The 8th International Workshop on the CKM Unitarity Triangle

Report of Contributions

https://indico.cern.ch/e/253826

Contribution ID: **5** Type: **not specified**

Interplay between flavor violating and flavor diagonal CPV in charm

Thursday, 11 September 2014 17:40 (20 minutes)

Presenter: SALA, Filippo (Scuola Normale Superiore, Pisa)

Session Classification: WG7

Contribution ID: **6** Type: **not specified**

D-Dbar mixing, Charm CPV and NP

Tuesday, 9 September 2014 16:45 (25 minutes)

Presenter: Dr ALTMANNSHOFER, Wolfgang (Fermilab)

Session Classification: WG7

Contribution ID: **7** Type: **not specified**

CPV in radiative and rare D decays

Thursday, 11 September 2014 18:00 (20 minutes)

Presenter: KOŠNIK, Nejc (J. Stefan Institute)

Session Classification: WG7

Contribution ID: **8** Type: **not specified**

SU(3) methods and CPV in D decays

Tuesday, 9 September 2014 18:20 (20 minutes)

Presenter: SCHACHT, Stefan (TU Dortmund)

Session Classification: WG7

Contribution ID: **9** Type: **not specified**

Welcome

Monday, 8 September 2014 09:00 (8 minutes)

Presenter: SCHWANDA, Christoph (Austrian Academy of Sciences (AT))

Session Classification: Plenary

Contribution ID: **10** Type: **not specified**

Flavour physics beyond the Standard Model

Monday, 8 September 2014 09:35 (30 minutes)

Presenter: BLANKE, Monika (CERN)

Session Classification: Plenary

Contribution ID: **11** Type: **not specified**

What we have learned from the Top and the Higgs

Monday, 8 September 2014 10:05 (30 minutes)

Presenter: PETRIELLO, Frank (Northwestern University)

Session Classification: Plenary

Contribution ID: **12** Type: **not specified**

Present and future CKM studies from B physics at hadron machines

Monday, 8 September 2014 11:05 (25 minutes)

Presenter: KOPPENBURG, Patrick (NIKHEF (NL))

Session Classification: Plenary

Contribution ID: **13** Type: **not specified**

Present and future CKM studies from B physics at e+e- machines

Monday, 8 September 2014 11:30 (25 minutes)

Presenter: URQUIJO, Phillip (University of Melbourne (AU))

Session Classification: Plenary

Contribution ID: **14** Type: **not specified**

Status and Prospects for the Lattice

Monday, 8 September 2014 11:55 (25 minutes)

Presenter: EL-KHADRA, Aida (UIUC)

Session Classification: Plenary

Contribution ID: **15** Type: **not specified**

CKM studies in the charm sector

Monday, 8 September 2014 12:20 (20 minutes)

Presenter: CHARLES, Matthew John (Centre National de la Recherche Scientifique (FR))

Session Classification: Plenary

Contribution ID: **16** Type: **not specified**

Current and Future Kaon Experiments

Monday, 8 September 2014 12:40 (20 minutes)

Presenter: YAMANAKA, Taku (Osaka University)

Session Classification: Plenary

Contribution ID: **18** Type: **not specified**

CP violation in B0−>pi+pi-, rho0rho0, omega Ks, Ks eta at Belle

Thursday, 11 September 2014 15:30 (20 minutes)

Presenter: VANHOEFER, Pit (MPI Munich)

Session Classification: WG4

Contribution ID: **19** Type: **not specified**

CP violation in B0–>eta' K0 at Belle

Thursday, 11 September 2014 17:45 (20 minutes)

Presenter: RITTER, Martin (MPI for Physics)

Session Classification: WG4

Contribution ID: **20** Type: **not specified**

Rare B decays at ATLAS

Wednesday, 10 September 2014 09:00 (20 minutes)

Study of rare and suppressed processes in B-mesons decays with ATLAS. Evidence for New Physics signatures is searched in weak decays that are naturally suppressed in the Standard Model, such us processes with flavour-changing neutral-currents. The measurement of the angular distribution in the decay of Bd into K*mu+mu- (K+pi-mu+mu-) and of the branching ratios for Bs (B0) into mu+mu- are presented, reviewing the results from ATLAS and discussing the ongoing programme.

Presenter: PALESTINI, Sandro (CERN)

Session Classification: WG3

Contribution ID: **21** Type: **not specified**

Rare B decays at CMS

Wednesday, 10 September 2014 09:20 (20 minutes)

Rare B-meson decays especially those mediated by flavor-changing neutral current transition provide an excellent, indirect probe to search for new physics beyond the standard model. We discuss the newest and most interesting results on rare semileptonic b –> s l+l- decays from the CMS experiment at LHC. The results are based on 5.2 fbˆ-1 of proton-proton collision data recorded at the center-of-mass energy of 7 TeV.

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

Session Classification: WG3

Contribution ID: **22** Type: **not specified**

Rare b –> s ll decays at LHCb

Wednesday, 10 September 2014 09:40 (20 minutes)

Rare b->sll transitions are excellent probes of physics beyond the Standard Model. We present the current status of rare b->sll measurements from the LHCb experiment and discuss the implications of these results in the context of new physics.

Presenter: PETRIDIS, Konstantinos (Imperial College Sci., Tech. & Med. (GB))

Session Classification: WG3

Contribution ID: **23** Type: **not specified**

New physics in rare B decays

Wednesday, 10 September 2014 10:20 (20 minutes)

The first run of the LHC provided us with many new insights on rare leptonic and semi-leptonic B decays.
Highlights were the first observation of Bs −> mu+mu- and improved results on B −> K mu+mu- and B −> K*mu+mu-, including first measurements of many angular observables.*
In this talk I will discuss the implications of the recent experimental results on rare leptonic and semi-leptonic B decays both model independently and in the context of new physics models.
Particular emphasis will be put on possible new physics explanations of the anomaly observed in B −> K mu+mu-.

Presenter: ALTMANNSHOFER, Wolfgang (Perimeter Institute)

Session Classification: WG3

Contribution ID: **24** Type: **not specified**

Theory of B –> K(*) mu+ mu-

Wednesday, 10 September 2014 10:00 (20 minutes)

Decay modes mediated by the transition b->sll, such as Bs->mumu and B->K(*)mumu, are currently under intensive experimental and theoretical scrutiny, mostly due to the latest measurements of their branching ratios and angular distributions. In this talk I will provide a comprehensive review of the theory of b->sll modes, the main theory uncertainties, recent developments and future challenges.

Presenter: Dr VIRTO, Javier (Universitat Siegen)

Session Classification: WG3

Contribution ID: **25** Type: **not specified**

Non-leptonic b –> s, d decays (experiment)

Wednesday, 10 September 2014 11:15 (20 minutes)

Presenter: WILSON, Fergus (STFC - Rutherford Appleton Lab. (GB))

Session Classification: WG3

Contribution ID: **26** Type: **not specified**

Non-leptonic b –> s,d decays (theory)

Wednesday, 10 September 2014 11:35 (20 minutes)

I give a concise overview of the theory of charmless two-body B decays. These modes provide a large set of potential probes of BSM physics, but strong interactions are more challenging than in the simpler leptonic and semileptonic rare decays. I focus on the main qualitative features, rather than technical aspects, of the SM predictions, primarily invoking the heavy-quark expansion. Then I contrast this with a subset of the data, reviewing both successes and a number of puzzles and briefly commenting on future prospects.

Presenter: JAEGER, Sebastian (University of Sussex (GB))

Session Classification: WG3

Contribution ID: **27** Type: **not specified**

Bs,d –> mu mu (experiment)

Wednesday, 10 September 2014 11:55 (20 minutes)

Presenter: ARCHILLI, Flavio (CERN)

Session Classification: WG3

Contribution ID: **28** Type: **not specified**

Bs,d –> mu mu (theory)

Wednesday, 10 September 2014 12:15 (20 minutes)

The decay rate of the rare process B_s-> muˆ+ muˆ- is sensitive to small deviations from the Standard Model flavour structure and is thus used as an indirect probe for new physics. The decay rate has recently been observed by the CMS and LHCb collaboration for the first time and agrees with the SM expectations. In this talk I discuss recent progress in predicting the rate within the SM. I shall mainly focus on the recent two-loop electroweak calculation which helped to remove a 7% uncertainty of the SM prediction.

