

# Beauty 2016, Marseille, France



## Report of Contributions

Contribution ID: 1

Type: **not specified**

## **Theory in the LHC era: overview and vision**

*Monday, 2 May 2016 09:15 (45 minutes)*

**Presenter:** MURAYAMA, Hitoshi

**Session Classification:** Overview

Contribution ID: 2

Type: **not specified**

## Penguins in $\phi_s$ , $\phi_d$

*Monday, 2 May 2016 10:00 (30 minutes)*

**Presenter:** DE BRUYN, Kristof (CPPM, Aix Marseille Université, CNRS/IN2P3, Marseille, France)

**Session Classification:** b hadrons lifetime, mixing and CPV

Contribution ID: 3

Type: **not specified**

## Summary on theory

*Friday, 6 May 2016 11:10 (45 minutes)*

**Presenter:** EICHTEN, Estia (Fermilab)

**Session Classification:** Summaries

Contribution ID: 4

Type: **not specified**

## Experimental summary

*Friday, 6 May 2016 11:55 (45 minutes)*

**Presenter:** SCHUNE, Marie-Helene (Laboratoire de l'Accelérateur Lineaire (FR))

**Session Classification:** Summaries

Contribution ID: 5

Type: **not specified**

## **CP violating phase $\phi_s$ and $\Delta\Gamma$ s measurements at LHCb**

*Monday, 2 May 2016 11:00 (20 minutes)*

**Presenter:** VAZQUEZ SIERRA, Carlos (Universidade de Santiago de Compostela (ES))

**Session Classification:** b hadrons lifetime, mixing and CPV

Contribution ID: 6

Type: **not specified**

## **Lifetime, mixing and CPV in ATLAS**

*Monday, 2 May 2016 11:20 (20 minutes)*

**Presenter:** SKINNER, Malcolm Bruce (Lancaster University (GB))

**Session Classification:** b hadrons lifetime, mixing and CPV

Contribution ID: 7

Type: **not specified**

## **Measurement of CP violation in Bs- $\rightarrow$ Jpsi Phi decays with the CMS experiment**

*Monday, 2 May 2016 11:40 (20 minutes)*

**Presenter:** JARVINEN, Terhi Tuuli (Helsinki Institute of Physics (FI))

**Session Classification:** b hadrons lifetime, mixing and CPV



Contribution ID: 8

Type: **not specified**

## **CPV in mixing at LHCb**

*Monday, 2 May 2016 12:00 (20 minutes)*

**Presenter:** DE VRIES, Jacco Andreas (Nikhef National institute for subatomic physics (NL))

**Session Classification:** b hadrons lifetime, mixing and CPV

Contribution ID: **10**

Type: **not specified**

## **Theoretical review on spectroscopy including exotic states**

*Monday, 2 May 2016 14:00 (30 minutes)*

**Presenter:** LEBED, Richard (Arizona State University)

**Session Classification:** Spectroscopy, onia and exotics

Contribution ID: **11**

Type: **not specified**

## **Exotic quarkonium states at CMS**

*Monday, 2 May 2016 14:30 (20 minutes)*

**Presenter:** CRISTELLA, Leonardo (Università & INFN, Bari (IT))

**Session Classification:** Spectroscopy, onia and exotics

Contribution ID: 12

Type: **not specified**

## **Spectroscopy, onia including exotics at LHCb**

*Monday, 2 May 2016 14:50 (20 minutes)*

**Presenter:** CRAIK, Daniel Charles (University of Edinburgh (GB))

**Session Classification:** Spectroscopy, onia and exotics

Contribution ID: 13

Type: **not specified**

## **Spectroscopy, onia including exotics at ATLAS**

*Monday, 2 May 2016 15:10 (20 minutes)*

**Presenter:** LYUBUSHKIN, Vladimir (Joint Inst. for Nuclear Research (RU))

**Session Classification:** Spectroscopy, onia and exotics

Contribution ID: 14

Type: **not specified**

## **Spectroscopy including XYZ states at BESIII**

*Monday, 2 May 2016 15:30 (20 minutes)*

**Presenter:** WANG, LIANGLIANG

**Session Classification:** Spectroscopy, onia and exotics

Contribution ID: 15

