **not specified**

Final discussion

Session Classification: Heavy Ions and Fixed Target

Contribution ID: 16

Type: **not specified**

New pentaquark states at LHCb

Presenter: POLYAKOV, Ivan (CERN)

Session Classification: QCD spectroscopy and exotic hadrons

Contribution ID: 17

Type: **not specified**

Tetraquark studies at LHCb

Presenter: JIANG, Yi (University of Chinese Academy of Sciences (CN))

Session Classification: QCD spectroscopy and exotic hadrons

Contribution ID: **18**

Type: **not specified**

Methods to explore the nature of the new exotic resonances from data

Presenter: Dr ALBALADEJO, Miguel (IFIC (CSIC & Valencia U.))

Session Classification: QCD spectroscopy and exotic hadrons

Contribution ID: 19

Type: **not specified**

Hadronic resonances and exotics from lattice QCD

Presenter: LIU, Liuming (Institute of Modern Physics, Chinese Academy of Sciences)

Session Classification: QCD spectroscopy and exotic hadrons

Contribution ID: 20

Type: **not specified**

Conventional spectroscopy at LHCb

Presenter: WANG, Mengzhen (Università degli Studi e INFN Milano (IT))

Session Classification: QCD spectroscopy and exotic hadrons

Contribution ID: 21

Type: **not specified**

Overview of rare B decays

Presenter: LANGENBRUCH, Christoph Michael (Heidelberg University (DE))

Session Classification: Flavour Changing Neutral Currents

Contribution ID: 22

Type: **not specified**

Lepton Flavour Violation

Presenter: BATTIG, Alexander (Technische Universitaet Dortmund (DE))

Session Classification: Flavour Changing Neutral Currents

Contribution ID: 23

Type: **not specified**

$K \rightarrow \mu\mu$ as probe for NP

Presenter: SCHACHT, Stefan (University of Manchester)

Session Classification: Flavour Changing Neutral Currents

Contribution ID: 24

Type: **not specified**

Progress on QCD corrections to $b \rightarrow sll$

Presenter: REBOUD, Meril

Session Classification: Flavour Changing Neutral Currents

Contribution ID: 25

Type: **not specified**

Rare Charm and Strange results

Presenter: FERNANDEZ GOMEZ, Miguel (Universidade de Santiago de Compostela (ES))

Session Classification: Flavour Changing Neutral Currents

Contribution ID: 26

Type: **not specified**

Decays of rare charmed baryons

Presenter: HILLER, Gudrun (Technische Universitaet Dortmund (DE))

Session Classification: Flavour Changing Neutral Currents

Contribution ID: 27

Type: **not specified**

Overview of BSM models

Presenter: Prof. ALLANACH, Ben (University of Cambridge (GB))

Session Classification: Model building for flavor physics

Contribution ID: 28

Type: **not specified**

Neutral current anomalies and alps

Presenter: PESTANADALUZ, Maria

Session Classification: Model building for flavor physics

Contribution ID: 29

Type: **not specified**

Flavor and mass hierarchies from extra dim

Presenter: SELIMOVIC, Nudzeim

Session Classification: Model building for flavor physics

Contribution ID: **30**

Type: **not specified**

On a model with two scalar leptoquarks R2 and S3

Presenter: JAFFREDO, Florentin (CNRS)

Session Classification: Model building for flavor physics

Contribution ID: 31

Type: **not specified**

Bridge solutions for (g-2) and $b \rightarrow s\ell\ell$ anomalies

Presenter: OLGOSO, Pablo

Session Classification: Model building for flavor physics

Contribution ID: 32

Type: **not specified**

Muonic forces and flavor universality

Presenter: THOMSEN, Anders Eller (Universität Bern)

Session Classification: Model building for flavor physics

Contribution ID: 33

Type: **not specified**

Experimental Overview: EW+Direct

Presenter: BARTER, William (University of Edinburgh)

Session Classification: EW physics and direct searches

Contribution ID: 34

Type: **not specified**

W-mass Theory Overview

Presenter: BAGNASCHI, Emanuele Angelo (INFN Laboratori Nazionali di Frascati)

Session Classification: EW physics and direct searches

Contribution ID: 35

Type: **not specified**

W mass measurement plans

Presenter: HUNTER, Ross John (University of Warwick (GB))

Session Classification: EW physics and direct searches

Contribution ID: 36

Type: **not specified**

Theory Overview: High-pT Searches for Flavor

Presenter: HAISCH, Uli

Session Classification: EW physics and direct searches

Contribution ID: 37

Type: **not specified**

Drell-Yan tails as a probe of New Physics

Presenter: ALLWICHER, Lukas

Session Classification: EW physics and direct searches

Contribution ID: 38

Type: **not specified**

Z boson production in pp and pPb

Presenter: LI, Hengne (South China Normal University (CN))

Session Classification: EW physics and direct searches

Contribution ID: 39

Type: **not specified**

Understanding QCD exotics using deep neural networks

Presenter: FERNANDEZ RAMIREZ, Cesar (UNAM)

