

BSM journal club

21st October 2015

- 1 [Global analysis of \$b \rightarrow s\ell\ell\$ anomalies](#)
Sébastien Descotes-Genon, Lars Hofer, Joaquim Matias, Javier Virto
arXiv:1510.04239
Presented by Avelino
- 2 [Diboson anomaly: heavy Higgs resonance and QCD vector-like exotics](#)
D. Aristizabal Sierra, J. Herrero-Garcia, D. Restrepo, A. Vicente
arXiv:1510.03437
Presented by Avelino
- 3 [Implications of the CMS search for \$W_R\$ on Grand Unification](#)
Triparno Bandyopadhyay, Biswajoy Brahmachari, Amitava Raychaudhuri
arXiv:1509.03232
Presented by Renato

28th October 2015

- 1 [Theoretically palatable flavor combinations of astrophysical neutrinos](#)
Mauricio Bustamante, John F. Beacom, Walter Winter
Phys. Rev. Lett. **115** (2015) 161302, [arXiv:1506.02645]
Presented by Pablo
- 2 [Effect of New Physics in Astrophysical Neutrino Flavor](#)
Carlos A. Argüelles, Teppei Katori, Jordi Salvado
Phys. Rev. Lett. **115** (2015) 161303, [arXiv:1506.02043]
Presented by Pablo
- 3 [Probing heavy neutrinos in the COMET experiment](#)
Takehiko Asaka, Atsushi Watanabe
arXiv:1510.07746
Presented by Avelino

4th November 2015

- 1 [Neutrino Mixing: \$A_4\$ variations](#)
Ernest Ma
arXiv:1510.02501
Presented by Alma
- 2 [Disambiguating Seesaw Models using Invariant Mass Variables at Hadron Colliders](#)
P. S. Bhupal Dev, Doojin Kim, Rabindra N. Mohapatra
arXiv:1510.04328
Presented by Martin
- 3 [Short-range mechanisms of neutrinoless double beta decay at the LHC](#)
J. C. Helo, M. Hirsch, H. Päs, S. G. Kovalenko
Phys. Rev. D **88** (2013) 073011, [arXiv:1307.4849]
Presented by Martin

12th November 2015

- 1 [Bounds on Neutrino-Scalar Yukawa Coupling](#)
P.S. Pasquini, O.L.G. Peres
arXiv:1511.01811
Presented by Pedro
- 2 [Bounds on very low reheating scenarios after Planck](#)
P.F. de Salas, M. Lattanzi, G. Mangano, G. Miele, S. Pastor, O. Pisanti
arXiv:1511.00672
Presented by Pablo
- 3 [A common origin of \$R_K\$ and neutrino masses](#)
Heinrich Päs, Erik Schumacher
arXiv:1510.08757
Presented by Avelino

20th November 2015

- 1 [Constraints to Dark Matter from Inert Higgs Doublet Model](#)
Marco Aurelio Díaz, Benjamin Koch, Sebastián Urrutia-Quiroga
arXiv:1511.04429
Presented by Nicolás

- 2 [SO\(10\) models with flavour symmetries: Classification and examples](#)
I.P. Ivanov, L. Lavoura
arXiv:1511.02720
Presented by Renato
- 3 [QCD running in neutrinoless double beta decay: Short-range mechanisms](#)
M. González, M. Hirsch, S.G. Kovalenko
arXiv:1511.03945
Presented by Martin

3rd December 2015

- 1 [Searching for Dark Matter Annihilation from Milky Way Dwarf Spheroidal Galaxies with Six Years of Fermi-LAT Data](#)
Fermi-LAT Collaboration
Phys. Rev. Lett. **115** (2015) 231301, [arXiv:1503.02641]
Presented by Roberto
- 2 [h, Z \$\rightarrow \ell_i \bar{\ell}_j\$, \$\Delta a_\mu\$, \$\tau \rightarrow \(3\mu, \mu\gamma\)\$ in generic two-Higgs-doublet models](#)
R. Benbrik, Chuan-Hung Chen, Takaaki Nomura
arXiv:1511.08544
Presented by Avelino
- 3 [\$\tau\$ - and \$\mu\$ -physics in a general two Higgs doublet model with \$\mu\$ - \$\tau\$ flavor violation](#)
Yuji Omura, Eibun Senaha, Kazuhiro Tobe
arXiv:1511.08880
Presented by Avelino
- 4 [A constrained supersymmetric left-right model](#)
Martin Hirsch, Manuel E. Krauss, Toby Opferkuch, Werner Porod, Florian Staub
arXiv:1512.00472
Presented by Martin
- 5 [Soft masses in SUSY SO\(10\) GUTs with low intermediate scales](#)
Valentina De Romeri, Martin Hirsch, Michal Malinsky
Phys. Rev. D **84** (2011) 053012, [arXiv:1107.3412]
Presented by Martin