Type: **not specified**

## **Review of Higgs results at LHC**

*Monday, 2 May 2016 16:20 (20 minutes)*

**Presenter:** FAVARETO, Andrea (Università degli Studi e INFN Genova)

**Session Classification:** High pT flavour physics

Contribution ID: 16

Type: **not specified**

## **Top results from the LHC (ATLAS and CMS results)**

*Monday, 2 May 2016 16:40 (20 minutes)*

**Presenter:** MOHANTY, Gagan (Tata Inst. of Fundamental Research (IN))

**Session Classification:** High pT flavour physics



Contribution ID: 17

Type: **not specified**

## **Theoretical review on new Higgs**

*Monday, 2 May 2016 17:00 (30 minutes)*

**Presenter:** BROD, Joachim (Johannes-Gutenberg-Universitaet Mainz)

**Session Classification:** High pT flavour physics

Contribution ID: **18**

Type: **not specified**

## **ATLAS performance in run 2**

*Wednesday, 4 May 2016 11:50 (20 minutes)*

**Presenter:** PANDURO VAZQUEZ, Jose Guillermo (Royal Holloway, University of London)

**Session Classification:** Instrumentation

Contribution ID: **19**

Type: **not specified**

## **Theoretical overview on rare decays**

*Tuesday, 3 May 2016 09:00 (30 minutes)*

**Presenter:** LUNGI, Enrico (Indiana University (US))

**Session Classification:** Semileptonic and rare decays

Contribution ID: 20

Type: **not specified**

## **Semileptonic at LHCb (RD\*)**

*Tuesday, 3 May 2016 09:30 (20 minutes)*

**Presenter:** CIEZAREK, Gregory Max (Nikhef National institute for subatomic physics (NL))

**Session Classification:** Semileptonic and rare decays

Contribution ID: 21

Type: **not specified**

## **Theoretical review on semileptonic decays including $|V_{cb}|$**

*Tuesday, 3 May 2016 09:50 (30 minutes)*

**Presenter:** GAMBINO, paolo (università di torino)

**Session Classification:** Semileptonic and rare decays

Contribution ID: 22

Type: **not specified**

## **Semileptonic at B-factories (RD, RD\*)**

*Tuesday, 3 May 2016 10:20 (20 minutes)*

**Presenter:** HASENBUSCH, Jan

**Session Classification:** Semileptonic and rare decays

Contribution ID: 23

Type: **not specified**

## **Rare/semi-rare decays ( $B \rightarrow K^* \mu \mu$ , $B \rightarrow \mu \mu$ , ...) at ATLAS**

*Tuesday, 3 May 2016 11:10 (20 minutes)*

**Presenter:** DE SANCTIS, Umberto (University of Sussex (GB))

**Session Classification:** Semileptonic and rare decays

Contribution ID: 24

Type: **not specified**

## **B to $K^*l\bar{l}$ and rare decays at CMS**

*Tuesday, 3 May 2016 11:30 (20 minutes)*

**Presenter:** BOLETTI, Alessio (Universita e INFN, Padova (IT))

**Session Classification:** Semileptonic and rare decays



Contribution ID: 25

Type: **not specified**

## **Form factors for $B_s \rightarrow K\ell\nu$ decays from lattice HQET**

*Tuesday, 3 May 2016 11:50 (5 minutes)*

**Presenter:** KOREN, Mateusz (NIC, DESY Zeuthen)

**Session Classification:** Poster session

Contribution ID: 26

Type: **not specified**

## **Precision measurement of decay-rate asymmetries in $D^0 \rightarrow hh$ modes using the full LHCb Run-I sample**

*Tuesday, 3 May 2016 11:55 (5 minutes)*

**Presenter:** MARINO, Pietro (SNS & INFN-Pisa (IT))

**Session Classification:** Poster session

Contribution ID: 27

Type: **not specified**

## **Measurement of the branching fraction ratio $\text{Br}(\text{Bc} \rightarrow \Psi(2\text{S}) \pi) / \text{Br}(\text{Bc} \rightarrow \text{J}\psi \pi)$ at LHCb**

