

FPCP 2017 - Flavor Physics & CP Violation



Report of Contributions

Contribution ID: 2

Type: **not specified**

Charmonium / bottomonium production at the colliders

Tuesday 6 June 2017 09:00 (30 minutes)

Presenter: KARLINER, Marek (Tel Aviv University (IL))

Session Classification: HF production / Spectroscopy

Contribution ID: 3

Type: **not specified**

Lepton flavour violation in the meson sector

Monday 5 June 2017 16:00 (30 minutes)

Presenter: MARTIN CAMALICH, Jorge (CERN)

Session Classification: Semileptonic & leptonic B decays

Contribution ID: 4

Type: **not specified**

Lepton flavour violation in the lepton sector

Wednesday 7 June 2017 09:00 (30 minutes)

Presenter: TSUMURA, KOJI (Kyoto University)

Session Classification: Neutrino

Contribution ID: 5

Type: **not specified**

B -> D(*) form factors in the lattice QCD

Monday 5 June 2017 14:00 (30 minutes)

Presenter: LAIHO, John (FNAL)

Session Classification: Lattice QCD

Contribution ID: 6

Type: **not specified**

Lattice QCD overview

Monday 5 June 2017 12:00 (30 minutes)

Presenter: MACKENZIE, Paul (Fermilab)

Session Classification: Lattice QCD

Contribution ID: 7

Type: **not specified**

Leptonic CP violation in the charged sector and EFT approach

Tuesday 6 June 2017 14:00 (30 minutes)

Presenter: PRUNA, Giovanni Marco

Session Classification: CPV

Contribution ID: 8

Type: **not specified**

SUSY flavour / Flavour sector in BSM scenarios

Thursday 8 June 2017 14:00 (30 minutes)

Presenter: CRIVELLIN, Andreas

Session Classification: Top, Higgs, Energy frontier BSM Searches

Contribution ID: 9

Type: **not specified**

Kaon decays

Monday 5 June 2017 11:00 (30 minutes)

Presenter: BLAZEK, Tomas (Faculty of Mathematics and Physics (FMFI)-Comenius University)

Session Classification: Rare K

Contribution ID: 11

Type: **not specified**

epsilon'/epsilon

Thursday 8 June 2017 14:30 (30 minutes)

Presenter: SACHRAJDA, Christopher (University of Southampton)

Session Classification: Top, Higgs, Energy frontier BSM Searches

Contribution ID: 12

Type: **not specified**

Overview of rare B-decays (Bs -> $\mu\mu$, B -> $K^*\ell\ell$, etc.)

Monday 5 June 2017 15:00 (30 minutes)

Presenter: PRISCIANDARO, Jessica (Universidade de Santiago de Compostela (ES))

Session Classification: Semileptonic & leptonic B decays

Contribution ID: 13

Type: **not specified**

B -> D(*) tau nu overview

Monday 5 June 2017 14:30 (30 minutes)

Presenter: WORMSER, Guy (LAL Orsay)

Session Classification: Semileptonic & leptonic B decays

Contribution ID: 14

Type: **not specified**

Tests of lepton universality at the LHCb

Monday 5 June 2017 17:00 (30 minutes)

Presenter: COQUEREAU, Samuel (University of Barcelona (ES))

Session Classification: Semileptonic & leptonic B decays

Contribution ID: 15

Type: **not specified**

Overview of hadron flavour production

Tuesday 6 June 2017 09:30 (30 minutes)

Presenter: GANDINI, Paolo (University of Oxford (GB))

Session Classification: HF production / Spectroscopy

Contribution ID: 16

Type: **not specified**

Associated production with onia, double onia production at the LHC

Tuesday 6 June 2017 10:00 (30 minutes)

Presenter: BOUHOVA-THACKER, Eva (Lancaster University (GB))

Session Classification: HF production / Spectroscopy

Contribution ID: 17

Type: **not specified**

Overview of UT angle gamma/phi3 measurements

Tuesday 6 June 2017 15:00 (30 minutes)

Presenter: DALSENO, Jeremy Peter (University of Bristol (GB))

Session Classification: CPV

Contribution ID: **18**

Type: **not specified**

Overview of CPV parameter ϕ_s determination

Tuesday 6 June 2017 16:00 (30 minutes)

