

# **Final Workshop**

## **Report of Contributions**

Contribution ID: 1

Type: **not specified**

## **73 - Investigation of the muon puzzle at the Pierre Auger Observatory**

*Monday, 13 September 2021 09:40 (12 minutes)*

**Presenter:** NUNES, Raquel Freitas

**Session Classification:** Session

Contribution ID: 2

Type: **not specified**

## **74 - Pierre Auger vs. The Machine: towards validation of deep-learning based reconstruction of ultra-high energy cosmic rays with new data from the Pierre Auger Observatory**

*Monday, 13 September 2021 09:52 (12 minutes)*

**Presenter:** COSTA, Diogo

**Session Classification:** Session

Contribution ID: 3

Type: **not specified**

## **46 - Desenvolvimento de uma interface para analisar eventos do Observatório Pierre Auger, para uso em Masterclasses**

*Monday, 13 September 2021 10:04 (16 minutes)*

**Presenters:** VENTURA, Diogo; CORREIA, Ricardo da Silva

**Session Classification:** Session

Contribution ID: 4

Type: **not specified**

## **47 - Optimização da muografia**

*Monday, 13 September 2021 10:32 (16 minutes)*

**Presenters:** DIAS, Maria Inês Machado Correia Brioso; PEREIRA, Rodrigo Henrique Gomes

**Session Classification:** Session

Contribution ID: 5

Type: **not specified**

## **63 - Muografia: simulação da sensibilidade do telescópio de muões**

*Monday, 13 September 2021 10:20 (12 minutes)*

**Presenters:** ALEXANDRE, Isabel Maria Jaló; DIAS, Maria Inês Machado Correia Brioso; PEREIRA, Rodrigo Henrique Gomes

**Session Classification:** Session

Contribution ID: 6

Type: **not specified**

## **67 - Calibração de detetores RPC para muografia**

*Monday, 13 September 2021 10:48 (12 minutes)*

**Presenter:** SILVA , Jorge Francisco

**Session Classification:** Session

Contribution ID: 7

Type: **not specified**

## **69 - Telescópio de muões / Chuveiros atmosféricos - Laboratório de Raios Cósmicos (LabRC)**

*Monday, 13 September 2021 11:36 (16 minutes)*

**Presenters:** SOUSA, Ana Sofia Camões de; RODRIGUES, Francisco Patrício

**Session Classification:** Session



Contribution ID: 8

Type: **not specified**

## **70 - Análise de dados com a experiência AMS**

*Monday, 13 September 2021 11:52 (12 minutes)*

**Presenter:** SIMPLÍCIO, Guilherme

**Session Classification:** Session

Contribution ID: 9

Type: **not specified**

## **56 - Pesquisas de multi-mensageiros astrofísicos de altas energias**

*Monday, 13 September 2021 12:04 (16 minutes)*

**Presenters:** GOMES, João Pedro Sá; BAPTISTA, Margarida da Felicidade Tavares; GODINHO, Miguel César

**Session Classification:** Session

Contribution ID: 10

Type: **not specified**

## **89 - Development of a next-generation detector concept to detect astrophysical gamma-rays**

*Monday, 13 September 2021 12:20 (16 minutes)*

**Presenters:** CARAPUÇA, Matilde Túbal; MENDES, Tatiana Soraia Silva

**Session Classification:** Session

Contribution ID: 11

Type: **not specified**

## **78 - Hunting Forbush Decreases in the inner Solar System**

*Monday, 13 September 2021 11:20 (16 minutes)*