*Tuesday, 3 May 2016 12:00 (5 minutes)*

**Presenter:** AN, Liupan (Ecole Polytechnique Federale de Lausanne (CH))

**Session Classification:** Poster session

Contribution ID: 28

Type: **not specified**

## **Measurement of correlations between heavy-favour decay electrons and unidentified charged particles in p-Pb collisions at $\sqrt{s_{NN}} = 5.02$ TeV and in pp collisions at 7TeV**

*Tuesday, 3 May 2016 12:10 (5 minutes)*

**Presenter:** MAS, Alexis (Universidade de Sao Paulo (BR))

**Session Classification:** Poster session

Contribution ID: 29

Type: **not specified**

## **b-anomalies related to leptons and LFUV**

*Tuesday, 3 May 2016 14:00 (30 minutes)*

**Presenter:** CRIVELLIN, Andreas (CERN)

**Session Classification:** Semileptonic and rare decays

Contribution ID: **30**

Type: **not specified**

## **Electroweak penguins with di-leptons, including $K^*$ $\mu\mu$ , $R_K$ , ...**

*Tuesday, 3 May 2016 14:30 (20 minutes)*

**Presenter:** PETRIDIS, Konstantinos (University of Bristol (GB))

**Session Classification:** Semileptonic and rare decays

Contribution ID: 31

Type: **not specified**

## **Semileptonic B decays at LHCb ( $V_{ub}$ )**

*Tuesday, 3 May 2016 14:50 (20 minutes)*

**Presenter:** KHANJI, Basem (Universita & INFN, Milano-Bicocca (IT))

**Session Classification:** Semileptonic and rare decays

Contribution ID: 32

Type: **not specified**

## **Radiative electroweak penguin decays at LHCb**

*Tuesday, 3 May 2016 15:10 (20 minutes)*

**Presenter:** XU, Zhirui (Ecole Polytechnique Federale de Lausanne (CH))

**Session Classification:** Semileptonic and rare decays



Contribution ID: 33

Type: **not specified**

## **Hadronic uncertainties in semileptonic B decays**

*Tuesday, 3 May 2016 15:30 (30 minutes)*

**Presenter:** MARTIN CAMALICH, Jorge (Johannes Universitat Mainz)

**Session Classification:** Semileptonic and rare decays

Contribution ID: 34

Type: **not specified**

## **BSM fits for rare B decays**

*Tuesday, 3 May 2016 16:30 (30 minutes)*

**Presenter:** DESCOTES-GENON, Sébastien (CNRS)

**Session Classification:** Semileptonic and rare decays

Contribution ID: 35

Type: **not specified**

## **EW and radiative penguin transitions from B-factories**

*Tuesday, 3 May 2016 17:00 (20 minutes)*

**Presenter:** AKAR, Simon (CPPM, Aix-Marseille Université, CNRS/IN2P3, Marseille, France)

**Session Classification:** Semileptonic and rare decays

Contribution ID: 36

Type: **not specified**

## Very rare decays at LHCb

*Tuesday, 3 May 2016 17:20 (20 minutes)*

**Presenter:** EVANS, Hannah Mary (University of Cambridge (GB))

**Session Classification:** Semileptonic and rare decays

Contribution ID: 37

Type: **not specified**

## Beyond the Standard Model

*Tuesday, 3 May 2016 17:40 (30 minutes)*

**Presenter:** OKADA, Yasuhiro (KEK)

**Session Classification:** Semileptonic and rare decays

Contribution ID: **38**

Type: **not specified**

## **Lattice QCD**

*Monday, 2 May 2016 17:30 (30 minutes)*

**Presenter:** VAN DE WATER, Ruth (Brookhaven National Laboratory)

**Session Classification:** Lattice

Contribution ID: 39

Type: **not specified**

## **Renaissance of kaon flavour physics**

*Wednesday, 4 May 2016 09:00 (30 minutes)*

### **Summary**

**Presenter:** BURAS, Andrzej (Technical University Munich)

**Session Classification:** Kaons, EDM, LFV

Contribution ID: 40

Type: **not specified**

## NA62 results and prospects

*Wednesday, 4 May 2016 09:30 (20 minutes)*

