#### 21/02/2018

#### PRELIMINARY SCIENTIFIC PROGRAMME Monday, February 26

## I. Cosmology and Astroparticle Physics 8:30-11:30

GWs from coalescing binaries: experimental aspects and recent results GWs from coalescing binaries: the theory Detecting gravitational waves with atomic sensors **COFFEE BREAK** The smoking guns of n\*n\* mergers Cosmology with the CMB: Planck and beyond 10 years in space: highlights of Fermi-LAT science

#### II. Neutrino Physics 16:30-18:25

#### ANTARES/KM3 Progress in Neutrino physics BREAK

Study of Cosmic Rays anisotropy with the Auger Observatory Search for neutrino double-beta decay with CUORE

### Young Scientists Forum (I)

#### 18:25-19:00

CMB cosmology with Planck Low temperature electroweak phase transition with hidden scale invariance Search for high-mass resonances in the dilepton final state in p-p collisions at sqrt(s)=13 TeV

#### Tuesday, February 27

## III. Dark Matter Searches

#### 8:30-11:30

Search for dark matter with the XENON1T detector Black Holes as DM candidates Hunting DM with gravititational waves **COFFEE BREAK** LHCb/TOTEM/LHCf inputs to astrophysics Relativistic kinematics, cosmic rays and gamma-ray bursts

Review Results from DAMPE

# IV. Dark Matter and Neutrino Physics 16.00-17:30

Study of neutrino CPV with the T2K experiment Newest Results from NOVA on v oscillation Towards a Future Muon Collider MuOne BREAK

#### Young Scientists Forum (II) 17:30-18:30

Sneutrino Dark Matter in the BLSSM Mixing and CP violation in charm Measurement of Ps

## V. Heavy lons

18:30-19:20 Heavy ion physics at ATLAS, CMS and LHCb Gianluca Gemme, Genova Alessandro Nagar, Torino Guglielmo Tino, Firenze

Arnon Dar, Haifa Paolo Natoli, Ferrara Francesco De Palma, Bari

Giulia Illuminati, Valencia Carlo Giunti, Torino

Jonathan Biteau, Orsay Irene Nutini, GSSI

Marina Migliaccio, ASI Cyril Lagger, Sydney Filippo Errico, Bari

Guillaume Eurin, Heidelberg Davide Racco,Geneva Alfredo Urbano, Trieste

Valery Zhukov, Aachen Alvaro De Rujula, CERN Giovanni Ambrosi, Perugia

Lorenzo Magaletti, Bari Luke Vinton, Sussex Pantaleo Raimondi, ESRF Fulvio Piccinini, Pavia

Simon King, Southampton Louis Henry, Valencia Miriam Lucio Martinez, Santiago

Wednesday, February 28		
VI. Heavy Flavour Spectroscopy		
8.30-12:00		
Heavy flavour spectroscopy at ATLAS, CMS and LHCb	Matthew Charles, Paris	
Heavy Flavour Physics at the Tevatron	Diego Tonelli, Trieste	
COFFEE BREAK		
Lepton-flavour universality tests at LHCb	Marta Calvi, Milano	
NP effects in B-physics	Nazila Mahmoudi, Lyon	
Flavour Contraints on NP	Luca Silvestrini, Roma	
Status and perspective of Belle II at SuperKEKB	Pavel Krokovny, Budker	
Measurements of CP violation at the LHC	Diego Tonelli, Trieste	
VII. Flavour Physics and Rare Decays		
Study of rare heavy flavour decays at the LHC	Giulio Dujany, Paris	
First evidence for cos(2β)>0 at BaBar and Belle	Markus Roehrken, CERN	
Models for B-physics anomalies	Dario Buttazzo, Pisa	
BREAK		
Light New Physics	Maxim Pospelov, Perimeter	
$K^+ - > \pi^+ \nu \nu$ decays and NP searches at NA62	Silvia Martellotti, LNF	
VIII. Physics and Society 18:50-19:30		
Fake News and Science, a social and educational challenge	Lorenzo Maanea Torino	

Fake News and Science, a social and educational challenge Discussion

#### Thursday, March 1 X. QCD and Electroweak Physics and Top Physics

8:30-11:30

QCD in gauge-boson production at the LHC Top production at the LHC ( joint talk) Top Physics at the Tevatron **COFFEE BREAK** BESIII Study of XYZ Status

TOTEM Measurements of  $\rho$ ,  $\sigma$ \_el, s\_tot EWK Measurements at the Tevatron

## IX. Special Session

16:00-17:00 Testing Naturalness INFN Initiaties Towards Future Accelerators

#### BREAK

# X. QCD and Electroweak Physics and Top Physics - continued 17:15-18:30

Electroweak physics at the LHC Exotic Decays at NA62 NP searches in EW physics

## Young Scientists Forum (III)

18:30-19:15 Evidence for the H to bbar decay with the ATLAS detector Lorenzo Magnea,Torino

Matthias Schott, Mainz Geoffrey Gilles, Wuppertal Sandra Leone, Pisa

Yutie Liang, Giessen Nicola Turini, Siena Breese Quinn, Mississipi Univ.

Ian Low , Northwestern Fernando Ferroni, Roma

Philip Sommer, Sheffield Tommaso Spadaro, LNF David Marzocca, Trieste

#### 21/02/2018

Search for single production of vector-like quarks decaying to a b quark and a Higgs boson	Giorgia Rauco, Zürich
Measurement of the top quark pair-production in association with a W or Z boson in pp collisions at 13 TeV with full 2016 dataset at CMS experiment	Illia Khvastunov, Ghent
Search for direct top squark pair production in events with a Higgs or Z boson, and missing transverse momentum in $\sqrt{s}$ =13 TeV pp collisions with the ATLAS	Gabriele D'Amen, Bologna
Search for heavy neutral leptons (sterile neutrinos) with the CMS detector	Martina Vit, Ghent

Friday, March 2

#### 8.30-11.45

Measurement of Higgs Production Cross-Sections and CouplingsSilvio Donato, ZürickDirect and indirect probes of the Higgs Yukawa couplingsUli Haisch, OxfordSearch for dark matter production at ATLAS and CMS (joint talk)Alexander Grohsjean, DESYDM at collidersPedro Schwaller, MainzCOFFEE BREAKHiggs properties and decays, searches for high mass Higgs boson and di-Higgs productionCollider implication of flavor anomaliesMarco Nardecchia, TriesteSearches for Rare Top Processes and Decay and Third Generation SUSYStefano Zambito, Harvard

### XI. Searching for New Physics - continued

Searches for Electroweak and Strong SUSY (joint talk)	Santiago Folgueras, Oviedo
Searches for long-lived particle decays at the LHC (joint talk)	Simone Gennai, Milano
Searches for high-mass resonances in bosons and leptons (joint talk)	John Alison, Chicago
Searches for electroweak Higgsino production in compressed scenarios with ATLAS	Maximilian J. Swiatlowski
BREAK	

## Young Scientists Forum (V) 18:25-19:10

Lepton-Flavour universality tests with semitauonic decays Christos Hadjivasiliou, Clermont-Ferrand Measurement of the tt<sup>-</sup>y production cross section in proton-proton collisions at \s=8 TeV with the ATLAS detector Clockwork theory and phenomenology Daniele Teresi, Brussels

#### Saturday, March 3

#### X. Perspectives 9:00 - 10:30

Darkside new results and prospects Probing the dark sector with PADME Search for Sterile Neutrino with Danss Matteo Cadeddu, Cagliari Mauro Raggi, Roma Michael Danilov, LPI Moscow