Presenter: CHOBANOVA, Veronika Georgieva (Universidade de Santiago de Compostela (ES))

Session Classification: CPV

Contribution ID: 19

Type: **not specified**

Overview of XYZ states and tetraquarks

Tuesday 6 June 2017 11:00 (30 minutes)

Presenter: SHEN, Chengping (Beihang University (CN))

Session Classification: HF production / Spectroscopy

Contribution ID: **20**

Type: **not specified**

Overview on pentaquarks

Tuesday 6 June 2017 11:30 (30 minutes)

Presenter: DEY, Biplab (INFN Milano)

Session Classification: HF production / Spectroscopy

Contribution ID: 21

Type: **not specified**

Top quark production and properties at the LHC

Thursday 8 June 2017 15:00 (30 minutes)

Presenter: CRISTINZIANI, Markus (University of Bonn (DE))

Session Classification: Top, Higgs, Energy frontier BSM Searches

Contribution ID: 22

Type: **not specified**

Status of UT angles alpha/phi2 and beta/phi1

Tuesday 6 June 2017 14:30 (30 minutes)

Presenter: ALBERT, Justin (University of Victoria (CA))

Session Classification: CPV

Contribution ID: 23

Type: **not specified**

Precise measurements of oscillation parameters, theta13 and m2 difference

Wednesday 7 June 2017 09:30 (30 minutes)

Presenter: ZHANG, Qingmin (Xi'an Jiaotong University)

Session Classification: Neutrino

Contribution ID: 24

Type: **not specified**

Sterile neutrino overview

Wednesday 7 June 2017 10:00 (30 minutes)

Presenter: LING, Jiajie (BNL)

Session Classification: Neutrino

Contribution ID: 25

Type: **not specified**

Latest results from T2K

Wednesday 7 June 2017 11:00 (30 minutes)

Presenter: HAIGH, Jennifer (Warwick University)

Session Classification: Neutrino

Contribution ID: 26

Type: **not specified**

NA48/62 latest results

Monday 5 June 2017 11:30 (30 minutes)

Presenter: Mr MARCHEVSKI, Radoslav (Johannes-Gutenberg-Universitaet Mainz (DE))

Session Classification: Rare K

Contribution ID: 27

Type: **not specified**

Search for dark forces in flavor experiments

Thursday 8 June 2017 09:00 (30 minutes)

Presenter: CZANK, Thomas (Universidade de Sao Paulo (BR))

Session Classification: Tau / $g-2$ / Dark / Muons

Contribution ID: **28**

Type: **not specified**

SuperKEKB / Belle II status

Friday 9 June 2017 11:00 (30 minutes)

Presenter: DE SANGRO, Riccardo (INFN - LNF)

Session Classification: Future experiments

Contribution ID: 29

Type: **not specified**

Belle II physics prospects

Friday 9 June 2017 10:00 (30 minutes)

Presenter: GUIDO, Elisa (INFN Torino)

Session Classification: Future experiments

Contribution ID: **30**

Type: **not specified**

Plans and status of the LHCb upgrade

Friday 9 June 2017 12:00 (30 minutes)

Presenter: SZUMLAK, Tomasz (AGH University of Science and Technology (PL))

Session Classification: Future experiments

Contribution ID: **31**

Type: **not specified**

LHCb upgrade physics prospects

Friday 9 June 2017 11:30 (30 minutes)

Presenter: MARTINEZ SANTOS, Diego (Universidade de Santiago de Compostela (ES))

Session Classification: Future experiments

Contribution ID: 32

Type: **not specified**

Overview of SM and Higgs results at ATLAS and CMS

Thursday 8 June 2017 16:00 (30 minutes)

Presenter: MASSIRONI, Andrea (Northeastern University (US))

Session Classification: Top, Higgs, Energy frontier BSM Searches

Contribution ID: 33

Type: **not specified**

BSM / SUSY / Exotics searches at ATLAS and CMS

Thursday 8 June 2017 16:30 (30 minutes)

Presenter: ROMPOTIS, Nikolaos (University of Liverpool (UK))

Session Classification: Top, Higgs, Energy frontier BSM Searches

Contribution ID: 34

Type: **not specified**

Higgs flavor specific decays at ATLAS and CMS

Thursday 8 June 2017 17:00 (30 minutes)