**Primary author:** BUCCI, Francesca (Universita e INFN, Firenze (IT))

**Presenter:** BUCCI, Francesca (Universita e INFN, Firenze (IT))

**Session Classification:** Kaons, EDM, LFV



Contribution ID: 41

Type: **not specified**

## **ISR and tau physics at B-factories**

*Wednesday, 4 May 2016 09:50 (20 minutes)*

**Presenter:** SEREDNYAKOV, Sergey

**Session Classification:** Kaons, EDM, LFV

Contribution ID: 42

Type: **not specified**

## Theory of EDMs and LFV

*Wednesday, 4 May 2016 10:10 (30 minutes)*

**Presenter:** JUNG, Martin (TUM IAS / Excellence Cluster Universe)

**Session Classification:** Kaons, EDM, LFV

Contribution ID: 43

Type: **not specified**

## **LFV experiments (MEG, ...)**

*Wednesday, 4 May 2016 11:10 (20 minutes)*

**Presenter:** LANCASTER, Mark (University College London (UK))

**Session Classification:** Kaons, EDM, LFV

Contribution ID: 44

Type: **not specified**

## **BelleII: physics and early measurements**

*Wednesday, 4 May 2016 12:10 (30 minutes)*

**Presenter:** SHIU, Sjing-Ge (National Taiwan University (TW))

**Session Classification:** Future programs

Contribution ID: 45

Type: **not specified**

## **LHCb Run 2 trigger performance**

*Wednesday, 4 May 2016 11:30 (20 minutes)*

**Presenter:** SCIASCIA, Barbara (INFN (IT))

**Session Classification:** Instrumentation

Contribution ID: 46

Type: **not specified**

## **D0-D0bar mixing and rare D decays as probes of NP**

*Thursday, 5 May 2016 09:00 (30 minutes)*

**Presenter:** PETROV, Alexey (Wayne State University)

**Session Classification:** Charm physics

Contribution ID: 47

Type: **not specified**

## Charm CPV and rare decays at LHCb

*Thursday, 5 May 2016 09:30 (20 minutes)*

**Presenter:** MORELLO, Michael J. (SNS and INFN-Pisa (IT))

**Session Classification:** Charm physics

Contribution ID: 48

Type: **not specified**

## Charm at B-factories

*Thursday, 5 May 2016 09:50 (20 minutes)*

**Presenter:** LI, LongKe

**Session Classification:** Charm physics



Contribution ID: 49

Type: **not specified**

## Charm at BESIII

*Thursday, 5 May 2016 10:10 (20 minutes)*

**Presenter:** LI, Peirong

**Session Classification:** Charm physics

Contribution ID: 50

Type: **not specified**

## Non-leptonic D decays

*Thursday, 5 May 2016 10:50 (30 minutes)*

**Presenter:** Dr SCHACHT, Stefan (Karlsruhe Institute of Technology (KIT))

**Session Classification:** Charm physics

Contribution ID: 51

Type: **not specified**

## **Heavy flavour production at ATLAS**

*Thursday, 5 May 2016 11:20 (20 minutes)*

**Presenter:** WALDER, James William (Lancaster University (GB))

**Session Classification:** Heavy flavor production

Contribution ID: 52

Type: **not specified**

## Heavy flavour production at CMS

*Thursday, 5 May 2016 11:40 (20 minutes)*

**Presenter:** NEGRO, Giulia (CEA/IRFU,Centre d'étude de Saclay Gif-sur-Yvette (FR))

**Session Classification:** Heavy flavor production

Contribution ID: 53

Type: **not specified**

## **Heavy flavour production at LHCb**

*Thursday, 5 May 2016 12:00 (20 minutes)*

**Presenter:** BARSUK, Sergey (Laboratoire de l'Accelérateur Lineaire (FR))

**Session Classification:** Heavy flavor production

Contribution ID: 54

Type: **not specified**

## **Heavy flavour production in ion collisions**

*Thursday, 5 May 2016 12:20 (20 minutes)*

**Presenter:** PRINO, Francesco (Universita e INFN Torino (IT))

**Session Classification:** Heavy flavor production

Contribution ID: 55

Type: **not specified**

## **Theoretical overview on CP violation**

*Thursday, 5 May 2016 14:00 (30 minutes)*

**Presenter:** CHARLES, Jérôme (CPT Marseille)

**Session Classification:** CP violation including gamma

Contribution ID: 56