11th December 2015

- 1 [Scalar doublet models confront \$\tau\$ and \$b\$ anomalies](#)
James M. Cline
arXiv:1512.02210
Presented by Avelino
- 2 [Generalized \$\mu - \tau\$ reflection symmetry and leptonic CP violation](#)
Peng Chen, Gui-Jun Ding, Felix Gonzalez-Canales, J.W.F. Valle
arXiv:1512.01551
Presented by Félix
- 3 [Electroweak breaking and neutrino mass: 'invisible' Higgs decays at the LHC \(Type II seesaw\)](#)
Cesar Bonilla, Jorge C. Romão, José W. F. Valle
arXiv:1511.07351
Presented by César

12th February 2016

- 1 [The LHC diphoton resonance from gauge symmetry](#)
Sofiane M. Boucenna, Stefano Morisi, Avelino Vicente
arXiv:1512.06878
Presented by Avelino
- 2 [Dynamical seesaw mechanism for Dirac neutrinos](#)
José W. F. Valle, C.A. Vaquera-Araujo
arXiv:1601.05237
Presented by Carlos
- 3 [Long-range contributions to double beta decay revisited](#)
J.C. Helo, M. Hirsch, T. Ota
arXiv:1602.03362
Presented by Martin

22nd February 2016

- 1 [Neutrino propagation in the galactic dark matter halo](#)
P.F. de Salas, R.A. Lineros, M. Tórtola
arXiv:1601.05798
Presented by Pablo

- 2 [Double Froggatt-Nielsen Mechanism](#)
Kenji Nishiwaki, Yusuke Shimizu, Yoshiyuki Tatsuta
arXiv:1602.00890
Presented by Paulina
- 3 [Measurement of the Reactor Antineutrino Flux and Spectrum at Daya Bay](#)
Daya Bay Collaboration
Phys. Rev. Lett. **116** (2016) 6, 061801, [arXiv:1508.04233]
Presented by Mariam

4th March 2016

- 1 [Precision tools and models to narrow in on the 750 GeV diphoton resonance](#)
Florian Staub *et al*
arXiv:1602.05581
Presented by Avelino
- 2 [A flavour physics scenario for the 750 GeV diphoton anomaly](#)
Cesar Bonilla, Miguel Nebot, Rahul Srivastava, Jose W. F. Valle
arXiv:1602.08092
Presented by César
- 3 [Observation of Gravitational Waves from a Binary Black Hole Merger](#)
LIGO Scientific Collaboration and Virgo Collaboration
Phys. Rev. Lett. **116** (2016) 6, 061102, [arXiv:1602.03837]
Presented by Renato

23rd March 2016

- 1 The diphoton excess. Episode 2: the update
Presented by Avelino

13th April 2016

- 1 [String completion of an \$SU\(3\)_c \otimes SU\(3\)_L \otimes U\(1\)_X\$ electroweak model](#)
Andrea Addazi, J.W.F. Valle, C.A. Vaquera-Araujo
arXiv:1604.02117
Presented by Carlos
- 2 [Non-abelian gauge extensions for B-decay anomalies](#)
Sofiane M. Boucenna, Alejandro Celis, Javier Fuentes-Martin, Avelino Vicente, Javier Virto
arXiv:1604.03088
Presented by Javi
- 3 [Consistency of WIMP Dark Matter as radiative neutrino mass messenger](#)
Alexander Merle, Moritz Platscher, Nicolás Rojas, José W. F. Valle, Avelino Vicente
arXiv:1603.05685
Presented by Nicolás

13th May 2016

- 1 Neutrino landscape
Presented by José

1st June 2016

- 1 [Naturally light neutrinos in *Diracon* model](#)
Cesar Bonilla, Jose W.F. Valle
arXiv:1605.08362
Presented by César
- 2 $B \rightarrow \tau E_{miss}$
Presented by Choong Sun Kim