Session Classification: QCD spectroscopy and exotic hadrons

Contribution ID: 40

Type: **not specified**

Satellite discussion - unfolded distributions of semi-leptonic decays

Presenters: SMITH, Mark (Imperial College (GB)); CALVI, Marta (Univ. degli Studi Milano-Bicocca)

Contribution ID: 41

Type: **not specified**

$R(D)$ **and** $R(D^*)$

Presenter: Dr HAMILTON, Phoebe (University of Maryland (US))

Session Classification: Heavy Ions and Fixed Target

Contribution ID: 42

Type: **not specified**

wrap-up

Friday, 27 October 2023 15:10 (10 minutes)

Presenter: AMHIS, Yasmine Sara (IJCLab/CERN)

Contribution ID: 43

Type: **not specified**

CPV and mixing in B decays at LHCb

Wednesday, 25 October 2023 09:30 (25 minutes)

Presenter: ESEN, Sevda (Heidelberg University (DE))

Session Classification: Mixing and CP violation

Contribution ID: 44

Type: **not specified**

Quark-hadron duality at work

Wednesday, 25 October 2023 10:00 (20 minutes)

Presenter: Dr RUSOV, Aleksey (University of Siegen)

Session Classification: Mixing and CP violation

Contribution ID: 45

Type: **not specified**

A study of CP asymmetry in B- \rightarrow DD decays using SU(3) flavour symmetry with breaking effects

Wednesday, 25 October 2023 10:25 (20 minutes)

Presenter: DAVIES, Jonathan Edward (University of Manchester (GB))

Session Classification: Mixing and CP violation

Contribution ID: 46

Type: **not specified**

Final-state interactions in the CP asymmetries of charm-meson

Wednesday, 25 October 2023 11:20 (20 minutes)

Presenter: SOLOMONIDI, Eleftheria (IFIC (CSIC, Univ. of Valencia))

Session Classification: Mixing and CP violation

Contribution ID: 47

Type: **not specified**

Progress in eps'et al and in Unitarity Triangles

Wednesday, 25 October 2023 11:45 (20 minutes)

Presenter: SONI, Amarjit

Session Classification: Mixing and CP violation

Contribution ID: 48

Type: **not specified**

LHCb summary of charm CPV and mixing

Wednesday, 25 October 2023 12:10 (25 minutes)

Presenter: DUFOUR, Laurent (CERN)

Session Classification: Mixing and CP violation

Contribution ID: 49

Type: **not specified**

Talk on theoretical aspects of Fixed Target experiments

Wednesday, 25 October 2023 14:15 (20 minutes)

Presenter: SIGNORI, Andrea (University of Turin and INFN)

Session Classification: Heavy Ions and Fixed Target

Contribution ID: 50

Type: **not specified**

Astro+Fixed target

Wednesday, 25 October 2023 14:40 (20 minutes)

Presenter: MATTIOLI, Kara (Centre National de la Recherche Scientifique (FR))

Session Classification: Heavy Ions and Fixed Target

Contribution ID: 51

Type: **not specified**

Nuclear PDFs

Wednesday, 25 October 2023 15:05 (20 minutes)

Presenter: SCHIENBEIN, Ingo (Universite Grenoble Alpes)

Session Classification: Heavy Ions and Fixed Target

Contribution ID: 52

Type: **not specified**

nPDFs

Wednesday, 25 October 2023 16:00 (20 minutes)

Presenter: SELLAM, Sara

Session Classification: Heavy Ions and Fixed Target

Contribution ID: 53

Type: **not specified**

Hadronization and small systems

Wednesday, 25 October 2023 16:25 (20 minutes)

Presenter: ZHAO, Jiaxing (Tsinghua University)

Session Classification: Heavy Ions and Fixed Target

Contribution ID: 54

Type: **not specified**

Hadronization in small systems

Wednesday, 25 October 2023 16:50 (20 minutes)

Presenter: Dr AUDURIER, Benjamin (Commissariat à l'énergie atomique et aux énergies alternatives - CEA)

Session Classification: Heavy Ions and Fixed Target

Contribution ID: 55

Type: **not specified**

Lepton flavour universality measurements with FCCC at LHCb

Thursday, 26 October 2023 09:00 (20 minutes)

Presenter: REISS, Florian (University of Manchester (GB))

Session Classification: Flavour Changing Charged Currents

Contribution ID: 56

Type: **not specified**

LQCD measurements for charged current decays

Thursday, 26 October 2023 09:30 (20 minutes)

Presenter: HARRISON, Judd

Session Classification: Flavour Changing Charged Currents

Contribution ID: 57

Type: **not specified**

Differential measurements with FCCC at LHCb

Thursday, 26 October 2023 10:00 (20 minutes)

Presenter: FAZZINI, Davide (Universita & INFN, Milano-Bicocca (IT))

Session Classification: Flavour Changing Charged Currents

Contribution ID: 58

Type: **not specified**

Measurements of $|V_{cb}|$ and $|V_{ub}|$: Status and prospects at LHCb

Thursday, 26 October 2023 11:00 (20 minutes)