Type: **not specified**

## **Gamma measurements at LHCb**

*Thursday, 5 May 2016 14:30 (20 minutes)*

**Presenter:** CHEUNG, Faye (University of Oxford (GB))

**Session Classification:** CP violation including gamma



Contribution ID: 57

Type: **not specified**

## **Hadronic B/Bs decays results (including CPV, gamma) at B-factories**

*Thursday, 5 May 2016 14:50 (20 minutes)*

**Presenter:** MOHANTY, Gagan (Tata Inst. of Fundamental Research (IN))

**Session Classification:** CP violation including gamma

Contribution ID: 58

Type: **not specified**

## Charmless B decays at LHCb

*Thursday, 5 May 2016 15:10 (20 minutes)*

**Presenter:** EKLUND, Lars (University of Glasgow (GB))

**Session Classification:** CP violation including gamma

Contribution ID: 59

Type: **not specified**

## **Multibody charmless b-hadron decays**

*Thursday, 5 May 2016 15:30 (20 minutes)*

**Presenter:** DUJANY, Giulio (University of Manchester (GB))

**Session Classification:** CP violation including gamma

Contribution ID: **60**

Type: **not specified**

## **B decays to open charm**

*Thursday, 5 May 2016 16:30 (20 minutes)*

**Presenter:** HAINES, Susan Carol (University of Cambridge (GB))

**Session Classification:** CP violation including gamma

Contribution ID: 61

Type: **not specified**

## **B hadron properties (lifetimes, BR and polarisation, b-baryons, Bc, ...)**

*Thursday, 5 May 2016 16:50 (20 minutes)*

### **Summary**

**Presenter:** HEREDIA DE LA CRUZ, Ivan (Centro Invest. Estudios Avanz. IPN (MX))

**Session Classification:** b-hadrons properties

Contribution ID: 62

Type: **not specified**

## **b-hadrons decays at ATLAS**

*Thursday, 5 May 2016 17:10 (20 minutes)*

**Presenter:** TURCHIKHIN, Semen (M.V. Lomonosov Moscow State University (RU))

**Session Classification:** b-hadrons properties

Contribution ID: **63**

Type: **not specified**

## **b-hadrons decays at LHCb**

*Thursday, 5 May 2016 17:30 (20 minutes)*

**Presenter:** POLUEKTOV, Anton (University of Warwick (GB))

**Session Classification:** b-hadrons properties

Contribution ID: **64**

Type: **not specified**

## **LHCb upgrade**

*Thursday, 5 May 2016 17:50 (20 minutes)*

**Presenter:** SIMI, Gabriele (Universita e INFN, Padova (IT))

**Session Classification:** Future programs



Contribution ID: 65

Type: **not specified**

## **SuperKEKB, Beast and BelleII prospects**

*Friday, 6 May 2016 09:00 (30 minutes)*

**Presenter:** NAYAK, Minakshi (Indian Institute of Technology Madras)

**Session Classification:** Future programs

Contribution ID: **66**

Type: **not specified**

## **LHCb long term plans beyond the current upgrade**

*Friday, 6 May 2016 10:10 (20 minutes)*

**Presenter:** TEUBERT, Frederic (CERN)

**Session Classification:** Future programs

Contribution ID: 67

Type: **not specified**

## **ATLAS future upgrade**

*Friday, 6 May 2016 09:30 (20 minutes)*

**Presenter:** VANKOV, Peter (Nikhef National institute for subatomic physics (NL))

**Session Classification:** Future programs

Contribution ID: **68**

Type: **not specified**

## **B physics with CMS upgraded detector**

*Friday, 6 May 2016 09:50 (20 minutes)*

**Presenter:** PALLA, Fabrizio (Universita di Pisa & INFN (IT))

**Session Classification:** Future programs

Contribution ID: **69**

Type: **not specified**

## **Extreme flavor factories (FCC, ...)**

*Friday, 6 May 2016 10:50 (20 minutes)*

**Presenter:** MONTEIL, Stephane (Univ. Blaise Pascal Clermont-Fe. II (FR))

**Session Classification:** Future programs

Contribution ID: 70