Presenter: STAMOU, Emmanuel (W)

Session Classification: WG3

Contribution ID: **29** Type: **not specified**

Lattice calculations for rare B decays

Wednesday, 10 September 2014 12:35 (20 minutes)

Recent lattice QCD calculations of form factors relevant for $b \to s$ decays are briefly reviewed. Some time will be spent discussing prospects and ideas for further improvements.

Presenter: Dr WINGATE, Matthew (University of Cambridge)

Session Classification: WG3

Contribution ID: **30** Type: **not specified**

Inclusive b –> s ll and b –> s gamma decays (theory)

Thursday, 11 September 2014 09:00 (20 minutes)

I'll review the theory of inclusive B –> X_s ll transitions, and then present the latest results – based on NNLO QCD + NLO QED corrections – of all angular observables, as well as some NP sensitivities. I will also discuss the results of a dedicated Monte-Carlo analysis on the treatment of collinear photons. In the end I will briefly cover the results of four body contributions to B –> X_s gamma at NLO.

Presenter: HUBER, Tobias (University of Siegen)

Session Classification: WG3

Contribution ID: **31** Type: **not specified**

Inclusive and exclusive b –> s ll and b –> s gamma decays at BaBar

Thursday, 11 September 2014 09:20 (20 minutes)

Presenter: GERSHON, Timothy (University of Warwick (GB))

Session Classification: WG3

Contribution ID: **32** Type: **not specified**

Inclusive and exclusive b –> s ll and b –> s gamma decays at Belle

Thursday, 11 September 2014 09:40 (20 minutes)

Presenter: SATO, Yutaro (Tohoku Univ.)

Session Classification: WG3

Contribution ID: **33** Type: **not specified**

Inclusive and exclusive b –> s gamma decays (theory)

Thursday, 11 September 2014 10:00 (20 minutes)

Presenter: KOU, Emi (LAL/IN2P3)

Session Classification: WG3

Contribution ID: **34** Type: **not specified**

Radiative decays at LHCb

Thursday, 11 September 2014 10:20 (20 minutes)

Presenter: MARCHAND, Jean-Francois (Centre National de la Recherche Scientifique (FR))

Session Classification: WG3

Contribution ID: **35** Type: **not specified**

b –> s,d nu nu (experiment)

Thursday, 11 September 2014 11:15 (20 minutes)

We present the status of the experimental searches for flavour changing neutral current (FCNC) processes where a b hadron decays into light hadrons (X_d, X_s) and two neutrinos. Within the Standard Model, these processes are suppressed and rare, with branching fractions around 5*10ˆ-6. Several New Physics models predict significant enhancements. Recent analyses by the Belle and BaBar collaborations have set several upper limits.

Presenter: LUSIANI, Alberto (Scuola Normale Superiore and INFN Pisa)

Session Classification: WG3

Contribution ID: **36** Type: **not specified**

b –> s,d nu nu (theory)

Thursday, 11 September 2014 11:35 (20 minutes)

An analysis of the rare B decays B-> K^(*) nu nubar is presented both within the SM and beyond. A model independent approach is used and concrete NP models are studied as well. The relation between b-> s nu nubar and b-> s l^+ l^- transitions are analysed in detail.

Presenter: GIRRBACH, Jennifer (Technical University Munich)

Session Classification: WG3

Contribution ID: **37** Type: **not specified**

Rare K decays (theory)

Thursday, 11 September 2014 11:55 (20 minutes)

Rare K decays belong to the cleanest observables in flavor physics and are highly sensitive to heavy new particles. I review the status of the standard model predictions and also shortly discuss the new-physics expectations.

Presenter: BROD, Joachim (University of Cincinnati)

Session Classification: WG3

Contribution ID: **38** Type: **not specified**

K –> pi nu nu at KOTO

Thursday, 11 September 2014 12:15 (20 minutes)

The KOTO experiment aims to discover the rare decay KL->pi0nunu at the J-PARC 30 GeV proton synchrotron. This mode violates the CP symmetry directly and is highly suppressed in the Standard Model. Thus the mode is sensitive to new physics beyond the SM, in particular the physics related to CP violation.

KOTO is an upgrade of the E391a experiment at KEK, and includes a new CsI Calorimeter, DAQ system and high intensity beam. KOTO performed engineering and commissioning runs to study the detector performance until early 2013, and finally started the first physics run in May 2013. Although data taking time was terminated after 100 hours due to an accident, the experiment achieved nearly the same sensitivity as the KEK E391a experiment, which holds the current best limit on this decay.

In this contribution, the preliminary result of the first physics run will be reported.

Presenter: SHIOMI, koji (Kyoto university)

Session Classification: WG3

Contribution ID: **39** Type: **not specified**

K –> pi nu nu at NA62

Thursday, 11 September 2014 12:35 (20 minutes)

The main goal of the NA62 experiment at the CERN SPS is to measure the branching ratio of the ultra-rare K+ -> pi+ nu unbar decay with 10% accuracy. The NA62 strategy foresees the collection of ˜ 100 K+ -> pi+ nu unbar decays in two years of data taking, keeping the background at the level of 10%. This measurement can provide stringent tests of SM predictions, also offering a complementary approach, with respect to the LHC high energy frontier, to probe new physics at short distances, corresponding to energy scales up to ˜100 TeV.
Part of the experimental apparatus has been commissioned during a technical run in 2012. The physics prospects and the status of the experiment
will be reviewed in view of the first physics run scheduled for 2014.

Presenter: ROMANO, Angela (University of Birmingham (GB))

Session Classification: WG3

Contribution ID: **40** Type: **not specified**

Rare D decays (theory)

Thursday, 11 September 2014 14:30 (20 minutes)

Rare D decays might serve as a test of FCNC transition in the up-quark sector.
The presence of new physics in these decays is rather difficult to detect due to the contributions of SM long distance dynamics.
Basic features of rare charm meson transitions within the Standard model and beyond are discussed. Chances to observe new physics signals are considered for inclusive c-> u gamma and c -> u l+l- decays and exclusive D ->V gamma, D -> P l+ l-, D-> V l+l- and D -> l+ l- decays.

Presenter: FAJFER, S (Univ. of Ljubljana and Inst. J. Stefan)

Session Classification: WG3

Contribution ID: **41** Type: **not specified**

Rare D decays (experiment)

Thursday, 11 September 2014 14:50 (20 minutes)

Presenter: ZUPANC, Anze (Jozef Stefan Institute)

Session Classification: WG3

Contribution ID: **42** Type: **not specified**

Lepton Flavour Violation (theory)

Thursday, 11 September 2014 15:10 (20 minutes)

The field of lepton flavor violation will live an era of unprecedented developments in the near future, with dedicated experiments in different fronts. The observation of a flavor violating process involving charged leptons would be a clear evidence of physics beyond the Standard Model, thus motivating the great effort in this direction. Furthermore, in case a positive signal is found, a proper theoretical understanding of the lepton flavor anatomy of a given model would become necessary. In this talk I will briefly review the current situation, emphasizing the most relevant theoretical and phenomenological aspects of several processes. Finally, I will discuss two topics that have received some attention recently: lepton flavor violation in low-scale seesaw models and lepton flavor violating Higgs decays.

Presenter: VICENTE, Avelino (Université de Liège)

Session Classification: WG3

Contribution ID: **43** Type: **not specified**

Muon LFV (experiment)

Thursday, 11 September 2014 15:30 (20 minutes)

Search for the lepton flavor violation has long history and is now active area of the experimental search for physics beyond the Standard Model. Last year the MEG experiment, searching for the mu->e gamma decay, completed the data acquisition, leading to one of the most stringent constraints on building BSM models. The muon LFV search will be followed by several sophisticated experiments as well as the final result from MEG with double statistics, and new insights into physics must be brought from those experiments in 5 years from now. In this talk, we will review the status and future prospects of muon LFV experiments including MEG, MEG II, Mu3e, DeMee, COMET, and Mu2e.