**Presenters:** FALORCA, Anselmo José Gonçalves; LOURENÇO, Bruno Alexandre Alves

**Session Classification:** Session

Contribution ID: 12

Type: **not specified**

## **79 - Radiation at Mars with SRAM-based monitors**

*Monday, 13 September 2021 12:36 (16 minutes)*

**Presenters:** BRANCO, Alexandre Miguel Baptista; CANDEIAS, Leonor

**Session Classification:** Session

Contribution ID: 13

Type: **not specified**

## **55 - Neutron data from the SNO+ neutrino detector**

*Monday, 13 September 2021 14:30 (16 minutes)*

**Presenters:** SOARES, André Octávio Pais Ferreira dos Santos; MIRANDA, Teresa Oliveira

**Session Classification:** Session

Contribution ID: 14

Type: **not specified**

## **62 - À descoberta da natureza do neutrino: decaimento beta duplo sem neutrinos**

*Monday, 13 September 2021 14:46 (16 minutes)*

**Presenters:** ROXO, Carlos; PAIS, Francisco

**Session Classification:** Session

Contribution ID: 15

Type: **not specified**

## **91 - Detecção directa de matéria escura com a experiência LUX-ZEPLIN**

*Monday, 13 September 2021 15:02 (16 minutes)*

**Presenters:** GORGULHO, Diogo S.; CASALINHO, Francisco; MARTINS, Tiago

**Session Classification:** Session



Contribution ID: 16

Type: **not specified**

## **76 - Estudos para controlar a radiação de fundo na verificação experimental do efeito Migdal**

*Monday, 13 September 2021 15:18 (12 minutes)*

**Presenter:** IVO, Gonçalo

**Session Classification:** Session

Contribution ID: 17

Type: **not specified**

## **77 - Predição do efeito Migdal nas calibrações com neutrões em LZ**

*Monday, 13 September 2021 15:30 (12 minutes)*

**Presenter:** PIRES, Paulo

**Session Classification:** Session

Contribution ID: 18

Type: **not specified**

## **93 - Identifying Hidden Particles with Machine Learning at SHiP**

*Monday, 13 September 2021 15:42 (16 minutes)*

**Presenters:** BRANCO, André; SANTOS, Henrique de Sousa

**Session Classification:** Session

Contribution ID: 19

Type: **not specified**

## **82 - Simulating the impact of proton therapy on amyloid protein structures using Geant4-DNA**

*Monday, 13 September 2021 16:30 (16 minutes)*

**Presenters:** ALMEIDA , Débora; SIMÕES, Maria Alves

**Session Classification:** Session

Contribution ID: 20

Type: **not specified**

## **72 - Estudo de um microdosímetro de fibras cintilante em diferentes ambientes de radiação utilizando o código FLUKA**

*Monday, 13 September 2021 16:46 (12 minutes)*

**Presenter:** GAMBOA, Madalena Ventura

**Session Classification:** Session

Contribution ID: 22

Type: **not specified**

## **61 - Muões num balão: medidas do fluxo e muões até à estratosfera**

*Monday, 13 September 2021 16:58 (16 minutes)*

**Presenters:** ÁVILA, Afonso Robalo; COELHO, Daniel Tavares Marques; SANTOS, Julio

**Session Classification:** Session

Contribution ID: 23

Type: **not specified**

## **80 - Investigating ANN and their use in the reconstruction of high energetic photons with the R3B calorimeter CALIFA**