19th July 2016

- 1 [Dirac Neutrinos and Dark Matter Stability from Lepton Quarticity](#)
Salvador Centelles Chuliá, Ernest Ma, Rahul Srivastava, José W. F. Valle
arXiv:1606.04543
Presented by Salva
- 2 [Predicting CP Violation from Flavor Symmetry in a Lepton Quarticity Dark Matter Model](#)
Salvador Centelles Chuliá, Rahul Srivastava, José W. F. Valle
arXiv:1606.06904
Presented by Salva
- 3 [Realistic \$SU\(3\)_c \otimes SU\(3\)_L \otimes U\(1\)_X\$ model with type-II Dirac neutrino seesaw mechanism](#)
Mario Reig, Jose W. F. Valle, C.A. Vaquera-Araujo
arXiv:1606.08499
Presented by Mario

9th November 2016

- 1 Self introduction
Presented by Thomas
- 2 Self introduction
Presented by Stefano
- 3 [Unifying left-right symmetry and 331 electroweak theories](#)
Mario Reig, Jose W. F. Valle, C.A. Vaquera-Araujo
arXiv:1611.02066
Presented by Mario

17th November 2016

- 1 [Naturally small Dirac Neutrino Mass with Intermediate \$SU\(2\)_L\$ Multiplet Fields](#)
Weijian Wang, Zhi-Long Han
arXiv:1611.03240
Presented by César

- 2 [Emergence of small numbers in complex systems and the origin of the electroweak scale](#)

Radovan Dermisek

arXiv:1611.03188

Presented by Avelino

24th November 2016

- 1 [Quasi-Dirac neutrinos at the LHC](#)

G. Anamiati, M. Hirsch, E. Nardi

JHEP **1610** (2016) 010, [arXiv:1607.05641]

Presented by Tanya

- 2 [Non-renormalizable Operators for Solar Mass Generation in Split SuSy with Bilinear R-parity Violation](#)

Marco Aurelio Diaz, Benjamin Koch, Nicolas Rojas

arXiv:1611.03468

Presented by Nicolás

15th December 2016

- 1 Recent AMS results

Presented by Roberto

- 2 [Three-family left-right symmetry with low-scale seesaw mechanism](#)

Mario Reig, Jose W. F. Valle, C.A. Vaquera-Araujo

arXiv:1611.04571

Presented by Mario

3rd February 2017

- 1 [Probing anomalous Higgs couplings in \$H \rightarrow ZV\$ decays](#)

Tanmoy Modak, Rahul Srivastava

Mod. Phys. Lett. A **32** (2017), 1750004, [arXiv:1411.2210]

Presented by Rahul

- 2 [Constraining wrong-sign \$hbb\$ couplings with \$h \rightarrow \Upsilon\gamma\$](#)
Tanmoy Modak, Jorge C. Romão, Soumya Sadhukhan, João P. Silva, Rahul Srivastava
Phys. Rev. D **94** (2016) 075017, [arXiv:1607.07876]
Presented by Rahul
- 3 [Gauge vectors and double beta decay](#)
Renato M. Fonseca, Martin Hirsch
arXiv:1612.04272
Presented by Renato

16th February 2017

- 1 [The Many Guises of a Neutral Fermion Singlet](#)
Ernest Ma
arXiv:1702.03281
Presented by Avelino
- 2 [Connecting Radiative Neutrino Mass, Neutron-Antineutron Oscillation, Proton Decay, and Leptogenesis through Dark Matter](#)
Pei-Hong Gu, Ernest Ma, Utpal Sarkar
Phys. Rev. D **94** (2016) 111701, [arXiv:1608.02118]
Presented by Avelino
- 3 [Collider Phenomenology of the 3-3-1 Model](#)
Qing-Hong Cao, Dong-Ming Zhang
arXiv:1611.09337
Presented by Mario
- 4 [In-flight cLFV conversion: \$e - \mu\$, \$e - \tau\$ and \$\mu - \tau\$ in minimal extensions of the Standard Model with sterile fermions](#)
A. Abada, V. De Romeri, J. Orloff, A.M. Teixeira
arXiv:1612.05548
Presented by Valentina