Presenter: UCHIYAMA, Yusuke (The University of Tokyo)

Session Classification: WG3

Contribution ID: **44** Type: **not specified**

Tau LFV (experiment)

Thursday, 11 September 2014 15:50 (20 minutes)

The tau lepton, the heaviest charged lepton in the third generation, is a sensitive probe to New Physics (NP). In particular, lepton flavor violating (LFV) tau decays are of great interest, as many NP models predict their branching fractions in a range accessible by current and near future experiments. They also provide information of NP, complementary to LFV processes in the muon.
In this talk, we will summarize the present status of searches for tau LFV decays at Belle and BaBar, as well as LHCb. We will also briefly discuss future prospect in the near future experiments.

Presenter: IIJIMA, Toru (Nagoya University)

Session Classification: WG3

Contribution ID: **45** Type: **not specified**

New physics searches in leptonic decays of B mesons

Monday, 8 September 2014 14:30 (20 minutes)

Leptonic decays of B mesons are well understood in the Standard Model (SM) and highly suppressed due to helicity conservation. The leptonic branching fraction measurements can provide stringent constraints on New Physics, where particles or forces outside of the SM can suppress or enhance the decay rate. Experimentally, due to the small branching fractions, it is a challenge to measure the decay rates and this requires intense B-meson beams and sophisticated analysis techniques for signal selection.

We review the recent results from B factories where the clean e+e- environment and excellent detector performances allow us to study B-meson decays into a charged lepton and a neutrino, as well as their implications for New Physics searches.

Presenter: HECK, Martin (Karlsruhe Institute of Technology)

Session Classification: WG2

Contribution ID: **46** Type: **not specified**

Exclusive semileptonic B decays to high-mass charm hadrons

Monday, 8 September 2014 18:10 (19 minutes)

The experimental knowledge of semileptonic B decays to a D or D*meson with one or more pions is limited. These limitations are relevant to two experimental puzzles: the tension between the values of Vcb determined from inclusive and exclusive semileptonic decays, and the gap between the sum of the exclusive semileptonic B decays to charm and the inclusive b -> c l nu rate. The full BABAR data set is used to improve the precision on decays involving D(*) pi l nu and to search for decays of the type D(*) pi pi l nu. Fully-reconstructed hadronic B decays are used to tag events and provide good resolution on the discriminant variable U = E_{miss}-P_{miss}. A simultaneous fit to charged and neutral B decays to D(n\pi) and D*(n\pi) decays is used to extract relative branching fractions. In addition to studying these high mass charm final states, the data are used to determine a precise measurement of the ratio of branching fractions for B -> D l nu / B -> D* l nu.

Presenter: Dr BERNLOCHNER, Florian Urs (Universitaet Bonn (DE))

Session Classification: WG2

Contribution ID: **47** Type: **not specified**

B meson decay constants HPQCD/HISQ/FNAL/NRQCD

Monday, 8 September 2014 14:50 (18 minutes)

In this talk, I will review lattice calculations on B meson decay constants, f_B, f_Bs, and f_Bs/f_B. I will focus on recent calculations from N_f = 2+1 and 2+1+1 lattice gauge configurations. Moreover, I will compare between calculations utilizing different heavy quark discritization methods such as Fermilab interpretation, HISQ, and NRQCD action.

Presenter: NA, Heechang

Session Classification: WG2

Contribution ID: **48** Type: **not specified**

New results for fB from ETMC

Monday, 8 September 2014 15:08 (18 minutes)

We discuss a lattice QCD computation of the B-meson decay constants by the ETM collaboration where suitable ratios allow to reach the bottom quark sector by combining simulations around the charm-quark mass with an exactly known static limit. The extrapolations to the continuum limit and to the physical point as well as other sources of systematic uncertainties are analysed. A comparison of results from simulations with two and four flavour dynamical quarks will be presented.

Presenter: HERDOIZA, Gregorio

Session Classification: WG2

Contribution ID: **49** Type: **not specified**

Review of the Light-Cone Sum Rule Results

Monday, 8 September 2014 15:26 (24 minutes)

I will present the current status of the B\to \pi form factors calculated from QCD LCSR at large hadronic recoil. New updated uncertainty estimates and extrapolations of the form factors are obtained, together with model-independent unitarity bounds. Related results for the other heavy-to-light hadronic matrix elements will be overviewed.

Presenter: KHODJAMIRIAN, Alexander (University of Siegen)

Session Classification: WG2

Contribution ID: **50** Type: **not specified**

Review of QCD sum rule results (comparison with LQCD)

Monday, 8 September 2014 15:50 (25 minutes)

In this talk I will present the lattice averages for the decay constants of the D- and the B-meson performed by the Flavor Lattice Averaging Group (FLAG) and compare them with the corresponding updated predictions from Borel QCD Sum Rules for heavy-light currents. An excellent agreement is obtained in the charm sector, while
some tension can be observed in the bottom sector.
Furthermore, available lattice and QCD sum rule calculations of the decay constants of the vector D- *and B*-mesons will be compared. Again some tension in the bottom sector can be observed.

Presenter: SIMULA, Silvano

Session Classification: WG2

Contribution ID: **51** Type: **not specified**

Vcb experimental review

Monday, 8 September 2014 16:45 (20 minutes)

The most precise measurements of Vcb today come from semileptonic B decays at the B-factories BaBar and Belle.
We present an overview of their measurements with a focus on the most recent results.
Different approaches are used to determine Vcb: inclusive and exclusive measurements; tagged and untagged analyses or global fits.
We also give a summary on how the most recent measurements affect the discrepancy between inclusive and exclusive Vcb results.

Presenter: GLATTAUER, Robin (Vienna)

Session Classification: WG2

Contribution ID: **52** Type: **not specified**

Extraction of Vcb from the inclusive decay B–>Xc l nu

Monday, 8 September 2014 17:05 (25 minutes)

The extraction of Vcb from fits to inclusive semileptonic B decays is reviewed, with emphasis on recent developments and in particular on the effect of higher order corrections and on heavy mass constraints.

Presenter: GAMBINO, Paolo (Universita e INFN (IT))

Session Classification: WG2

Contribution ID: **53** Type: **not specified**

Vcb from B–> Dˆ* l nu on the lattice

Monday, 8 September 2014 17:50 (20 minutes)

I will discuss the recent results for the B->D*lv and B->Dlv semileptonic form factors and the determination of |V_cb| from the Fermilab/MILC collaborations. These lattice calculations use an improved staggered action for the light quarks and the Fermilab action for the charm and bottom quarks; the calculation uses the MILC (asqtad) ensembles with three flavors of sea quarks and five lattice spacings. The zero-recoil B->D*lv calculation is an update of their 2008 result, with higher statistics, finer lattice spacings, and lighter light quark masses. The error is now commensurate with the experimental error. The B->Dlv calculation determines the form factors at non-zero recoil and a combined fit with the experimental data over the full kinematic range is performed to determine |V_cb|. Preliminary results for this channel will be presented.

Presenter: DU, Daping (University of Illinois, Urbana-Champaign)

Session Classification: WG2

Contribution ID: **54** Type: **not specified**

B -> D and Bs–> Ds semileptonic decays on the lattice

Monday, 8 September 2014 17:30 (20 minutes)

We present the results for the normalization of the relevant form factor mediating the semileptonic B–>Dlnu and Bs–>Ds lnu decays in the Standard Model, as obtained by using the maximally twisted mass QCD on the lattice with Nf=2 dynamical light quarks, and with the fully propagating heavy quark. Furthermore, the form factors needed for description of these decays in a generic scenarios of physics beyond the Standard Model near zero recoil are also presented.
Preliminary results for F(1), needed to normalize B–>D*lnu and Bs–>Ds* lnu decays, are also presented in this talk.

Presenter: SANFILIPPO, Francesco

Session Classification: WG2

Contribution ID: **55** Type: **not specified**

Semileptonic b-hadron decays at LHCb

Wednesday, 10 September 2014 09:00 (25 minutes)

LHCb has recorded large samples of semileptonic decays of c- and b-flavoured hadrons. We review the latest results in semileptonic decays of B, Bs and Λb decays. Recent results on CP violation and determination of CKM matrix elements are shown.

