



LES RENCONTRES DE PHYSIQUE  
DE LA VALLEE D'AOSTE  
**Results and Perspectives in Particle Physics**

*La Thuile, Aosta Valley (Italy)*  
*February 26 - March 3, 2012*



**PRELIMINARY SCIENTIFIC PROGRAMME**  
**(February 21, 2012)**

**Monday, February 27**

**I. Cosmology and Astrophysics**

**8.30-11.30**

1. Planck: Results and Cosmological Perspectives (Paolo Natoli, Roma)
2. Sloan Digital Sky Survey (Ariel Sanchez, MPI)
3. SN 1987 A: the Supernova which changed our views (Arnon Dar, Technion)
4. Recent Results from FERMI (Francesco De Palma, Bari)
5. KLOE searches on Dark Forces (Simona Giovannella, Frascati)
6. Dark Matter Searches: a Theoretical Perspective (Marco Cirelli, CERN)

**II. Astroparticle and Neutrino Physics**

**16.30-19.00**

1. Modified Gravity. Problems and Observational Manifestations (Elena Arbusova, Dubna)
2. OPERA Neutrino Oscillation Results (Ali Murat Guler, Ankara)
3. Recent Results from T2K (Kendall Mahn, TRIUMF)
4. Studying Solar Neutrinos with the Borexino Detector (Marco Giammarchi, Milano)
5. Theoretical Models for Neutrino Masses (Luca Merlo, Munich)
6. Searching for Double Beta Decay with GERDA (Sabine Hemmer, Padova)

**Tuesday, February 28**

**III. Astroparticle and Neutrino Physics**

**8.30-10.45**

1. OPERA Measurement of Neutrinos Speed (Giulia Brunetti, LHEP)
2. First Results from the Daya Bay Experiment (Debabrata Mohapatra, Virginia)
3. Double Chooz Results on  $\theta_{13}$  (Bernd Reinhold, Heidelberg)
4. The Quest for LFV. Are we going to see it? (Sacha Davidson, Lyon)
5. LFV and New-Physics Searches from the B Factories (Kevin Flood, Caltech)
6. LFV Searches in Kaon Rare Decays (Angela Romano, University of Birmingham).
7. LFV with MEG (Gianluca Cavoto, Roma)

**IV. QCD Physics/Hadronic Interactions**

**11:00 -11.40**

1. ALICE Results on HI Physics at the LHC (Luciano Ramello, Torino)

**IV. QCD Physics/Hadronic Interactions**

**16.00-19.50**

1. HI Physics Results from CMS (Gabor Veres, CERN)
2. Total, Elastic cross and Diffractive pp cross section at 7 TeV (Nicola Turini, Siena)
3. QCD and Fwd Physics Results from CMS (Roberta Arcidiacono, Torino)
4. QCD Results Using Jets and Photons in ATLAS (David Mateos Lopez, Harvard)
5. QCD Physics at the Tevatron (Shulamit Moed, Harvard)
6. Probes of soft and hard QCD at LHCb (Emanuele Santovetti, Roma 2)
7. QCD in Hadron Collision (Gavin Salam, CERN)

# Wednesday, February 29

## V. Flavour Physics, CP Violation and Rare Decays

8.30-11.30

1. Study of CPV in B and Charm Systems at LHCb (Emile Maurice, Marseille)
2. CPV in the Charm System (Jernej Kamenik, Ljubljana)
3. Rare b and c decays at LHCb (Oliver Deschamps, Clermont-Ferrand)
4. Heavy Flavour Physics at the Tevatron (centered about  $B_s$ ,  $\sin\beta_s$  etc.) (Hideki Miyake, Tsukuba)
5. Latest B-Physics Results at ATLAS (Julie Kirk, RAL)
6. Heavy Flavour Physics Results from CMS (Domenico Giordano, CERN)
7. Heavy Flavour Spectroscopy (X,Y,Z,Bc,B\*\*) (Wenbin Qian, Syracuse)
8. Bottomonium(-like) States from the B Factories (Pavel Krokovny, BINP)