8th March 2017

- 1 [Can we probe intrinsic CP/T violation and non-unitarity at long baseline accelerator experiments?](#)
Jogesh Rout, Mehedi Masud, Poonam Mehta
arXiv:1702.02163
Presented by Masud
- 2 [The Dark Side of MSW: Solar Neutrinos as a Probe of Dark Matter-Neutrino Interactions](#)
Francesco Capozzi, Ian M. Shoemaker, Luca Vecchi
arXiv:1702.08464
Presented by Jordi
- 3 [\$\Upsilon\$ and \$\psi\$ leptonic decays as probes of solutions to the \$R\(D^{\(*\)}\)\$ puzzle](#)
Daniel Aloni, Aielet Efrati, Yuval Grossman, Yosef Nir
arXiv:1702.07356
Presented by Avelino

26th April 2017

- 1 Anomalies in B-meson decays - Part I
Presented by Avelino
- 2 Anomalies in B-meson decays - Part II
Presented by Javi

4th May 2017

- 1 [\$U\(1\)_{B_3-3L_\mu}\$ gauge symmetry as the simplest description of \$b \rightarrow s\$ anomalies](#)
Cesar Bonilla, Tanmoy Modak, Rahul Srivastava, Jose W. F. Valle
arXiv:1705.00915
Presented by Rahul
- 2 [The Sym2Int program: going from symmetries to interactions](#)
Renato M. Fonseca
arXiv:1703.05221
Presented by Renato

10th May 2017

- 1 [Implications of the latest NO \$\nu\$ A results](#)
Srubabati Goswami, Newton Nath
arXiv:1705.01274
Presented by Christoph
- 2 [The seesaw portal in testable models of neutrino masses](#)
A. Caputo, P. Hernandez, J. Lopez-Pavon, J. Salvado
arXiv:1704.08721
Presented by Jordi
- 3 [Loop neutrino masses from d=7 operator](#)
R. Cepedello, M. Hirsch, J.C. Helo
arXiv:1705.01489
Presented by Ricardo

16th June 2017

- 1 [Direct Bounds on Heavy Top-Like Quarks With Standard and Exotic Decays](#)
Mikael Chala
arXiv:1705.03013
Presented by Miki
- 2 [The Neutrino Option](#)
Ilaria Brivio, Michael Trott
arXiv:1703.10924
Presented by Claudius
- 3 [Spontaneous Charge Breaking in the NMSSM - Dangerous or not?](#)
Manuel E. Krauss, Toby Opferkuch, Florian Staub
Eur. Phys. J. C **77** (2017) no.5, 331, [arXiv:1703.05329]
Presented by Manuel

7th July 2017

- 1 [Stimulated transitions in resonant Atom Majorana Mixing](#)
Jose Bernabeu, Alejandro Segarra
arXiv:1706.08328
Presented by Alejandro

2 [Thermal Dark Matter Below an MeV](#)

Asher Berlin, Nikita Blinov

arXiv:1706.07046

Presented by Stefano

13th July 2017

1 [A Model of Comprehensive Unification](#)

Mario Reig, José W. F. Valle, C.A. Vaquera-Araujo, Frank Wilczek

arXiv:1706.03116

Presented by Mario

2 [Spontaneous CP violation in multi-Higgs potentials with triplets of \$\Delta\(3n^2\)\$ and \$\Delta\(6n^2\)\$](#)

Ivo de Medeiros Varzielas, Stephen F. King, Christoph Luhn, Thomas Neder

arXiv:1706.07606

Presented by Thomas

20th September 2017

1 [Gauge leptoquark as the origin of B-physics anomalies](#)

Luca Di Luzio, Admir Greljo, Marco Nardecchia

arXiv:1708.08450

Presented by Avelino

2 [Controlled Flavour Changing Neutral Couplings in Two Higgs Doublet Models](#)

Joao M. Alves, Francisco J. Botella, Gustavo C. Branco, Fernando Cornet-Gomez, Miguel Nebot

Eur. Phys. J. C **77** (2017) no.9, 585, [arXiv:1703.03796]

Presented by Fernando

3 [Dark Matter and the elusive \$Z'\$ in a dynamical Inverse Seesaw scenario](#)