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

Session Classification: WG2

Contribution ID: **56** Type: **not specified**

Vub experimental review

Wednesday, 10 September 2014 09:25 (20 minutes)

In this talk I give an experimental review of the current status of |V_ub| determinations. Precision measurements of charmless semileptonic B-decays allow for a determination of the magnitude of the CKM matrix element V_ub, for a test of the consistency of the CKM mechanism and potentially of NP scenarios.
In this talk the various experimental methods to determine |V_ub| based on exclusive and inclusive measurements using tagged and untagged data samples are presented.
The various contributions to the uncertainties on the |V_ub| measurements and the persistent disagreement between excl. and incl. |V_ub| results are discussed.

Presenter: ERMAKOV, Alexander (Bonn)

Session Classification: WG2

Contribution ID: **57** Type: **not specified**

B–>pi l nu and Bs ⟶ K l nu from FNAL/HPQCD

Wednesday, 10 September 2014 09:45 (20 minutes)

Recently published and preliminary Fermilab/MILC and HPQCD lattice QCD calculations of form factors for B -> pi l nu and Bs -> K l nu will be presented. In combination with existing experiment, these results generate a significant reduction in the error of Vub. I will also discuss plans to improve the lattice calculations, including the use of a fully relativistic b quark to eliminate matching errors and an effort to extend the kinematic range of validity of lattice simulations to smaller qˆ2.

Presenter: BOUCHARD, Chris (University of Illinois)

Session Classification: WG2

Contribution ID: **58** Type: **not specified**

B–>pi form factors from Alpha collaboration

Wednesday, 10 September 2014 10:05 (20 minutes)

We present the current status of the ongoing work of the ALPHA collaboration on the computation of the form factor $f_+(q^2)$ for the semi-leptonic decay $textnormal B_{textnormal s \to textnormal K \ell \nu}$. We simulate on lattices generated as part of the Coordinated Lattice Simulations (CLS) effort which have $N_{textnormal f=2}$ non-perturbatively $O(a)$ improved Wilson fermions that satisfy $m_\pi L \geq 4$ and have sea pion masses down to ≈ 250 $textnormal MeV$. The heavy quark is treated in non-perturbative Heavy Quark Effective Theory (HQET).

We discuss how to extract physical information from our raw measurement data and present first results in the form of a data point for the form factor at $q^2 = 21.23$ $textnormal GeV^2$ extrapolated to the continuum. We also address the inclusion of next-to-leading order terms in HQET and chiral extrapolation, which have yet to be performed.

Presenter: Mr BAHR, Felix (DESY Zeuthen)

Session Classification: WG2

Contribution ID: **59** Type: **not specified**

Λb ⟶ p l υ on the lattice

Thursday, 11 September 2014 09:20 (20 minutes)

We present a brief review of our lattice calculation of $\Lambda_b \to p$ form factors in the static b quark limit. A new calculation using relativistic b quarks is underway and its status will be discussed.

Presenter: Dr WINGATE, Matthew (University of Cambridge)

Session Classification: WG2

Contribution ID: **60** Type: **not specified**

NP scenarios - 2HDM-III

Wednesday, 10 September 2014 11:35 (20 minutes)

In this talk I review the flavour phenomenology of two-Higgs-doublet models with generic Yukawa structure. After discussing the constraints from FCNC I show that even taking into account these bound, one can still get sizable effects in B->(Dˆ(*))tau nu. In order to explain the observed deviations in tauonic B decays from the SM large flavour-changing elements connecting top and charm are necessary, leading to a sizable decay width for H,A->tc.

Presenter: CRIVELLIN, Andreas (University Bern)

Session Classification: WG2

Contribution ID: **61** Type: **not specified**

NP scenarios - A2HDM

Wednesday, 10 September 2014 11:55 (20 minutes)

I will discuss the status of B to D(*) Tau Nu decays in the context of the aligned two-Higgs-doublet model. The sensitivity of these decays to charged scalar contributions will be considered, taking into account constraints from leptonic meson decays and direct searches for a charged Higgs at colliders. The role of differential distributions to discriminate a charged scalar from other types of new physics in these transitions will be stressed

Presenter: CELIS, Alejandro (IFIC CSIC-Universitat de Valencia)

Session Classification: WG2

Contribution ID: **62** Type: **not specified**

New physics searches in B->D(*)tau nu decays

Wednesday, 10 September 2014 12:15 (20 minutes)

I will review the current status of measurements involving semi-tauonic B meson decay at the B-factories. I will briefly touch upon the experimental methods and highlight the importance of backgrounds especially from poorly understood D** in this study. Perhaps this can also shed some light on the discrepancy in BaBar's measurement of ratio of semi-tauonic and semi-leptonic (e / \mu) modes of B decay from the Standard Model (SM) at 3.4 \sigma significance. I will also pose a question on which New Physics (NP) modeling may be most sensitive in the semi-tauonic channel.

Presenter: BANSAL, Vikas (PNNL)

Session Classification: WG2

Contribution ID: **63** Type: **not specified**

NP scenarios in b–>c(u) l nu decays

Wednesday, 10 September 2014 12:35 (20 minutes)

The BaBar measurements of the ratios $calR(D^{(*)}) = \frac{calB(B\to D^{(*)}\tau\bar{\nu}_\tau)}{calB(B\to D^{(*)}\mu\bar{\nu}_\mu)}$ deviate from the standard model expectation, while new results
on the purely leptonic $B \to \tau\bar{\nu}_\tau$ mode show a better consistency with the standard model, within the uncertainties. In a new physics scenario, one possibility to accomodate these two experimental facts consists in considering an
additional tensor operator in the effective weak hamiltonian. We study the effects of such an operator in a set of observables, in semileptonic $B \to D^{(*)}$ modes as well as in semileptonic B and B_s decays to excited positive parity charmed mesons.

Presenter: DE FAZIO, Fulvia (INFN - Sezione di Bari)

Session Classification: WG2

Contribution ID: **64** Type: **not specified**

Measurement of the D -> pi- e+ nu partial branching fraction: form factor and implications for Vub

Wednesday, 10 September 2014 11:15 (20 minutes)

Measurement of the D -> pi- e+ nu partial branching fraction, form factor and implications for Vub. Precision measurements of the D -> pi e+ nu form factor could shed new light on the persistent difference between inclusive and exclusive
measurements of Vub. We report the measurement of the partial branching fraction of D -> pi e+ nu in bins of the four-momentum transfer squared of the D to pi system using 347.2 /fb of integrated luminosity of the BaBar data. The D -> pi form factor is extracted with fits to the unfolded partial branching fraction using pole or generalized expansions and the value at zero recoil is determined. These form factors are compared to the current world average, the available lattice predictions, and interpreted with the expectation of a single dominant pole term. The measured form factor is then combined with previous BaBar B -> pi l nu information to determine a value of Vub.

Presenter: LUTH, Vera (SLAC)

Session Classification: WG2

Contribution ID: **66** Type: **not specified**

Review of the Lattice QCD results

Thursday, 11 September 2014 09:40 (25 minutes)

In this talk I shall discuss, from a methodological point of view, some of the theoretical and numerical problems that arise in lattice calculations of heavy flavoured hadronic observables. I shall also emphasize the importance of non-perturbative lattice techniques for the calculation of heavy quark masses and give an outlook on the possibility of performing lattice calculations of QED radiative corrections to heavy hadron decay rates.

Presenter: Dr TANTALO, Nazario (Rome University "Tor Vergata")

Session Classification: WG2

Contribution ID: **67** Type: **not specified**

Search for New Physics in semileptonic B decays

Thursday, 11 September 2014 10:05 (20 minutes)

The observed discrepancy between the experimental results and the Standard Model prediction for the ratios of the branching fractions of the decays B-> D(*) tau nu and B-> D(*) mu nu came as a surprise and lead to a discussion of testing New Physics through these modes. We discuss the possibilities for observing the New Physics effects by examining the qˆ2 and the angular distributions of the decay products. In particular we find new observables that could be accessible experimentally and that can be sensitive to the effects of physics beyond the Standard Model and be useful for discriminating various new physics scenarios.