Type: **not specified**

## **Precise measurement of the branching fraction of $B^0$ to $D^{*3}\pi$**

*Tuesday, 3 May 2016 12:05 (5 minutes)*

**Presenter:** WANG, LIANGLIANG

**Session Classification:** Poster session

Contribution ID: 71

Type: **not specified**

## **Measurement of CP violation and mixing in $B_s \rightarrow J/\psi \phi$ in ATLAS**

*Tuesday, 3 May 2016 12:15 (5 minutes)*

**Presenter:** JAKOUBEK, Tomas (Acad. of Sciences of the Czech Rep. (CZ))

**Session Classification:** Poster session

Contribution ID: 72

Type: **not specified**

## **ATLAS Topological Level-1 Trigger used in Run-2 for B0(s) to mu+mu- searches**

*Tuesday, 3 May 2016 12:20 (5 minutes)*

**Presenter:** DE SANCTIS, Umberto (University of Sussex (GB))

**Session Classification:** Poster session



Contribution ID: 73

Type: **not specified**

## **B\_c decays from highly improved staggered quarks and NRQCD**

*Tuesday, 3 May 2016 12:25 (5 minutes)*

We use both non-relativistic QCD (NRQCD) and fully relativistic formalisms to calculate semileptonic form factors for the decays  $B_c \rightarrow \eta_c \ell \nu$  and  $B_c \rightarrow J/\psi \ell \nu$  over the entire  $q^2$  range. To achieve this we employ a highly improved lattice quark action and at several lattice spacings down to  $a=0.044$  fm, which allow a fully relativistic treatment of charm and simulation of the full  $q^2$  range with controlled continuum extrapolation. We have two ways of treating the b quark: either with an  $O(\alpha_s)$  improved NRQCD formalism or by extrapolating a heavy mass  $m_h$  to  $m_b$  in the relativistic formalism. We find good agreement between these approaches which provides an important cross-check of our results.

**Presenter:** LYTLE, Andrew (University of Glasgow)

**Session Classification:** Poster session

Contribution ID: 74

Type: **not specified**

## Matching of gauge invariant dimension 6 operators for b to s and b to c transitions

*Tuesday, 3 May 2016 12:30 (5 minutes)*

New physics realized above the electroweak scale can be encoded in a model independent way in the Wilson coefficients of higher dimensional operators which are invariant under the Standard Model gauge group. In this talk, I present the matching of the  $SU(3)_C \times SU(2)_L \times U(1)_Y$  gauge invariant dim-6 operators on the standard B physics Hamiltonian relevant for b  $\rightarrow$  s and b  $\rightarrow$  c transitions. The matching is performed at the electroweak scale (after spontaneous symmetry breaking) by integrating out the top quark, W, Z and the Higgs particle. We first carried out the matching of the dim-6 operators that give a contribution at tree level to the low energy Hamiltonian. In a second step, we identified those gauge invariant operators that do not enter b  $\rightarrow$  s transitions already at tree level, but can give relevant one-loop matching effects.

**Presenter:** AEBISCHER, Jason (University of Bern)

**Session Classification:** Poster session

Contribution ID: 75

Type: **not specified**

## **Introduction to Beauty 2016 by the local chairman**

*Monday, 2 May 2016 09:00 (5 minutes)*

**Presenter:** LEROY, Olivier (CPPM, Aix Marseille Université, CNRS/IN2P3, Marseille, France)

**Session Classification:** Welcome

Contribution ID: 76

Type: **not specified**

## Welcome by the CPPM director

*Monday, 2 May 2016 09:05 (10 minutes)*

**Presenter:** KAJFASZ, Eric (Centre National de la Recherche Scientifique (FR))

**Session Classification:** Welcome