Valentina De Romeri, Enrique Fernandez-Martinez, Julia Gehrlein, Pedro A. N. Machado, Viviana Niro

arXiv:1707.08606

Presented by Valentina

27th September 2017

- 1 [Sterile Neutrinos or Flux Uncertainties? - Status of the Reactor Anti-Neutrino Anomaly](#)
Mona Dentler, Álvaro Hernández-Cabezudo, Joachim Kopp, Michele Maltoni, Thomas Schwetz
arXiv:1709.04294
Presented by Stefano
- 2 [Hidden Sector Dark Matter and the Galactic Center Gamma-Ray Excess: A Closer Look](#)
Miguel Escudero, Samuel J. Witte, Dan Hooper
arXiv:1709.07002
Presented by Sam

4th October 2017

- 1 [Baryogenesis from Oscillations of Charmed or Beautiful Baryons](#)
Kyle Aitken, David McKeen, Ann E. Nelson, Thomas Neder
arXiv:1708.01259
Presented by Thomas
- 2 [Future prospects for exploring present day anomalies in flavour physics measurements with Belle II and LHCb](#)
Johannes Albrecht, Florian Bernlochner, Matthew Kenzie, Stefanie Reichert, David Straub, Alison Tully
arXiv:1709.10308
Presented by Avelino

18th October 2017

- 1 [Radiative Two-Loop Neutrino Masses with Dark Matter](#)
C. Simoes, D. Wegman
JHEP 1704 (2017) 148 [arXiv:1702.04759]
Presented by Daniel

- 2 [Flavour alignment in multi-Higgs-doublet models](#)
Ana Peñuelas, Antonio Pich
arXiv:1710.02040
Presented by Ana
- 3 [Slepton Non-Universality in the Flavor-Effective MSSM](#)
M. Luisa López-Ibáñez, Aurora Melis, M. Jay Pérez, Oscar Vives
arXiv:1710.02593
Presented by Aurora

22nd November 2017

- 1 [Implications of the Neutron Star Merger GW170817 for Cosmological Scalar-Tensor Theories](#)
Jeremy Sakstein, Bhuvnesh Jain
arXiv:1710.05893
Presented by Gonzalo
- 2 [Can one ever prove that neutrinos are Dirac particles?](#)
Martin Hirsch, Rahul Srivastava, José W. F. Valle
arXiv:1711.06181
Presented by Rahul

28th November 2017

- 1 [Renormalizable SU\(5\) Unification](#)
Pavel Fileviez Perez, Clara Murgui
Phys. Rev. D **94** (2016) 075014 [arXiv:1604.03377]
Presented by Clara
- 2 [Clockwork for Neutrino Masses and Lepton Flavor Violation](#)
Alejandro Ibarra, Ashwani Kushwaha, Sudhir K. Vempati
arXiv:1711.02070
Presented by Avelino

21st February 2018

- 1 [\$\Delta L = 3\$ processes: Proton decay and LHC](#)
Renato M. Fonseca, Martin Hirsch, Rahul Srivastava
arXiv:1802.04814
Presented by Renato
- 2 [Cosmological bounds on neutrino statistics](#)
P.F. de Salas, S. Gariazzo, M. Laveder, S. Pastor, O. Pisanti, N. Truong
arXiv:1802.04639
Presented by Pablo

13th March 2018

- 1 [Neutrinoless double-beta decay with massive scalar emission](#)
Kfir Blum, Yosef Nir, Michal Shavit
arXiv:1802.08019
Presented by Martin
- 2 [Galactic Dark Matter Population as the Source of Neutrino Masses](#)
Hooman Davoudiasl, Gopolang Mohlabeng, Matthew Sullivan
arXiv:1803.00012
Presented by Miguel

11th April 2018

- 1 [Neutrino tomography of the Earth](#)
Andrea Donini, Sergio Palomares-Ruiz, Jordi Salvado
arXiv:1803.05901
Presented by Sergio
- 2 [\$R\(K^{\(*\)}\)\$ from dark matter exchange](#)
James M. Cline, Jonathan M. Cornell
arXiv:1711.10770
Presented by Avelino

2nd May 2018

- 1 [Probing the sterile neutrino portal to Dark Matter with \$\gamma\$ rays](#)
Miguel G. Folgado, Germán A. Gómez-Vargas, Nuria Rius, Roberto Ruiz De Austri
arXiv:1803.08934
Presented by Miguel
- 2 [Neutrino Oscillations in Dark Backgrounds](#)
Francesco Capozzi, Ian M. Shoemaker, Luca Vecchi
arXiv:1804.05117
Presented by Pablo

