

# **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 19 October 2022 09:00 (15 minutes)*

**Presenter:** AMHIS, Yasmine Sara (IJCLab/CERN)

**Session Classification:** Welcome

Contribution ID: 3

Type: **not specified**

## LHCb Introduction

*Wednesday 19 October 2022 09:15 (30 minutes)*

**Presenter:** FONTANA, Marianna (Centre National de la Recherche Scientifique (FR))

**Session Classification:** Welcome

Contribution ID: 4

Type: **not specified**

## LFU measurements at LHCb

*Wednesday 19 October 2022 15:00 (20 minutes)*

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

**Session Classification:** Flavour changing charged currents

Contribution ID: 5

Type: **not specified**

## **Cabibbo angle anomaly: statistical assessment & New Physics interpretations**

*Wednesday 19 October 2022 15:30 (20 minutes)*

**Presenter:** PASSEMAR, Emilie

**Session Classification:** Flavour changing charged currents

Contribution ID: 6

Type: **not specified**

## SL measurements at LHCb - focus on $V_{cb}$

*Wednesday 19 October 2022 16:10 (20 minutes)*

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

**Session Classification:** Flavour changing charged currents

Contribution ID: 7

Type: **not specified**

## $V_{ub}$ **exclusive**

*Wednesday 19 October 2022 17:10 (20 minutes)*

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

**Session Classification:** Flavour changing charged currents



Contribution ID: 8

Type: **not specified**

$$b \rightarrow c\ell\nu \text{ \& } V_{cb}$$

*Wednesday 19 October 2022 16:35 (30 minutes)*

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

**Session Classification:** Flavour changing charged currents

Contribution ID: 9

Type: **not specified**

## Experimental overview of charm

*Wednesday 19 October 2022 09:45 (25 minutes)*

**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**

*Wednesday 19 October 2022 10:20 (20 minutes)*

**Presenter:** GAVRILOVA, Margarita (Cornell)

**Session Classification:** Mixing and CP violation

Contribution ID: **11**

Type: **not specified**

## **Direct $A_{CP}$ from charm final state interactions**

*Wednesday 19 October 2022 10:47 (20 minutes)*

**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

*Wednesday 19 October 2022 11:45 (25 minutes)*

**Presenter:** LI, Peilian (CERN)

**Session Classification:** Mixing and CP violation

Contribution ID: 13

Type: **not specified**

## NNLO for B Mixing

*Wednesday 19 October 2022 12:20 (20 minutes)*

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

**Session Classification:** Mixing and CP violation

Contribution ID: 14

Type: **not specified**

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

*Wednesday 19 October 2022 12:47 (20 minutes)*

**Presenter:** MALAMI, Eleftheria

**Session Classification:** Mixing and CP violation

Contribution ID: 15

Type: **not specified**

## Final discussion

*Wednesday 19 October 2022 17:35 (25 minutes)*

**Session Classification:** Flavour changing charged currents



Contribution ID: 16

Type: **not specified**

## New pentaquark states at LHCb

*Thursday 20 October 2022 09:00 (20 minutes)*

**Presenter:** POLYAKOV, Ivan (CERN)

**Session Classification:** QCD spectroscopy and exotic hadrons

Contribution ID: 17

Type: **not specified**

## Tetraquark studies at LHCb

*Thursday 20 October 2022 09:25 (20 minutes)*

**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**

*Thursday 20 October 2022 09:50 (20 minutes)*

**Presenter:** Dr ALBALADEJO SERRANO, Miguel (Universidad de Murcia)

**Session Classification:** QCD spectroscopy and exotic hadrons

Contribution ID: **19**

Type: **not specified**

# Hadronic resonances and exotics from lattice QCD

*Thursday 20 October 2022 10:45 (20 minutes)*

**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

*Thursday 20 October 2022 11:10 (20 minutes)*

**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

*Thursday 20 October 2022 13:35 (20 minutes)*

**Presenter:** LANGENBRUCH, Christoph Michael (Rheinisch Westfaelische Tech. Hoch. (DE))

**Session Classification:** Flavour Changing Neutral Currents

Contribution ID: 22

Type: **not specified**

## Lepton Flavour Violation

*Thursday 20 October 2022 14:00 (20 minutes)*

**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

*Thursday 20 October 2022 14:25 (15 minutes)*

**Presenter:** SCHACHT, Stefan (University of Manchester)

**Session Classification:** Flavour Changing Neutral Currents



Contribution ID: 24

Type: **not specified**

## Progress on QCD corrections to $b \rightarrow s\ell\ell$

*Thursday 20 October 2022 14:45 (20 minutes)*

**Presenter:** REBOUD, Meril

**Session Classification:** Flavour Changing Neutral Currents

Contribution ID: 25

Type: **not specified**

## Rare Charm and Strange results

*Thursday 20 October 2022 15:10 (20 minutes)*

**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

*Thursday 20 October 2022 16:05 (20 minutes)*

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

**Session Classification:** Flavour Changing Neutral Currents

Contribution ID: 27

Type: **not specified**

## Overview of BSM models

*Thursday 20 October 2022 16:30 (20 minutes)*

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

**Session Classification:** Model building for flavor physics

Contribution ID: 28

Type: **not specified**

## Neutral current anomalies and alps

*Thursday 20 October 2022 17:00 (20 minutes)*

**Presenter:** PESTANADALUZ, Maria

**Session Classification:** Model building for flavor physics

Contribution ID: 29

Type: **not specified**

## Flavor and mass hierarchies from extra dim

*Friday 21 October 2022 09:00 (20 minutes)*

**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

*Friday 21 October 2022 09:25 (20 minutes)*

**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

*Friday 21 October 2022 09:50 (20 minutes)*

**Presenter:** OLGOSO, Pablo

**Session Classification:** Model building for flavor physics



Contribution ID: 32

Type: **not specified**

## **Muonic forces and flavor universality**

*Friday 21 October 2022 10:15 (20 minutes)*

**Presenter:** THOMSEN, Anders Eller (Universität Bern)

**Session Classification:** Model building for flavor physics

Contribution ID: 33

Type: **not specified**

## Experimental Overview: EW+Direct

*Friday 21 October 2022 11:10 (20 minutes)*

**Presenter:** BARTER, William (University of Edinburgh)

**Session Classification:** EW physics and direct searches

Contribution ID: 34

Type: **not specified**

## W-mass Theory Overview

*Friday 21 October 2022 11:35 (20 minutes)*

**Presenter:** BAGNASCHI, Emanuele Angelo (CERN)

**Session Classification:** EW physics and direct searches

Contribution ID: 35

Type: **not specified**

## W mass measurement plans

*Friday 21 October 2022 12:00 (20 minutes)*

**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

*Friday 21 October 2022 14:00 (20 minutes)*

**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

*Friday 21 October 2022 14:25 (20 minutes)*

**Presenter:** ALLWICHER, Lukas

**Session Classification:** EW physics and direct searches

Contribution ID: 38

Type: **not specified**

## **Z boson production in pp and pPb**

*Friday 21 October 2022 14:50 (20 minutes)*

**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

*Thursday 20 October 2022 11:35 (20 minutes)*

**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**

*Thursday 20 October 2022 12:15 (1 hour)*

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

Contribution ID: 41

Type: **not specified**

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

*Wednesday 19 October 2022 14:30 (20 minutes)*

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

**Session Classification:** Flavour changing charged currents

Contribution ID: 42

Type: **not specified**

## wrap-up

*Friday 21 October 2022 16:45 (2 minutes)*

**Presenter:** AMHIS, Yasmine Sara (IJCLab/CERN)