## Flavour Physics continued

16.30-17.30

1. Heavy Flavour at the Tevatron (Angelo Di Canto, Pisa)
2. Searching for New Physics with Flavor-Violating Observables (Wolfgang Altmanshofer, Fermilab)

## Young Scientists Forum (1 hour, 4 talks)

17.30-19.00

1. Results of  $B_s \rightarrow$  CP Eigenstates at Belle (Felicita Thorne, Vienna)
2. CP asymmetries, decay rates, and Dalitz-plot analysis of  $B \rightarrow KKK$  at BABAR (Brian Lindquist, Stanford)
3. Studies of CP Violation in the Decay  $B \rightarrow J\psi\phi$  at D0 (Ricardo Magana-Villalba, Mexico)
4. Flavour Phenomenology of a Maximally Gauged Flavour Model (Emmanuel Stamou, Munich)
5. The time-dependent CP violation in charm (Gianluca Inguglia, London)

# Thursday, March 1

## VI. Electroweak and top Physics

8.30-11.30

1. Electroweak Physics at the Tevatron (including  $M_W$ ) (Viviana Cavaliere, Urbana)
2. Top Physics results from the Tevatron (Alexander Grohsjean)
3. EWK Physics Results from CMS (Ilya Kravchenko, Nebraska)
4. Latest Electroweak Physics Results at ATLAS (Alexandre Glazov, DESY)
5. Top Physics Results from CMS (Maria Aldaya Martin, DESY)
6. Latest Top Physics Results at ATLAS (Liza Mijovic, DESY)
7. Recent progress in top-quark physics (Michael Trott, CERN)

## Young Scientists Forum

(16.30-18:00)

1. Search for the SM Higgs Boson in the 2-Photon Decay Channel (Haichen Wang, University of Wisconsin)
2. Search SUSY with jets and missing energy (Robin van der Leeuw, NIKHEF)
3. BSM Higgs Searches in Tau Final States at D0 (Louise Suter, FNAL)
4. Finding a  $Z \rightarrow 2$  jets signal in  $W+3$  jets events at CDF (Caterina Vernieri, Pisa)
5. Light Dark Matter, Light Higgs and Strong Electroweak Phase Transition (Amine Ahriche, Algeri)

## VII. Physics and Society

(18:00-19:30)

1. Thorium Reactors (Stuart Henderson, Fermilab)
2. Physics in Latin America (Luciano Maiani, Roma)

## **Friday, March 2, morning**

### **VIII. Higgs Searches, Hot Topics**

**8.30-11.30**

1. Search for Low Mass Higgs at the Tevatron (Satish Desai, Fermilab)
2. Search for High Mass Higgs at the Tevatron (Richard StDenis, Glasgow)
3. WW/WZ-->ln bb at the Tevatron (Yuji Enari, Fermilab)
4. Search for the Standard Model Higgs boson at ATLAS (Junichi Tanaka, ICEPP)
5. Higgs Results from CMS (Josh Bendavid, MIT)
6. Implications of LHC Higgs (Giuseppe Degrassi, Roma)
7. Electroweak symmetry breaking beyond the SM (Adam Falkowski, Paris)

### **IX. Searching for New Physics**

**16:30 – 19:30**

1. Search for the BSM Higgs Bosons at ATLAS (Markus Warsinsky, Freiburg)
2. SUSY Searches Results from CMS (Markus Stoye, CERN)
3. BSM Searches Results from CMS (Artur Apresyan, CALTECH)
4. Search for Supersymmetry at ATLAS (Renaud Bruneliere, Freiburg)
5. Beyond the Standard Model Searches at ATLAS (Dominique Fortin, TRIUMF)
6. Phenomenology of New Neutral Gauge Bosons in Extended MSSM (Simonetta Gentile, Roma)
7. Light Colored Scalars as Messengers of Up-, Down-Quark and Charged Lepton Flavor Dynamics in Grand Unified Theories (Ilija Doršner, Sarajevo)

## **Saturday, March 3**

### **X. Perspectives**

**9:00 – 11:00**

1. Galileo, the European GNSS program & LAGEOS (Simone Berardi, Frascati)
2. Cherenkov Array Telescope (Speaker TBA)
3. CERN future prospects (Sergio Bertolucci, CERN)