9th May 2018

- 1 [Symmetry Constrained Two Higgs Doublet Models](#)
João M. Alves, Francisco J. Botella, Gustavo C. Branco, Fernando Cornet-Gomez, Miguel Nebot, João P. Silva
arXiv:1803.11199
Presented by Fernando
- 2 [Nuclear and Particle Conspiracy Solves Both Reactor Antineutrino Anomalies](#)
Jeffrey M. Berryman, Vedran Brdar, Patrick Huber
arXiv:1803.08506
Presented by Christoph

14th June 2018

- 1 Discussion on the recent results by the MiniBooNE collaboration
Presented by Christoph, Stefano, Mariam and Luis

28th June 2018

- 1 [SO\(3\) family symmetry and axions](#)
Mario Reig, José W.F. Valle, Frank Wilczek
arXiv:1805.08048
Presented by Mario

- 2 [Disentangling genuine from matter-induced CP violation in neutrino oscillations](#)
J. Bernabeu, A. Segarra
arXiv:1806.07694
Presented by Alejandro

18th July 2018

- 1 [Spontaneous Breaking of Lepton Number and Cosmological Domain Wall Problem](#)
George Lazarides, Mario Reig, Qaisar Shafi, Rahul Srivastava, José W. F. Valle
arXiv:1806.11198
Presented by Rahul
- 2 [Flavored Non-Minimal Left-Right Symmetric Model Fermion Masses and Mixings](#)
E. A. Garcés, Juan Carlos Gómez-Izquierdo, F. Gonzalez-Canales
arXiv:1807.02727
Presented by Félix

25th July 2018

- 1 [COHERENT analysis of neutrino generalized interactions](#)
D. Aristizabal Sierra, Valentina De Romeri, N. Rojas
arXiv:1806.07424
Presented by Valentina
- 2 [Dark Matter and The Scale for Lepton Number Violation](#)
Pavel Fileviez Pérez, Clara Murgui
arXiv:1803.07462
Presented by Clara

30th January 2019

- 1 [Scrutinizing Right-Handed Neutrino Portal Dark Matter With Yukawa Effect](#)
Priyotosh Bandyopadhyay, Eung Jin Chun, Rusa Mandal, Farinaldo S. Queiroz
Phys. Lett. B **788** (2019) 530-534 [arXiv:1807.05122]
Presented by Rusa

- 2 [Dynamical Peccei-Quinn symmetry breaking and the instanton interference effect: axion models without domain wall problem](#)
Mario Reig
arXiv:1901.00203
Presented by Mario

13th February 2019

- 1 [Dark matter stability and Dirac neutrinos using only Standard Model symmetries](#)
Cesar Bonilla, Salvador Centelles-Chuliá, Ricardo Cepedello, Eduardo Peinado, Rahul Srivastava
arXiv:1812.01599
Presented by Rahul
- 2 [Scotogenic \$U\(1\)_X\$ Dirac Neutrinos](#)
Ernest Ma
arXiv:1901.09091
Presented by Rahul

27th February 2019

- 1 [Ameliorating Higgs Induced Flavor Constraints on TeV Scale \$W_R\$](#)
Rabindra N. Mohapatra, Guanwen Yan, Yongchao Zhang
arXiv:1902.08601
Presented by Martin
- 2 [Constraints on millicharged dark matter and axion-like particles from timing of radio waves](#)
Andrea Caputo, Laura Sberna, Miguel Frias, Diego Blas, Paolo Pani, Lijing Shao, Wenming Yan
arXiv:1902.02695
Presented by Andrea

3rd April 2019

- 1 [Model-independent upper limits on lepton number violating states from neutrino mass](#)

Juan Herrero-Garcia, Michael A. Schmidt

arXiv:1903.10552

Presented by Avelino

- 2 [Combining QED and QCD transverse-momentum resummation for Z boson production at hadron colliders](#)

Leandro Cieri, Giancarlo Ferrera, German F.R. Sborlini

arXiv:1805.11948

Presented by Germán

15th May 2019

- 1 [Probing neutrino transition magnetic moments with coherent elastic neutrino-nucleus scattering](#)