*Monday, 13 September 2021 17:14 (12 minutes)*

**Presenter:** SOUSA, Tomás

**Session Classification:** Session

Contribution ID: 24

Type: **not specified**

## **81 - Thermal evaporation of thin layers of Copper for detector development**

*Monday, 13 September 2021 17:26 (12 minutes)*

**Presenter:** AZEVEDO, André Filipe Nobre

**Session Classification:** Session



Contribution ID: 25

Type: **not specified**

## **71 - High-precision timing detectors for HL-LHC**

*Monday, 13 September 2021 17:38 (12 minutes)*

**Presenter:** MENG, Cristina

**Session Classification:** Session

Contribution ID: 26

Type: **not specified**

## 49 - Investigating the Flavor Anomalies

*Tuesday, 14 September 2021 11:20 (16 minutes)*

**Presenters:** BOTAS, Marta André; REZA; POZZI, Ruben

**Session Classification:** Session

Contribution ID: 27

Type: **not specified**

## **59 - Searching for new physics by colliding light in the CMS experiment at the LHC**

*Tuesday, 14 September 2021 11:36 (12 minutes)*

**Presenter:** BENQUERENÇA, Ana João dos Santos

**Session Classification:** Session

Contribution ID: 28

Type: **not specified**

## **60 - Advanced Machine Learninig for Exclusive Processes**

*Tuesday, 14 September 2021 11:48 (12 minutes)*

**Presenter:** PEIXOTO, Manuel Maria Berjano

**Session Classification:** Session

Contribution ID: 29

Type: **not specified**

## **86 - Search for dark matter in association with a new $Z'$ boson at the LHC**

*Tuesday, 14 September 2021 12:00 (16 minutes)*

**Presenters:** PINTO, Amélia; NUNES, Madalena Cardoso

**Session Classification:** Session

Contribution ID: 30

Type: **not specified**

## **92 - Muon efficiency performance with Tag and Probe using CMS Open Data**

*Tuesday, 14 September 2021 12:16 (12 minutes)*

**Presenter:** SILVA, Rodrigo Campello

**Session Classification:** Session

Contribution ID: 31

Type: **not specified**

## 54 - Hunting for Kaons with Neural Networks

*Tuesday, 14 September 2021 12:28 (16 minutes)*

**Presenters:** BELO, Joana Catarina Santos; NEVES, João Pedro da Silva

**Session Classification:** Session

Contribution ID: 32

Type: **not specified**

## **57 - De que são feitos os nucleões e os piões?**

*Tuesday, 14 September 2021 16:40 (16 minutes)*

**Presenters:** ALMEIDA, Guilherme Filipe Marques; TOMÉ, Pedro Afonso de Brito

**Session Classification:** Session



Contribution ID: 33

Type: **not specified**

## **58 - Understanding hadronization timescales using jets**

*Tuesday, 14 September 2021 09:40 (16 minutes)*

**Presenters:** SIMÕES, Diogo Miguel dos Santos; MADUREIRA, Nuno Olavo Gonçalves Mendes

**Session Classification:** Session

Contribution ID: 34

Type: **not specified**

## **64 - Novel jet algorithms to unveil the Quark-Gluon Plasma evolution**

*Tuesday, 14 September 2021 09:56 (16 minutes)*

**Presenters:** MONFORTE, Alexandre da Silva; FERNANDES, João Miguel Ferreira da Rocha; LUÍS, Lénea

**Session Classification:** Session

Contribution ID: 35

Type: **not specified**

## **88 - Exploring jet quenching effects during QGP initialisation**

*Tuesday, 14 September 2021 10:12 (16 minutes)*

**Presenters:** SANTOS, André Milagre dos; CARDOSO, Daniela Beatriz Cabral

**Session Classification:** Session

Contribution ID: 37

Type: **not specified**

## **68 - QCD effects in the muon anomalous magnetic moment**

*Tuesday, 14 September 2021 10:28 (16 minutes)*

**Presenters:** NUNES, André; AMARO, Mário Abílio Bettencourt de Castro Jorge

**Session Classification:** Session

Contribution ID: 38

Type: **not specified**

## **48 - Heavy quarks as probes of the primordial plasma**

*Tuesday, 14 September 2021 10:44 (16 minutes)*

**Presenter:** LEGOINHA, Henrique Miguel Marques Luis

**Session Classification:** Session

Contribution ID: 39