Presenter: Dr TAYDUGANOV, Andrey (Osaka University)

Session Classification: WG2

Contribution ID: **68** Type: **not specified**

B–> D** l nu - puzzle 1/2 vs 3/2

Wednesday, 10 September 2014 10:25 (20 minutes)

Understanding the composition of final states in B –> Xc l nu could help to get a feedback on the persisting disagreement between exclusive and inclusive determinations of Vcb. In particular the series of orbital excitations D**and radial excitations (D', D*') has received a lot of attention; a misinterpretation as a scalar state of the (D' –> D pi) spectrum tail could have induced an experimental overestimate of the broad states contribution to the total B –> Xc l nu width with respect to theoretical expectations, all of them made however in the infinite mass limit: it is the so-called 1/2 vs 3/2 puzzle. We will describe first attempts to measure on the lattice form factors of B –> D** l nu at realistic quark masses. Cleaner processes, like hadronic decays B –> D**pi and semileptonic decays Bs –> Ds** l nu in the strange sector have recently been examined by phenomenologists, putting new interesting ideas on those issues with, again, the need of lattice inputs.

Presenter: Dr BLOSSIER, Benoit (CNRS/Laboratoire de Physique Théorique d'Orsay)

Session Classification: WG2

Contribution ID: **72** Type: **not specified**

Prospects of time dependent CP Violation with the LHCb Upgrade

Thursday, 11 September 2014 18:30 (20 minutes)

Presenter: RODRIGUES, Eduardo (University of Manchester (GB))

Session Classification: WG4

Contribution ID: **73** Type: **not specified**

Measurement of CP observables using Bs-> DsK at LHCb

Thursday, 11 September 2014 15:10 (20 minutes)

Presenter: GLIGOROV, Vladimir (CERN)

Session Classification: WG4

Contribution ID: **74** Type: **not specified**

Measurement of CP observables using Bs-> DsDs at LHCb

Thursday, 11 September 2014 17:05 (20 minutes)

Presenter: FITZPATRICK, Conor (Ecole Polytechnique Federale de Lausanne (CH))

Session Classification: WG4

Contribution ID: **76** Type: **not specified**

Tevatron results in CP Violation

Thursday, 11 September 2014 14:50 (20 minutes)

Presenter: BERTRAM, Iain (Lancaster University)

Session Classification: WG4

Contribution ID: **78** Type: **not specified**

B mixing in and beyond the SM

Tuesday, 9 September 2014 11:15 (30 minutes)

Presenter: LENZ, Alexander (IPPP, Durham)

Session Classification: WG4

Contribution ID: **79** Type: **not specified**

Lifetime measurements in B decays at LHCb

Tuesday, 9 September 2014 11:45 (25 minutes)

Presenter: DORDEI, Francesca (Ruprecht-Karls-Universitaet Heidelberg (DE))

Session Classification: WG4

Contribution ID: **80** Type: **not specified**

Measurement of CP observables in semi-leptonic decays at LHCb

Tuesday, 9 September 2014 12:10 (20 minutes)

Presenter: GRILLO, Lucia (Ruprecht-Karls-Universitaet Heidelberg (DE))

Session Classification: WG4

Contribution ID: **81** Type: **not specified**

CP violation in B0-B0bar mixing with dilepton events at BaBar

Tuesday, 9 September 2014 12:30 (25 minutes)

Presenter: CHENG, Chih-hsiang (Caltech)

Session Classification: WG4

Contribution ID: **82** Type: **not specified**

Penguin pollution in Bs->J/Psi Phi

Tuesday, 9 September 2014 14:30 (20 minutes)

Presenter: KNEGJENS, Rob (T)

Session Classification: WG4

Contribution ID: **83** Type: **not specified**

Penguin pollution in Bd -> J/Psi K_S and Bs -> J/Psi Phi

Tuesday, 9 September 2014 14:50 (20 minutes)

Presenter: FRINGS, Philipp (KIT)

Session Classification: WG4

Contribution ID: **84** Type: **not specified**

Phi_s and penguin pollution at LHCb

Tuesday, 9 September 2014 15:10 (25 minutes)

Presenter: KANSO, Walaa (CPPM, Aix -Marseille Université CNRS/IN2P3, Marseille, France)

Session Classification: WG4

Contribution ID: **85** Type: **not specified**

CP violation measurements and prospects for the upgrade at ATLAS

Tuesday, 9 September 2014 15:35 (20 minutes)

Presenter: BORISSOV, Guennadi (Lancaster University (GB))

Session Classification: WG4

Contribution ID: **86** Type: **not specified**

CP violation measurements at CMS

Tuesday, 9 September 2014 15:55 (20 minutes)

Presenter: PAZZINI, Jacopo

Session Classification: WG4

Contribution ID: **87** Type: **not specified**

The like-sign dimuon asymmetry and new physics

Thursday, 11 September 2014 14:15 (20 minutes)

Presenter: NEBOT, Miguel

Session Classification: WG4

Contribution ID: **88** Type: **not specified**

Effect of Delta Gamma on the dimuon asymmetry in B decays

Thursday, 11 September 2014 14:35 (15 minutes)

Presenter: NIERSTE, Ulrich (Karlsruhe Institute of Technology)

Session Classification: WG4

Contribution ID: **89** Type: **not specified**

Fits of the Unitarity Triangle

Thursday, 11 September 2014 15:50 (25 minutes)

Presenter: Dr BONA, Marcella (Queen Mary University of London (UK))

Session Classification: WG4

Contribution ID: **90** Type: **not specified**

Testing the SM with B->DD decays

Thursday, 11 September 2014 16:45 (20 minutes)

Presenter: SCHACHT, Stefan (TU Dortmund)

Session Classification: WG4

Contribution ID: **91** Type: **not specified**

Analysis of B -> rho pi Dalitz plot and measurement of B0->D*+D*- with partial reconstruction at BaBar

Thursday, 11 September 2014 17:25 (20 minutes)

Presenter: MIYASHITA, Tomonary (Caltech)

Session Classification: WG4

Contribution ID: **92** Type: **not specified**

Fits of the Unitarity Triangle

Thursday, 11 September 2014 18:05 (25 minutes)

Presenter: DESCOTES-GENON, Sébastien (LPT)

Session Classification: WG4

Contribution ID: **93** Type: **not specified**

Factorization in charmless B decays

Tuesday, 9 September 2014 09:00 (25 minutes)

I will review the status of factorisation predictions for charmless hadronic B meson decays. In particular, I will report on recent progress in obtaining a full NNLO calculation, and I will elucidate how non-perturbative methods as well as experimental measurements can help to further constrain the theoretical predictions.

Presenter: BELL, Guido (University of Oxford)

Session Classification: WG5

Contribution ID: **94** Type: **not specified**

DCPV in charmless B decays at Belle

Tuesday, 9 September 2014 09:25 (20 minutes)

We report preliminary measurements of the Branching Ratio (BR) for the charmless rare decays B0 -> pi0 pi0, B0 -> eta'K*(892)0 and B+ -> Kbar*0 K+. *We also report the preliminary results for A_CP for B0 -> eta'K*0 and the longitudinal fraction for B+ -> Kbarˆ*0 K*+. Previous Belle measurements of the BR for Bˆ0 -> piˆ0 piˆ0 are significantly larger than theoretical expectations and employed approximately one third of the full data set. The mode B -> eta'K*(892)ˆ0 is sensitive to a potentially large flavor-singlet contribution. Previous studies provided evidence for its existence at the 4-sigma level. The decay B0 -> K* K* proceeds via a b-> d penguin process and is sensitive to New Physics contributions. All three measurements employ the full data set of 711fb-1 available at Belle.

Presenter: SEVIOR, Martin (University of Melbourne (AU))

Session Classification: WG5

Contribution ID: **95** Type: **not specified**

Recent results on charmless B decays at BABAR

Tuesday, 9 September 2014 09:45 (20 minutes)

We present the results of a new search for B-meson decays to omega omega, and omega phi. These modes, yet unseen, are related to B -> phi K*decays via an SU(3) rotation. Their study can therefore provide information regarding the unexpectedly small value of the longitudinal spin component (f_L) measured in B -> phi K* decays.