Presenters: JESSOP, Colin (Notre Dame); JESSOP, Colin (University of Notre Dame (US))

Session Classification: Top, Higgs, Energy frontier BSM Searches

Contribution ID: 35

Type: **not specified**

Charm hadron physics at BESIII

Monday 5 June 2017 10:00 (30 minutes)

Presenter: ZHOU, Xiaokang (USTC)

Session Classification: Charm physics

Contribution ID: 36

Type: **not specified**

Overview of the CP violation and mixing in the charm sector

Thursday 8 June 2017 12:00 (30 minutes)

Presenter: GERSABECK, Evelina Mihova (Ruprecht-Karls-Universitaet Heidelberg (DE))

Session Classification: CPV(2)

Contribution ID: 37

Type: **not specified**

Charm semileptonic physics at BESIII

Monday 5 June 2017 09:30 (30 minutes)

Presenter: FANG, Yi (IHEP)

Session Classification: Charm physics

Contribution ID: **38**

Type: **not specified**

Overview of the $g-2$ status and related $e+e-$ measurements in Novosibirsk and by ISR

Thursday 8 June 2017 11:30 (30 minutes)

Presenter: DRUZHININ, Vladimir (BINP, Novosibirsk)

Session Classification: Tau / $g-2$ / Dark / Muons

Contribution ID: 39

Type: **not specified**

g-2 Theory

Thursday 8 June 2017 11:00 (30 minutes)

Presenter: MASJUAN QUERALT, Pere

Session Classification: Tau / g-2 / Dark / Muons

Contribution ID: 40

Type: **not specified**

Measurement of tau Michelle parameters

Thursday 8 June 2017 10:00 (30 minutes)

Presenter: SHIMIZU, Nobuhiro

Session Classification: Tau / g-2 / Dark / Muons

Contribution ID: 41

Type: **not specified**

HyperK project

Wednesday 7 June 2017 11:30 (30 minutes)

Presenter: LAGODA, Justyna (National Centre for Nuclear Research (PL))

Session Classification: Neutrino

Contribution ID: 42

Type: **not specified**

Reactor neutrino projects

Wednesday 7 June 2017 12:00 (30 minutes)

Presenter: WURM, Michael (JGU Mainz)

Session Classification: Neutrino

Contribution ID: 43

Type: **not specified**

Radiative and EW penguin B-decays ($B \rightarrow K^* \gamma$, $X_s \gamma$, $B \rightarrow h \nu \bar{\nu}$)

Monday 5 June 2017 16:30 (30 minutes)

Presenter: ISHIKAWA, Akimasa (Tohoku University (JP))

Session Classification: Semileptonic & leptonic B decays

Contribution ID: 44

Type: **not specified**

MEG results, MEG II and Mu2e prospects

Thursday 8 June 2017 09:30 (30 minutes)

Presenter: GRIGORIEV, Dmitri (BINP)

Session Classification: Tau / g-2 / Dark / Muons

Contribution ID: 45

Type: **not specified**

CP violation with b baryons

Tuesday 6 June 2017 16:30 (30 minutes)

Presenter: SMITH, Eluned Anne (Rheinisch-Westfaelische Tech. Hoch. (DE))

Session Classification: CPV

Contribution ID: 46

Type: **not specified**

Light hadrons and formfactors at BESIII

Tuesday 6 June 2017 12:00 (30 minutes)

Presenter: MIN, Tianjue (Institute of High Energy Physics, Beijing)

Session Classification: HF production / Spectroscopy

Contribution ID: 47

Type: **not specified**

Determination of Vub from inclusive measurements

Tuesday 6 June 2017 17:00 (30 minutes)

Presenter: SOFFER, Abi (Tel Aviv University (IL))

Session Classification: CPV

Contribution ID: 48

Type: **not specified**

Rare D-decays ($D^0 \rightarrow \nu \bar{\nu}$, $K_S K_S$, $K_S 3\pi$..., $B \rightarrow h \nu \bar{\nu}$)

Tuesday 6 June 2017 17:30 (30 minutes)

Presenter: BABU, Varghese (Tata Inst. of Fundamental Research (IN))

Session Classification: CPV

Contribution ID: 49

Type: **not specified**

New Physics implications from ϵ' / ϵ

Thursday 8 June 2017 17:30 (30 minutes)