Type: **not specified**

## **52 - Física Experimental de Partículas com o detector ATLAS**

*Tuesday, 14 September 2021 14:30 (16 minutes)*

**Presenters:** MACEDO, Helena Lessa; SERRA, Inês Moroso Alexandre

**Session Classification:** Session

Contribution ID: 40

Type: **not specified**

## **51 - Machine Learning Methods to measure the quantum numbers of the Higgs interaction to W bosons**

*Tuesday, 14 September 2021 14:46 (12 minutes)*

**Presenter:** TEIXEIRA, João Moura Pereira de Lucas

**Session Classification:** Session

Contribution ID: 41

Type: **not specified**

## **65 - Deep Neural Networks applications in experimental physics data analysis**

*Tuesday, 14 September 2021 15:10 (12 minutes)*

**Presenter:** MENDEIROS, Pedro

**Session Classification:** Session



Contribution ID: 42

Type: **not specified**

## **42 - Using the HiggsML dataset to benchmark machine learning techniques**

*Tuesday, 14 September 2021 15:22 (16 minutes)*

**Presenters:** SAMPAIO, Pedro António Ribeiro Costa; ALMADA, Sarah Melissa Silva

**Session Classification:** Session

Contribution ID: 43

Type: **not specified**

## **44 - Detecção de anomalias como teste de novos fenômenos de física nos dados da experiência ATLAS do CERN**

*Tuesday, 14 September 2021 15:38 (16 minutes)*

**Presenters:** REEVES, Ed; FERREIRA, Rui Lucas Oliveira Faria

**Session Classification:** Session

Contribution ID: 45

Type: **not specified**

## **43 - Transferability in machine learning: LHC searches as a case study**

*Tuesday, 14 September 2021 15:54 (12 minutes)*

**Presenter:** CUNHA, Gilberto

**Session Classification:** Session

Contribution ID: 46

Type: **not specified**

## **45 - Detecção de anomalias como ferramenta para descoberta de nova física no Large Hadron Collider do CERN**

*Tuesday, 14 September 2021 16:06 (12 minutes)*

**Presenter:** PEIXOTO, Miguel Caçador

**Session Classification:** Session

Contribution ID: 47

Type: **not specified**

## **85 - Desenvolvimento de uma nova tecnologia para detetores de neutrões**

*Tuesday, 14 September 2021 16:56 (16 minutes)*

**Presenters:** GOMES, Gonçalo; SERRA, Inês; SANTOS, Mariana

**Session Classification:** Session

Contribution ID: 48

Type: **not specified**

## **66 - Setting up a spectrometer to measure the absolute light yield of scintillating materials**

*Tuesday, 14 September 2021 17:12 (12 minutes)*

**Presenter:** REHAHN , Helene

**Session Classification:** Session

Contribution ID: 49

Type: **not specified**

## **75 - Simulation of large scintillators for future HEP experiments using GEANT4**

*Tuesday, 14 September 2021 17:24 (16 minutes)*

**Presenters:** MENDONÇA, Diogo; FERREIRA, Francisco Pereira da Silva Antunes

**Session Classification:** Session

Contribution ID: 50

Type: **not specified**

## **83 - Development of a portable system for scintillation detection**

*Tuesday, 14 September 2021 17:40 (12 minutes)*

**Presenter:** DIAS, Inês Gonçalves

**Session Classification:** Session



Contribution ID: 51

Type: **not specified**

## **94 - Sistema de alta tensão do Tilecal**

*Tuesday, 14 September 2021 17:52 (12 minutes)*

**Presenter:** AZUL, João Pedro Jones Olho

**Session Classification:** Session

Contribution ID: 52

Type: **not specified**

## **41 - Testes do novo detetor de tempo de voo para experiência HADES**

*Tuesday, 14 September 2021 18:04 (12 minutes)*

**Presenter:** RODRIGUES, Guilherme Alcides Alves da Silva Martins e

**Session Classification:** Session

Contribution ID: 53

Type: **not specified**

## **95 - Boosted Higgs boson reconstruction in WH associated production**

*Tuesday, 14 September 2021 14:58 (12 minutes)*

**Presenter:** AL-HABSI, Al-Maha Abdallah

**Session Classification:** Session