

# **WORKSHOP tau lepton decays: hadronic currents from Belle BaBar data and LHC signatures**

Monday, 14 May 2012 - Saturday, 19 May 2012

Institute of Nuclear Physics, Cracow

## **Book of Abstracts**



# Contents

Introduction . . . . .	1
RChL currents in Tauola: implementation and fit parameters . . . . .	1
Resonance Chiral Lagrangians and hadronic currents theoretical uncertainty . . . . .	1
Using spin of tau to constrain hard interactions. . . . .	1
TauSpinner and its application to data analysis . . . . .	1
2HDM(II) radiative corrections in leptonic tau decays . . . . .	1
LFV at LHCb . . . . .	1
title . . . . .	2
(N)NLL+(N)NLO QCD predictions and QED FSR for a novel variable which probes the low Z pT domain . . . . .	2
Measurement of polarization in B to D <sup>*</sup> tau nu decays . . . . .	2
Tau reconstruction and identification at CMS . . . . .	2
Tau identification and reconstruction at ATLAS . . . . .	2
Physics searches with tau leptons at ATLAS . . . . .	2
title . . . . .	2
Advanced analysis methods: today and tomorrow . . . . .	2
Software organization of the projects related to TAUOLA . . . . .	3
Confronting Theoretical Models with Experimental Data - Perspectives on tau <sup>-</sup> to h <sup>-</sup> h <sup>-</sup> h <sup>+</sup> nu . . . . .	3
Belle pion form factor in tauola . . . . .	3
What next? . . . . .	3
Introduction . . . . .	3
CMS searches using tau leptons, including Higgs and SUSY . . . . .	3
to be announced or cancelled . . . . .	3



0

## **Introduction**

**Corresponding Author:** z.was@cern.ch

1

## **RChL currents in Tauola: implementation and fit parameters**

**Corresponding Author:** olga.shekhovtsova@lnf.infn.it

2

## **Resonance Chiral Lagrangians and hadronic currents theoretical uncertainty**

**Corresponding Author:** proig@ifae.es

3

## **Using spin of tau to constrain hard interactions.**

**Author:** Zbigniew Andrzej Was<sup>1</sup>

<sup>1</sup> *Polish Academy of Sciences (PL)*

**Corresponding Author:** z.was@cern.ch

4

## **TauSpinner and its application to data analysis**

**Corresponding Author:** zofia.czyczula@cern.ch

5

## **2HDM(II) radiative corrections in leptonic tau decays**

**Corresponding Author:** maria.krawczyk@fuw.edu.pl

6

## **LFV at LHCb**

**Corresponding Author:** marcin.jakub.chrzaszcz@cern.ch

7

**title**

8

## **(N)NLL+(N)NLO QCD predictions and QED FSR for a novel variable which probes the low Z pT domain**

**Corresponding Author:** thi.kieu.oanh.doan@cern.ch

9

## **Measurement of polarization in B to D<sup>\*</sup> tau nu decays**

10

## **Tau reconstruction and identification at CMS**

**Corresponding Author:** vladimir.cherepanov@cern.ch

11

## **Tau identification and reconstruction at ATLAS**

**Corresponding Author:** martin.flechl@cern.ch

12

## **Physics searches with tau leptons at ATLAS**

**Corresponding Author:** stan.lai@cern.ch

13

**title**

14

## **Advanced analysis methods: today and tomorrow**

**Corresponding Author:** marcin.wolter@cern.ch

15

## **Software organization of the projects related to TAUOLA**

**Corresponding Author:** tomasz.przedzinski@cern.ch

16

## **Confronting Theoretical Models with Experimental Data - Perspectives on $\tau^- \rightarrow h^- h^- h^+ \nu$**

**Corresponding Author:** inugent@uvic.ca

17

## **Belle pion form factor in tauola**

18

## **What next?**

**Corresponding Author:** z.was@cern.ch

19

## **Introduction**

**Author:** Zbigniew Andrzej Was<sup>1</sup>

<sup>1</sup> *Polish Academy of Sciences (PL)*

20

## **CMS searches using tau leptons, including Higgs and SUSY**

**Corresponding Author:** artur.kalinowski@cern.ch

21

**to be announced or cancelled**