Presenter: YAMAMOTO, Kei

Session Classification: Top, Higgs, Energy frontier BSM Searches

Contribution ID: 50

Type: **not specified**

Experimental summary of the conference

Friday 9 June 2017 14:30 (40 minutes)

Presenter: ARTUSO, Marina (Syracuse University (US))

Session Classification: Summary / Outlook / Closing

Contribution ID: 51

Type: **not specified**

Theoretical summary and Outlook

Friday 9 June 2017 15:10 (40 minutes)

Presenter: BLANKE, Monika

Session Classification: Summary / Outlook / Closing

Contribution ID: 52

Type: **not specified**

Closing remarks

Friday 9 June 2017 15:50 (10 minutes)

Presenter: DOLEZAL, Zdenek (Charles University (CZ))

Session Classification: Summary / Outlook / Closing

Contribution ID: 53

Type: **not specified**

Invitation to the next conference

Friday 9 June 2017 16:00 (10 minutes)

Presenter: GIRI, Anjan (IIT Hyderabad)

Session Classification: Summary / Outlook / Closing

Contribution ID: 54

Type: **not specified**

DUNE: Prospects and status

Friday 9 June 2017 09:30 (30 minutes)

Presenter: CORWIN, Luke (South Dakota School of Mines and Technology)

Session Classification: Neutrino

Contribution ID: 55

Type: **not specified**

ATLAS and CMS HL-LHC upgrades and Flavor physics prospects

Friday 9 June 2017 14:00 (30 minutes)

Presenter: SIMONETTO, Franco (Universita e INFN, Padova (IT))

Session Classification: Future experiments

Contribution ID: 56

Type: **not specified**

Opening

Monday 5 June 2017 09:00 (30 minutes)

Presenters: Prof. KRATOCHVÍL, Jan; DOLEZAL, Zdenek (Charles University (CZ))

Session Classification: Opening

Contribution ID: 57

Type: **Poster Abstracts**

Daya Bay calibration results

Monday 5 June 2017 17:45 (1 minute)

Presenter: LI, Xianan

Session Classification: Poster session

Contribution ID: **58**

Type: **not specified**

Lunch

Monday 5 June 2017 12:30 (1h 30m)

Session Classification: Lattice QCD

Contribution ID: 59

Type: **not specified**

Lunch

Tuesday 6 June 2017 12:30 (1h 30m)

Contribution ID: **60**

Type: **not specified**

Lunch

Wednesday 7 June 2017 12:30 (1h 30m)

Contribution ID: **61**

Type: **not specified**

Prague tour

Wednesday 7 June 2017 14:00 (4 hours)

Contribution ID: **62**

Type: **not specified**

Lunch

Thursday 8 June 2017 12:30 (1h 30m)

Contribution ID: **63**

Type: **not specified**

Lunch

Friday 9 June 2017 12:30 (1h 30m)

Session Classification: Future experiments

Contribution ID: **64**

Type: **not specified**

Conference dinner

Thursday 8 June 2017 19:30 (3h 30m)

Contribution ID: 65

Type: **Poster Abstracts**

Angular analysis of $B^0 \rightarrow K^* \mu^+ \mu^-$ decay with the ATLAS detector

Monday 5 June 2017 17:46 (2 minutes)

Presenter: CARLI, Ina (Charles University (CZ))

Session Classification: Poster session

Contribution ID: 66

Type: **Poster Abstracts**

Physics prospects at the HL-LHC with ATLAS

Monday 5 June 2017 17:48 (2 minutes)

Presenter: DUNCAN, Anna Kathryn (University of Glasgow (GB))

Session Classification: Poster session

Contribution ID: 67

Type: **Poster Abstracts**

Implication of ALEPH 30 GeV dimuon excess at the LHC

Monday 5 June 2017 17:56 (2 minutes)

Recent reanalysis of ALEPH data on $Z \rightarrow b\bar{b} + X$ seems to indicate an existence of the dimuon excess around 30 GeV with a branching fraction for $Z \rightarrow b\bar{b}\mu^+\mu^-$ around 1.1×10^{-5} .

We discuss three different types of simplified models for this possible excess.

In the first class of models, we assume a new resonance couples to both $b\bar{b}$ and $\mu^+\mu^-$.