We also report the first Dalitz-plot analysis of charged B mesons decays to Ks pi+ pi0. We observe an excess of signal events and measure the branching fractions and CP asymmetries, for the different resonant decay modes and inclusively.

The two analyses are performed using the full BABAR dataset of 471 million BBbar events collected at the Upsilon_(4S) resonance.

Presenter: BEN HAIM, Eli (Centre National de la Recherche Scientifique (FR))

Session Classification: WG5

Contribution ID: **96** Type: **not specified**

DCPV in charmless B decays at LHCb

Tuesday, 9 September 2014 10:05 (20 minutes)

Charmless B hadrons decays offer rich opportunities to test the Standard Model. For example, CP violation in charmless charged two-body and three-body B decays provides ways to measure the CKM angle gamma and to
search for New Physics. Also, vector-vector final states provide additional interesting observables. Here, we present the latest LHCb results on hadronic charmless B decays putting emphasis on the direct CP
violation measurements

Presenter: GRABALOSA GANDARA, Marc (Univ. Blaise Pascal Clermont-Fe. II (FR))

Session Classification: WG5

Contribution ID: **97** Type: **not specified**

The ultimate precision on gamma/phi3

Tuesday, 9 September 2014 10:25 (20 minutes)

I review the extraction of gamma / phi3 from tree-level B -> DK decays. In particular, I discuss the effects of direct CP violation in D decays and the ultimate theory uncertainty.

Presenter: BROD, Joachim (University of Cincinnati)

Session Classification: WG5

Contribution ID: **98** Type: **not specified**

Towards a precise determination of gamma

Tuesday, 9 September 2014 14:30 (25 minutes)

Presenter: SONI, Amarjit (BNL)

Session Classification: WG5

Contribution ID: **99** Type: **not specified**

Impact of D-mixing and CPV in D decays on the determination of gamma/phi3

Tuesday, 9 September 2014 14:55 (25 minutes)

The datasets that the LHCb and Belle II experiments are expected to collect in the coming years will allow a 1-degree precision measurement of the angle gamma (phi3) using Bch->D(*)0K(*) decays. To reach this goal a number of subleading effects must be taken into account. We disuss these corrections, including the impact of D-Dbar mixing and possible CPV in D decays.

Presenter: RAMA, Matteo (Istituto Nazionale Fisica Nucleare (IT))

Session Classification: WG5

Contribution ID: **100** Type: **not specified**

World average and experimental overview of gamma/phi3

Tuesday, 9 September 2014 15:20 (25 minutes)

Determination of the parameters of the Cabibbo-Kobayashi-Maskawa (CKM) matrix are important as checks on the consistency of the Standard Model, and as ways to search for new physics. Among
the angles of the CKM unitarity triangle, gamma is the least-well constrained by direct measurements. In this talk, we report the determination of the angle gamma through the combination of measurements performed by the Babar, Belle and LHCb experiments involving B to DK, D*K and DK* decays.

Presenter: TRABELSI, Karim

Session Classification: WG5

Contribution ID: **101** Type: **not specified**

Quantum correlated measurements related to gamma/phi3

Tuesday, 9 September 2014 15:45 (25 minutes)

Quantum correlation results from D threshold data will be reviewed, with an emphasis and more details on the recent results.
Some key issues to address in the future are also highlighted.

Presenter: BRIERE, Roy (Carnegie Mellon University)

Session Classification: WG5

Contribution ID: **102** Type: **not specified**

phi3 measurements at Belle

Thursday, 11 September 2014 14:30 (25 minutes)

A review of the Belle gamma/phi3 measurements from B->DK will be presented. Results using the ADS, GLW and GGSZ methods are presented, along with the combined measurement of gamma/phi3 from Belle.

Presenter: LIBBY, James (Indian Institute of Technology Madras)

Session Classification: WG5

Contribution ID: **103** Type: **not specified**

gamma measurements at LHCb

Thursday, 11 September 2014 14:55 (25 minutes)

We report on an updated combination of all currently available tree-level measurements of the CKM angle gamma at LHCb. For the first time we include results obtained from a time integrated analysis of B+ -> DK+, D -> KS0Kpi decays; and of B0 -> DK*0, D -> K+K-, pi+pi-, K+pi-, pi+K- decays; and from a time-dependent analysis of Bs0 -> DsK decays. The results represent the world's best single-experiment determination of gamma.

Presenter: KARBACH, Till Moritz (CERN)

Session Classification: WG5

Contribution ID: **104** Type: **not specified**

Outlook for direct CP violation measurements at LHCb

Thursday, 11 September 2014 15:20 (25 minutes)

In Run-I of the LHC, LHCb has collected a dataset corresponding to an integrated luminosity of 3 inverse fb. Much larger datasets are expected in Run-II and in the Upgrade era. An outlook of the capabilities of LHCb is given with a number of direct CPV processes involving electro-weak and gluonic penguins and a measurement of gamma using tree diagrams as examples.

Presenter: PANMAN, Jaap (CERN)

Session Classification: WG5

Contribution ID: **105** Type: **not specified**

Prospects for phi3 and charmless B decay measurements at Belle II

Thursday, 11 September 2014 15:45 (25 minutes)

The next generation B-factory under construction at SuperKEKB / Belle II is targeted to collect an integrated luminosity of 50abˆ-1, starting in 2016. This large dataset will open up a new era of precision measurements in flavor physics. This talk will focus on the potential for a sub-degree precision measurement of the least constrained angle of the CKM unitarity triangle, gamma, and the impact on studies of charmless hadronic B decays.

Presenter: GOLDENZWEIG, Pablo (University of Rochester (US))

Session Classification: WG5

Contribution ID: **106** Type: **not specified**

Prospects of Belle II in B-meson semileptonic decays

Thursday, 11 September 2014 10:25 (20 minutes)

Presenter: Dr DE NARDO, Guglielmo (INFN Napoli)

Session Classification: WG2

Contribution ID: **107** Type: **not specified**

D-Dbar mixing in SM

Tuesday, 9 September 2014 14:15 (25 minutes)

Presenter: SILVESTRINI, Luca (INFN Rome)

Session Classification: WG7

Contribution ID: **108** Type: **not specified**

D-mixing and indirect CPV measurements at LHCb

Tuesday, 9 September 2014 14:40 (20 minutes)

Presenter: BORGHI, Silvia (University of Manchester (GB))

Session Classification: WG7

Contribution ID: **109** Type: **not specified**

D-mixing and indirect CPV at Belle and prospects for Belle II

Tuesday, 9 September 2014 15:00 (20 minutes)

Presenter: SCHWARTZ, Alan (University of Cincinnati)

Session Classification: WG7

Contribution ID: **110** Type: **not specified**

Charm mixing and CPV at BaBar

Tuesday, 9 September 2014 15:35 (20 minutes)

Presenter: CHUNHUI, Chen (Iowa State University-Unknown-Unknown)

Session Classification: WG7

Contribution ID: **111** Type: **not specified**

Recent results and prospects for charm mixing and CPV at Threshold

Tuesday, 9 September 2014 15:55 (20 minutes)

Presenter: LYU, Xiao-Rui (UCAS)

Session Classification: WG7

Contribution ID: **112** Type: **not specified**

CPV in hadronic D decays within SM

Tuesday, 9 September 2014 17:10 (25 minutes)

Presenter: SONI, Amarjit (BNL)

Session Classification: WG7

Contribution ID: **113** Type: **not specified**

Direct CPV in two-body and multibody charm decays at LHCb

Tuesday, 9 September 2014 17:35 (25 minutes)

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

Session Classification: WG7

Contribution ID: **114** Type: **not specified**

Direct CPV in charm decays at Belle and prospects for Belle II

Tuesday, 9 September 2014 18:00 (20 minutes)

Presenter: STARIC, Marko (J. Stefan Institute, Ljubljana, Slovenia)

Session Classification: WG7

Contribution ID: **115** Type: **not specified**

Dalitz plot studies in hadronic charm decays

Thursday, 11 September 2014 16:45 (25 minutes)