O.G. Miranda, D.K. Papoulias, M. Tórtola, J. W. F. Valle

arXiv:1905.03750

Presented by Dimitris

- 2 [Light majoron cold dark matter from topological defects and the formation of boson stars](#)

Mario Reig, José W.F. Valle, Masaki Yamada

arXiv:1905.01287

Presented by Mario

24th July 2019

- 1 [Global fit to \$b \rightarrow c\tau\nu\$ transitions](#)

Clara Murgui, Ana Peñuelas, Martin Jung, Antonio Pich

arXiv:1904.09311

Presented by Ana and Clara

- 2 [Gravity-mediated Scalar Dark Matter in Warped Extra-Dimensions](#)

Miguel G. Folgado, Andrea Donini, Nuria Rius

arXiv:1907.04340

Presented by Miguel

3 [4321... axion!](#)

Javier Fuentes-Martín, Mario Reig, Avelino Vicente

arXiv:1907.02550

Presented by Mario

16th October 2019

1 [The Different Regimes of Axion Gauge Field Inflation](#)

Valerie Domcke, Stefan Sandner

JCAP **1909** (2019) 038 [arXiv:1905.11372]

Presented by Stefan

2 [Gravitational footprints of massive neutrinos and lepton number breaking](#)

Andrea Addazi, Antonino Marcianò, António P. Morais, Roman Pasechnik, Rahul Srivastava, José W.F. Valle

arXiv:1909.09740

Presented by Rahul

31st October 2019

1 [Updated Summation Model: An Improved Agreement with the Daya Bay Antineutrino Fluxes](#)

M. Estienne et al

Phys. Rev. Lett. **123** (2019) 022502 [arXiv:1904.09358]

Presented by José Luis

13th November 2019

1 [Constraining axion inflation with gravitational waves from preheating](#)

Peter Adshead, John T. Giblin, Mauro Pieroni, Zachary J. Weiner

arXiv:1909.12842

Presented by Dani

2 [Constraining axion inflation with gravitational waves across 29 decades in frequency](#)

Peter Adshead, John T. Giblin, Mauro Pieroni, Zachary J. Weiner

arXiv:1909.12843

Presented by Dani

27th November 2019

- 1 [A theory for scotogenic dark matter stabilised by residual gauge symmetry](#)
Julio Leite, Oleg Popov, Rahul Srivastava, José W.F. Valle
arXiv:1909.06386
Presented by Julio
- 2 [A unified SU\(4\) theory for the \$R_{D^{\(*\)}}\$ and \$R_{K^{\(*\)}}\$ anomalies](#)
Shyam Balaji, Michael A. Schmidt
arXiv:1911.08873
Presented by Avelino

15th January 2020

- 1 [Standard-model prediction of \$\epsilon_K\$ with manifest CKM unitarity](#)
Joachim Brod, Martin Gorbahn, Emmanuel Stamou
arXiv:1911.06822
Presented by Luiz
- 2 Dark Matter production in association with a single top quark at the LHC
Presented by Alexander

29th January 2020

- 1 [The Large-Misalignment Mechanism for the Formation of Compact Axion Structures: Signatures from the QCD Axion to Fuzzy Dark Matter](#)
Asimina Arvanitaki, Savas Dimopoulos, Marios Galanis, Luis Lehner, Jedidiah O. Thompson, Ken Van Tilburg
arXiv:1909.11665
Presented by Mario
- 2 [Looking for MACHOs in the Spectra of Fast Radio Bursts](#)
Andrey Katz, Joachim Kopp, Sergey Sibiryakov, Wei Xue
arXiv:1912.07620
Presented by Andrea

12th February 2020

- 1 [Effective interactions in Ricci-Based Gravity models below the non-metricity scale](#)
Adria Delhom, Victor Miralles, Ana Peñuelas
arXiv:1907.05615
Presented by Adrià and Víctor

26th February 2020

- 1 [Does confinement imply CP invariance of the strong interactions?](#)
Y. Nakamura, G. Schierholz
arXiv:1912.03941
Presented by Andrea
- 2 [Two-Higgs-doublet models with a flavored \$\mathbb{Z}_2\$ symmetry](#)
S. Centelles Chuliá, W. Rodejohann, U.J. Saldaña-Salazar
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Presented by Salva