In the second model, we assume that the 30 GeV excess is a new gauge boson Z' that couples to the SM b and a new vectorlike singlet B quark heavier than Z and not to $b\bar{b}$.

In the third model, we consider $Z \rightarrow Z'\phi$ followed by $Z' \rightarrow \mu^+\mu^-$ and $\phi \rightarrow b\bar{b}$ assuming that the Higgs field for Z' mass is also charged under the SM $U(1)_Y$ gauge symmetry.

We consider constraints on the models and investigate implication of the three models at the LHC.

Primary author: YU, Chaehyun (Korea University)

Co-authors: Dr LI, Jinmian (KIAS); Prof. KO, P. (KIAS)

Presenter: YU, Chaehyun (Korea University)

Session Classification: Poster session

Contribution ID: 68

Type: **Poster Abstracts**

CP violation in charmed hadron decays into neutral kaons

Monday 5 June 2017 17:52 (2 minutes)

CP violation has not been observed in the charm sector. We find new measurable effect of CP asymmetries in the non-leptonic charmed hadron decaying into neutral kaons in the Cabibbo-favored and doubly Cabibbo-suppressed processes. Compared to the CP asymmetries in the singly Cabibbo-suppressed processes, the advantages of this new effect include avoiding ambiguities in theory without penguin contributions, and having larger branching fractions for measurements in experiment. The values of such CP asymmetries are at the order of 10^{-3} and hence are accessible by the LHCb and Belle II experiments in the near future. Besides, the measurement and determination of time-dependent CP asymmetries at $t=0$ is a smoking gun of direct CP violation in charm decays and signal of new physics.

Primary author: YU, Fu-Sheng**Presenter:** YU, Fu-Sheng**Session Classification:** Poster session

Contribution ID: 69

Type: **Poster Abstracts**

B-physics studies for HL-LHC ATLAS upgrade

Monday 5 June 2017 17:50 (2 minutes)

B-physics studies for HL-LHC ATLAS upgrade

Primary author: JAKOUBEK, Tomas (Acad. of Sciences of the Czech Rep. (CZ))

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

Session Classification: Poster session

Contribution ID: 70

Type: **Poster Abstracts**

Search for new physics via baryon EDM at LHC

Monday 5 June 2017 17:54 (2 minutes)

Permanent electric dipole moments (EDMs) of fundamental particles provide powerful probes for physics beyond the Standard Model. We propose to search for the EDM of strange and charm baryons at LHC, extending the ongoing experimental program on the neutron, muon, atoms, molecules and light nuclei. The EDM of strange Λ baryons, selected from weak decays of charm baryons produced in pp collisions at LHC, can be determined by studying the spin precession in the magnetic field of the detector tracking system. A test of CPT symmetry can be performed by measuring the magnetic dipole moment of Λ and anti- Λ baryons. For short-lived Λ_{c^+} and Ξ_{c^+} baryons, to be produced in a fixed-target experiment using the 7 TeV LHC beam and channeled in a bent crystal, the spin precession is induced by the intense electromagnetic field between crystal atomic planes. A possible realisation of this programme would be at the LHCb experiment. In this scenario the experimental layout based on the LHCb detector and the expected sensitivities in the coming years are discussed, along with perspectives for the future.

Published in Eur. Phys. J. C (2017) 77:181, On the search for the electric dipole moment of strange and charm baryons at LHC

Primary authors: RUIZ VIDAL, Joan (Univ. of Valencia and CSIC (ES)); NERI, Nicola (CERN, Università degli Studi e INFN Milano (IT)); MARTINEZ VIDAL, Fernando (IFIC - University of Valencia and CSIC (ES)); MARANGOTTO, Daniele (Università degli Studi e INFN Milano (IT)); MERLI, Andrea (Università degli Studi e INFN Milano (IT))

Co-authors: BOTELLA OLCINA, Francisco Jose (Univ. of Valencia and CSIC (ES)); GARCIA MARTIN, Luis Miguel (Univ. of Valencia and CSIC (ES)); DE OYANGUREN CAMPOS, Arantza (Univ. of Valencia and CSIC (ES))

Presenter: RUIZ VIDAL, Joan (Univ. of Valencia and CSIC (ES))