Presenter: LESNIAK, Leonard (H. Niewodniczanski Institute of Nuclear Physics PAN)

Session Classification: WG7

Contribution ID: **116** Type: **not specified**

CP violating triple product asymmetry measurements in charm decays

Thursday, 11 September 2014 17:10 (30 minutes)

Presenter: MARTINELLI, Maurizio (Ecole Polytechnique Federale de Lausanne (CH))

Session Classification: WG7

Contribution ID: **117** Type: **not specified**

HFAG averages and prospects for mixing and CPV in charm decays

Thursday, 11 September 2014 18:20 (25 minutes)

Presenter: Dr GERSABECK, Marco (University of Manchester (GB))

Session Classification: WG7

Contribution ID: **118** Type: **not specified**

Charm and bottom masses from QCD sum rules: new results and proper treatment of uncertainties

Monday, 8 September 2014 18:29 (16 minutes)

We briefly review recent charm and bottom mass determinations based on perturbative QCD. We give new results on MSbar charm mass using as input lattice moments of the pseudoscalar current correlator. We also give an update on the MSbar bottom mass based on e+e- data, which quantifies the uncertainties from energies where no measurements exist and uses latest theory input. Both analyses are based on a careful analysis of the theoretical uncertainties from the truncation of the perturbative series and avoid the accidental cancellation of scale variations contained in some of the previous sum rule analyses.

Co-authors: HOANG, Andre (U); MATEU, Vicent (MPI for Physics, Munich)

Presenter: Mr DEHNADI, Bahman (University of Vienna)

Session Classification: WG2

Contribution ID: **119** Type: **not specified**

Probing anomalous ttZ interactions with rare meson decays

Tuesday, 9 September 2014 18:30 (20 minutes)

Presenter: GRELJO, Admir (Institute Jozef Stefan)

Session Classification: WG6

Contribution ID: **120** Type: **not specified**

Top quark pair cross section

Tuesday, 9 September 2014 09:00 (30 minutes)

Presenter: MITOV, Alexander Dimitrov (University of Cambridge (GB))

Session Classification: WG6

Contribution ID: **121** Type: **not specified**

Measurement of cross-sections and search for new phsyics in tt̄(+X) final states at ATLAS

Tuesday, 9 September 2014 09:35 (30 minutes)

Presenter: KVITA, Jiri (Palacky University (CZ))

Session Classification: WG6

Contribution ID: **122** Type: **not specified**

Measurement of cross-sections and search for new phsyics in tt̄(+X) final states at CMS

Tuesday, 9 September 2014 10:10 (30 minutes)

Presenter: Dr GOLDSTEIN, Joel (University of Bristol (GB))

Session Classification: WG6

Contribution ID: **123** Type: **not specified**

New physics related to single top production

Tuesday, 9 September 2014 11:15 (25 minutes)

Presenter: F. KAMENIK, Jernej (Jozef Stefan Institute)

Session Classification: WG6

Contribution ID: **124** Type: **not specified**

Single top measurements at Tevatron

Tuesday, 9 September 2014 11:45 (20 minutes)

Presenter: BUTTI, Pierfrancesco (NIKHEF (NL))

Session Classification: WG6

Contribution ID: **125** Type: **not specified**

Single top measurements at ATLAS

Tuesday, 9 September 2014 12:10 (20 minutes)

Presenter: RIECK, Patrick (Humboldt-Universitaet zu Berlin (DE))

Session Classification: WG6

Contribution ID: **126** Type: **not specified**

Single top measurements at CMS

Tuesday, 9 September 2014 12:35 (20 minutes)

Presenter: POPOV, Andrey (Universite Catholique de Louvain (UCL) (BE))

Session Classification: WG6

Contribution ID: **127** Type: **not specified**

Flavor changing neutral currents and top quarks

Tuesday, 9 September 2014 16:45 (25 minutes)

Presenter: BROD, Joachim (University of Cincinnati)

Session Classification: WG6

Contribution ID: **128** Type: **not specified**

Searches for FCNC with top quarks at ATLAS

Tuesday, 9 September 2014 17:15 (20 minutes)

Presenter: ARSLAN, Ozan (Universitaet Bonn (DE))

Session Classification: WG6

Contribution ID: **129** Type: **not specified**

Searches for FCNC with top quarks at CMS

Tuesday, 9 September 2014 17:40 (20 minutes)

Presenter: LIU, Yueh-Feng (Carnegie Mellon University)

Session Classification: WG6

Contribution ID: **130** Type: **not specified**

Forward-backward and charge asymmetries at Tevatron and LHC

Thursday, 11 September 2014 09:00 (25 minutes)

Presenter: RODRIGO, German (CSIC)

Session Classification: WG6

Contribution ID: **131** Type: **not specified**

Asymmetries at Tevatron

Thursday, 11 September 2014 09:30 (20 minutes)

Presenter: BARTOS, Pavol (Comenius University (SK))

Session Classification: WG6

Contribution ID: **132** Type: **not specified**

tt̄ charge asymmetry at ATLAS

Thursday, 11 September 2014 09:55 (20 minutes)

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

Session Classification: WG6

Contribution ID: **133** Type: **not specified**

tt̄ charge asymmetry at CMS

Thursday, 11 September 2014 10:20 (20 minutes)

Presenter: BELUFFI, Camille (Universite Catholique de Louvain (UCL) (BE))

Session Classification: WG6

Contribution ID: **134** Type: **not specified**

CP violation in ttbar h

Thursday, 11 September 2014 11:15 (20 minutes)

Presenter: MAWATARI, Kentarou (Vrije Univ. Brussel)

Session Classification: WG6

Contribution ID: **135** Type: **not specified**

Top-Higgs couplings at high energies

Thursday, 11 September 2014 11:40 (20 minutes)

Presenter: Dr SAKURAI, Kazuki (King's College London)

Session Classification: WG6

Contribution ID: **136** Type: **not specified**

Searches for ttH at ATLAS

Thursday, 11 September 2014 12:05 (20 minutes)

Presenter: KNUE, Andrea Helen (University of Glasgow (GB))

Session Classification: WG6

Contribution ID: **137** Type: **not specified**

Searches for ttH at CMS

Thursday, 11 September 2014 12:30 (20 minutes)

Presenter: REBANE, Liis (Eidgenoessische Tech. Hochschule Zuerich (CH))

Session Classification: WG6

Contribution ID: **138** Type: **not specified**

Sensitivity of Neutron Beta Decay Observables to BSM Interactions

Monday, 8 September 2014 14:30 (35 minutes)

The extraction of Vud from the lifetime of the neutron and it's dependence on radiative, recoil and weak magnetism corrections will be reviewed. In addition, the sensitivity of neutron asymmetries and the lifetime of the free neutron to contributions of BSM interactions of order 10ˆ-4 will presented. Finally, new results on the sensitivity of bound state beta decay observables to contributions of BSM interactions will be shown.

Presenter: PITSCHMANN, Mario (V)

Session Classification: WG1

Contribution ID: **139** Type: **not specified**

The neutron lifetime

Monday, 8 September 2014 15:05 (35 minutes)

The free neutron decays to a proton, electron, and antineutrino with a lifetime of about 15 minutes. Neutron decay is the prototype for nuclear beta decay and other semileptonic weak decays. The value of the neutron lifetime, along with neutron decay correlation parameters, provides direct access to the vector and axial vector weak couplings of the nucleon and the CKM matrix element Vud and can search for hints of new physics beyond the Standard Model. The neutron lifetime is a key ingredient in theoretical calculations of primordial element abundances from Big Bang nucleosynthesis. Two main methods, the beam method and the ultracold neutron bottle method, have approached the 10ˆ-3 precision level in recent years, but unfortunately these two methods currently disagree by more than 8 seconds (almost 4 standard deviations). I will discuss the motivation and physics of the neutron lifetime and briefly review past experiments and future plans.