Presenter: KIRSEBOM, Veronica Soelund

Session Classification: Flavour Changing Charged Currents

Contribution ID: 59

Type: **not specified**

EFTs for charged current decays

Thursday, 26 October 2023 11:55 (20 minutes)

Presenter: ŠALKO, Jakub (Uppsala University)

Session Classification: Flavour Changing Charged Currents

Contribution ID: **60**

Type: **not specified**

Truncation independent Bayesian inference FF fitting

Thursday, 26 October 2023 12:25 (20 minutes)

Presenter: JUETTNER, Andreas

Session Classification: Flavour Changing Charged Currents

Contribution ID: **61**

Type: **not specified**

Search for pentaquarks decaying to open charm

Thursday, 26 October 2023 14:30 (20 minutes)

Presenter: ROBERTSON, Gary (University of Glasgow (GB))

Session Classification: QCD spectroscopy and exotic hadrons

Contribution ID: 62

Type: **not specified**

Born Oppenheimer effective theory for hybrids and doubly heavy tetraquarks

Thursday, 26 October 2023 16:15 (20 minutes)

Presenter: MOHAPATRA, Abhishek (Technical University of Munich)

Session Classification: QCD spectroscopy and exotic hadrons

Contribution ID: 63

Type: **not specified**

Conventional spectroscopy

Thursday, 26 October 2023 15:20 (20 minutes)

Presenter: WANG, Ziyi (University of Chinese Academy of Sciences, Beijing)

Session Classification: QCD spectroscopy and exotic hadrons

Contribution ID: 64

Type: **not specified**

Structure of all-charm tetraquarks and LHC states

Thursday, 26 October 2023 17:05 (20 minutes)

Presenter: Dr ANWAR, Muhammad Naeem (Department of Physics, Swansea University)

Session Classification: QCD spectroscopy and exotic hadrons

Contribution ID: 65

Type: **not specified**

Multiple quarkonia production at LHCb

Thursday, 26 October 2023 16:40 (20 minutes)

Presenter: ZHOVKOVSKA, Valeriia (University of Warwick (GB))

Session Classification: QCD spectroscopy and exotic hadrons

Contribution ID: 66

Type: **not specified**

Molecular hadrons (particularly pentaquarks) from the EFT perspective

Thursday, 26 October 2023 14:55 (20 minutes)

Presenter: PAVON VALDERRAMA, Manuel

Session Classification: QCD spectroscopy and exotic hadrons

Contribution ID: 67

Type: **not specified**

LFU measurements of FCNC decays and anomalies in $b \rightarrow s\ell^+\ell^-$ transitions

Friday, 27 October 2023 09:00 (20 minutes)

Presenter: MOISE, Razvan-Daniel (Rheinisch Westfaelische Tech. Hoch. (DE))

Session Classification: Flavour Changing Neutral Currents

Contribution ID: **68**

Type: **not specified**

Recent results on charm and beauty FCNC decays

Friday, 27 October 2023 09:30 (20 minutes)

Presenter: MACCOLINI, Serena (Technische Universitaet Dortmund (DE))

Session Classification: Flavour Changing Neutral Currents

Contribution ID: **69**

Type: **not specified**

Prospects for Run 3 and beyond

Friday, 27 October 2023 10:00 (20 minutes)

Presenter: VIEITES DIAZ, Maria (CERN)

Session Classification: Flavour Changing Neutral Currents

Contribution ID: 70

Type: **not specified**

Theoretical challenges in predictions of $b \rightarrow sll$ observables

Friday, 27 October 2023 12:00 (20 minutes)

Presenter: REBOUD, Meril

Session Classification: Flavour Changing Neutral Currents

Contribution ID: 71

Type: **not specified**

Theory of rare charm decays

Friday, 27 October 2023 11:00 (20 minutes)

Presenter: Dr VALE SILVA, Luiz Henrique (IFIC, UV-CSIC)

Session Classification: Flavour Changing Neutral Currents

Contribution ID: 72

Type: **not specified**

Global analyses of rare $b \rightarrow d$ and $b \rightarrow s$ decays

Friday, 27 October 2023 11:30 (20 minutes)

Presenter: SMOLKOVIC, Aleks

Session Classification: Flavour Changing Neutral Currents

Contribution ID: 73

Type: **not specified**

An unbinned amplitude analysis of $B \rightarrow \pi \mu \mu$ decays

Friday, 27 October 2023 12:30 (20 minutes)

Presenters: MARSHALL, Alexander Mclean; MARSHALL, Alexander Mclean (University of Bristol (GB))

Session Classification: Flavour Changing Neutral Currents

Contribution ID: 74

Type: **not specified**

Updates on the determination of $|V_{cb}|$, $R(D^*)$ and $|V_{ub}|/|V_{cb}|$

Thursday, 26 October 2023 11:30 (15 minutes)

Presenter: VITTORIO, Ludovico (SNS, Pisa)

Session Classification: Flavour Changing Charged Currents