Session Classification: Poster session

Contribution ID: 71

Type: **Poster Abstracts**

DsixTools: The Standard Model Effective Field Theory Toolkit

Monday 5 June 2017 17:58 (2 minutes)

I will present DsixTools, a Mathematica package for the handling of the dimension-six Standard Model Effective Field Theory. Among other features, DsixTools allows the user to perform the full one-loop Renormalization Group Evolution of the Wilson coefficients in the Warsaw basis. This is achieved thanks to the SMEFTrunner module, which implements the full one-loop anomalous dimension matrix previously derived in the literature. In addition, DsixTools also contains modules devoted to the matching to the $\Delta B = \Delta S = 1, 2$ and $\Delta B = \Delta C = 1$ operators of the Weak Effective Theory at the electroweak scale and their QCD and QED Renormalization Group Evolution below the electroweak scale.

Primary author: CELIS, Alejandro (Ludwig Maximilian University)

Presenter: CELIS, Alejandro (Ludwig Maximilian University)

Session Classification: Poster session

Contribution ID: 72

Type: **Poster Abstracts**

Scalar dark matter with top-quark portal

Monday 5 June 2017 18:00 (2 minutes)

A scalar dark matter model interacting with the standard model sector via top-quark portal as well as Higgs portal is presented. In the model a scalar dark matter S and a vector-like fermion T are new physics particles and assumed to have odd parity under a Z_2 symmetry, while all the standard model fields have even parity. The impacts of new top-quark portal interaction, $y_{ST}S\bar{T}t_R + h.c.$, on dark matter phenomenology and collider searches will be emphasized.

Primary author: BAEK, Seungwon

Co-authors: KO, Pyungwon (Korea Inst. for Advanced Study (KIAS)); WU, Peiwen (Korea Institute for Advanced Study (KIAS))

Presenter: BAEK, Seungwon

Session Classification: Poster session

Contribution ID: 73

Type: **Poster Abstracts**

B physics Beyond the Standard Model at One Loop: Complete Renormalization Group Evolution below the Electroweak Scale

Monday 5 June 2017 18:02 (2 minutes)

General analyses of B -physics processes beyond the Standard Model require accounting for operator mixing in the renormalization-group evolution from the matching scale down to the typical scale of B -meson mixing and decay. For this purpose the anomalous dimensions of the full set of local dimension-six operators beyond the Standard Model are needed. We present here for the first time a complete set of non-redundant dimension-six operators relevant for B physics, together with the complete one-loop anomalous dimensions in QCD and QED. These results are an important step towards the automation of general New Physics analyses.

Primary author: FAEL, Matteo (Unviersity of Bern)

Co-authors: VIRTO, Javier (Universitat Siegen); AEBISCHER, Jason (University of Bern); GREUB, Christoph (Univ. of Bern)

Presenter: FAEL, Matteo (Unviersity of Bern)

Session Classification: Poster session

Contribution ID: 74

Type: **Poster Abstracts**

iangmen Underground Neutrino Observatory (JUNO) facility and detector design

Monday 5 June 2017 18:04 (2 minutes)

iangmen Underground Neutrino Observatory (JUNO), a next generation underground reactor antineutrino experiment, is proposed to determine the neutrino mass hierarchy using a massive liquid scintillator detector underground. The experimental hall, spanning more than 50 meters, is under a granite mountain of over 700 m overburden. The central antineutrino detector, built with 35.4-meter diameter acrylic sphere, contains 20 kilotons of liquid scintillator and ~18,000 20 inch PMTs (and ~20,000 3 inch PMTs). The antineutrino detector is placed in a water pool shielding system which also functions as an active water Cherenkov veto detector. On the top of water pool is a Top Tracker system which further improves the muon track reconstruction. This poster presents the JUNO facility and detector design.