Presenter: WIETFELDT, Fred (Tulane University)

Session Classification: WG1

Contribution ID: **140** Type: **not specified**

Determination of the Weak Axial Vector Coupling from Neutron Beta Decay

Monday, 8 September 2014 15:40 (35 minutes)

Presenter: ABELE, Hartmut (Institute of Atomic and Subatomic Physics)

Session Classification: WG1

Contribution ID: **141** Type: **not specified**

Recent progress and outlook on the determination of Vud from nuclear physics experiments

Monday, 8 September 2014 16:45 (30 minutes)

We will describe the extraction of Vud from nuclear beta decays. We will summarize recent progress in understanding possible sources of uncertainties, in particular, the isospin breaking corrections. We will present some existing tests of the latter and indicate the prospects for more stringent tests in the future.

Presenter: GARCIA, Alejandro (University of Washington)

Session Classification: WG1

Contribution ID: **142** Type: **not specified**

Experimental determination of Vus from kaon decays

Monday, 8 September 2014 17:15 (30 minutes)

During the last few years, new experimental and theoretical results have allowed ever-more-stringent tests of the Standard Model to be performed using kaon decays. This overview of recent progress includes updated results for the evaluation of the CKM matrix element Vus from experimental kaon decay data, as well as related tests of CKM unitarity and gauge and lepton universality.

Presenter: MOULSON, Matthew David (INFN)

Session Classification: WG1

Contribution ID: **143** Type: **not specified**

Extracting Vus from lattice QCD simulations: recent progress and prospects

Monday, 8 September 2014 17:45 (30 minutes)

I review the recent determinations of V_{us} from lattice QCD. After a quick review of the strategies, I will show the current status and will present some new ongoing computations at the physical value of pion mass

Presenter: GARRON, Nicolas

Session Classification: WG1

Contribution ID: **144** Type: **not specified**

Inclusion of isospin breaking effects in lattice simulations

Monday, 8 September 2014 18:15 (30 minutes)

Isospin symmetry is explicitly broken in the Standard Model by the non-zero differences of mass and electric charge between the up and down quarks. Both of these corrections are expected to have a comparable size of the order of one percent relatively to hadronic energies. Although these contributions are small, they play a crucial role in hadronic and nuclear physics. We explain how to properly define QCD and QED on a finite and discrete space-time so that isospin corrections to hadronic observables can be computed ab-initio. We then consider the different approaches to compute lattice correlation functions of QCD and QED observables. Finally we summarise the actual lattice computations which include isospin breaking effects.

Presenter: PORTELLI, Antonin (University of Southampton)

Session Classification: WG1

Contribution ID: **145** Type: **not specified**

Experimental review on Vus from tau decays

Tuesday, 9 September 2014 16:45 (30 minutes)

We use the available measurements of the tau lepton branching fraction to determine the CKM matrix coefficient |Vus| in three ways, which are finally combined. The experimental information is combined following the HFAG prescriptions to account for statistical and systematic correlations, and the dependence of experimental results from external parameters for which updated information exists. The 2012 HFAG tau branching fraction fit has been updated with new measurements and external parameters since then.

Presenter: LUSIANI, Alberto (Scuola Normale Superiore and INFN Pisa)

Session Classification: WG1

Contribution ID: **146** Type: **not specified**

Determinations of V_us from hadronic tau decays: A theory perspective

Tuesday, 9 September 2014 17:15 (30 minutes)

Presenter: Mrs PASSEMAR, Emilie (Institut de Physique Nucléaire)

Session Classification: WG1

Contribution ID: **147** Type: **not specified**

Recent experimental results on (semi-)leptonic D decays and extraction of V_cd and V_cs

Tuesday, 9 September 2014 17:45 (30 minutes)

Some recent experimental results on measurements of branching fraction of leptonic D(s)+ decays and semileptonic D decays, which were measured at the BaBar, Belle, BESIII and CLEO-c experiments in the last several years, are reviewed. The decay constants of D(s)+ mesons as well as form factors of D semileptonic decays are also briefly reviewed. In addition, the extraction of |V_cd| and |V_cs| based on these measurements are discussed. With the newly determined |V_cd| and |V_cs| based on these measurements together with other CKM matrix elements quoted from PDG2013 the unitarity of the CMK matrix are checked as well.

Presenter: RONG, Gang (Institute of High Energy Physics)

Session Classification: WG1

Contribution ID: **148** Type: **not specified**

Lattice inputs for the determination of V_cd and V_cs from (semi-)leptonic decays

Tuesday, 9 September 2014 18:15 (20 minutes)

In this talk I will review recent lattice QCD results for D and D_s meson leptonic and semileptonic decays. The theory inputs needed for the determination of V_cd and V_cs from experimental results are the meson decay constants (leptonic decays) and the form factors (semileptonic decays). In addition one can compare the shape of the form factors from lattice QCD and experiment, and use the full experimental qˆ2 range (partial decay rates in qˆ2 bins) to determine the CKM matrix elements.

Presenter: KOPONEN, Jonna (University of Glasgow)

Session Classification: WG1

Contribution ID: **149** Type: **not specified**

WG1 Summary – The determination of V_ud

Friday, 12 September 2014 09:00 (10 minutes)

Presenter: BAESSLER, Stefan (University of Virginia)

Session Classification: Plenary

Contribution ID: **150** Type: **not specified**

Working Group 2 Summary

Friday, 12 September 2014 09:30 (30 minutes)

Presenter: DELLA MORTE, Michele (Unknown)

Session Classification: Plenary

Contribution ID: **151** Type: **not specified**

Working Group 3 Summary

Friday, 12 September 2014 10:00 (30 minutes)

Presenter: BLAKE, Thomas (CERN)

Session Classification: Plenary

Contribution ID: **152** Type: **not specified**

Working Group 4 Summary

Friday, 12 September 2014 11:00 (30 minutes)

Presenter: AMHIS, Yasmine Sara (Laboratoire de l'Accelerateur Lineaire (FR))

Session Classification: Plenary

Contribution ID: **153** Type: **not specified**

Working Group 5 Summary

Friday, 12 September 2014 11:30 (30 minutes)

Presenter: LIBBY, James (Indian Institute of Technology Madras)

Session Classification: Plenary

Contribution ID: **154** Type: **not specified**

Working Group 6 Summary

Friday, 12 September 2014 12:00 (30 minutes)

Presenter: CRISTINZIANI, Markus (Universitaet Bonn (DE))

Session Classification: Plenary

Contribution ID: **155** Type: **not specified**

Working Group 7 Summary

Friday, 12 September 2014 12:30 (30 minutes)

Presenter: BRODZICKA, Jolanta (University of Manchester (GB))

Session Classification: Plenary

Contribution ID: **156** Type: **not specified**

Flavor violation in top-highs couplings

Tuesday, 9 September 2014 18:05 (20 minutes)

Presenter: SOREQ, Yotam (Weizmann Institute of Science (IL))

Session Classification: WG6

Contribution ID: **157** Type: **not specified**

Search for CPV in D0->hh at CDF

Tuesday, 9 September 2014 15:20 (15 minutes)

Presenter: SABATO, Leo

Session Classification: WG7

Contribution ID: **158** Type: **not specified**

WG1 Summary – The determination of V_us/V_cd(s)

Friday, 12 September 2014 09:10 (20 minutes)

Presenter: GAMIZ, Elvira

Session Classification: Plenary

Contribution ID: **160** Type: **not specified**

Greetings

Monday, 8 September 2014 09:08 (9 minutes)

Presenter: Prof. FRÖHLICH, Johannes (Vienna University of Technology)

Session Classification: Plenary

Contribution ID: **161** Type: **not specified**

Greetings

Monday, 8 September 2014 09:17 (9 minutes)

Presenter: Prof. RAUCH, Helmut (Austrian Academy of Sciences)

Session Classification: Plenary

Contribution ID: **162** Type: **not specified**

Greetings

Monday, 8 September 2014 09:26 (9 minutes)

Presenter: Prof. SCHIECK, Jochen (Austrian Academy of Sciences (AT))

Session Classification: Plenary

Contribution ID: **163** Type: **not specified**

Closing

Friday, 12 September 2014 13:00 (30 minutes)

Presenters: LIBBY, James (Indian Institute of Technology Madras); GERSHON, Timothy (University of Warwick (GB))

Session Classification: Plenary