Primary author: LI, Xiaonan**Presenter:** LI, Xiaonan**Session Classification:** Poster session

Contribution ID: 75

Type: **Poster Abstracts**

Lepton asymmetry in S_3 extended Standard Model

Monday 5 June 2017 18:06 (2 minutes)

Standard Model (SM) of electroweak interaction seems to be complete and consistent with almost all the data obtained so far, nevertheless, some deviations in the B sector are observed apart from the neutrino oscillation. It is believed that the SM is not a complete theory as we cannot explain the matter-anti matter asymmetry in our Universe in addition to the fact that the visible Universe contains just $\sim 5\%$ of the total energy budget. We consider Leptogenesis in a minimal S_3 extended standard model with a Higgs doublet and 3 right handed singlet Majorana neutrinos. We study the neutrino phenomenology from the flavor structure of the S_3 invariant mass matrix and obtained the allowed parameter space for Dirac and Majorana phases. We have chosen the out of equilibrium decays of the right handed Majorana neutrinos to be in the temperature range of 10^9 to 10^{12} GeV, where one flavor approximation is ruled out as the tau lepton comes to equilibrium. Hence we can distinguish between the τ and other leptons flavor. Thereafter, we generate the lepton asymmetry by adding flavor effects coming individually from both τ and other leptons sector. This two flavor approximation can generate an appreciable lepton asymmetry which can convert to the baryon asymmetry through sphaleron process which is in compatible with the experimental observation.

Primary authors: MISHRA, Subhasmita (IIT Hyderabad); GIRI, Anjan (IIT Hyderabad)

Presenter: GIRI, Anjan (IIT Hyderabad)

Session Classification: Poster session

Contribution ID: 76

Type: **Poster Abstracts**

JUNO supernovae neutrino potential

Monday 5 June 2017 18:08 (2 minutes)

Determination of neutrino mass hierarchy is the main purpose of Jiangmen Underground Neutrino Observatory (JUNO). JUNO is designed to determine neutrino mass hierarchy by a detailed examination of the spectrum of electron antineutrinos from nuclear reactors. The analysis of neutrino energy spectra emitted by a supernova represents another possible way to determine neutrino mass hierarchy because neutrino flavor conversions occurring inside the supernova are sensitive to neutrino mass hierarchy. The aim of this study is to explore the possibility of JUNO to distinguish between neutrino flavors coming in a supernova burst and measure their energy spectra. A set of observables and criteria is proposed that enable on the basis of measured neutrino energy spectra to distinguish between normal and inverted neutrino mass hierarchy and to prove or disprove some supernova theoretical models.

Presenter: DVORAK, Martin (Charles University Prague)

Session Classification: Poster session

Contribution ID: 77

Type: **Poster Abstracts**

Alignment and physics performance of the Belle II vertex detector

Monday 5 June 2017 18:10 (2 minutes)

The Belle II experiment at the SuperKEKB accelerator will start to take physics data in 2018. One of the major upgrades of the Belle II detector introduces a DEPFET pixel sensors in the two innermost layers of its silicon vertex detector, followed by four layers of silicon strip sensors. Excellent performance of the vertex reconstruction is a crucial ingredient in CP violation measurements and will require reliable and fast alignment procedure and continuous monitoring of the detector performance. To address the possible systematic errors of the procedure, a dedicated study has been performed to identify and evaluate influence of possible random and systematic deformations of the vertex detector on physics observables.

Presenters: KANDRA, Jakub (Charles University); BILKA, Tadeas

Session Classification: Poster session

Contribution ID: 78

Type: **not specified**

NOvA latest results

Friday 9 June 2017 09:00 (30 minutes)

Presenter: JEDINY, Filip (Czech Technical University (CZ))

Session Classification: Neutrino

Contribution ID: 79

Type: **Poster Abstracts**

Toward phi3 extraction in a time-dependent study of D* rho at Belle

Monday 5 June 2017 18:12 (2 minutes)

Presenter: CERVENKOV, Daniel (Charles University in Prague)

Session Classification: Poster session

Contribution ID: **80**

Type: **Poster Abstracts**

Searching for Lightweight Dark Matter in NOvA Near Detector

Monday 5 June 2017 18:14 (2 minutes)

Presenter: JEDINY, Filip (Czech Technical University (CZ))

Session Classification: Poster session

Contribution ID: **81**

Type: **Poster Abstracts**

HAMMER : Reweighting Tool for simulated data samples

Monday 5 June 2017 18:16 (2 minutes)

Presenter: LIGETI, Zoltan (Lawrence Berkeley National Lab. (US))

Session Classification: Poster session

Contribution ID: **82**

Type: **not specified**

Invitation for the next conference 2

Friday 9 June 2017 16:10 (15 minutes)

Presenter: EGEDE, Ulrik (Imperial College (GB))

Session Classification: Summary / Outlook / Closing