

**Mid-term activities**

# **Report of Contributions**

Contribution ID: 1

Type: **not specified**

## Introduction

*Friday, 23 July 2021 14:00 (10 minutes)*

**Session Classification:** Friday Chats

Contribution ID: 2

Type: **not specified**

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

*Friday, 23 July 2021 14:10 (5 minutes)*

**Presenter:** RODRIGUES, Guilherme

**Session Classification:** Friday Chats

Contribution ID: 4

Type: **not specified**

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

*Friday, 23 July 2021 14:15 (5 minutes)*

**Presenters:** REEVES, Ed; FERREIRA, Rui

**Session Classification:** Friday Chats

Contribution ID: 5

Type: **not specified**

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

*Friday, 23 July 2021 14:20 (5 minutes)*

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

**Session Classification:** Friday Chats

Contribution ID: 6

Type: **not specified**

## Optimização da muografia

*Friday, 23 July 2021 14:25 (5 minutes)*

**Presenters:** DIAS, Inês; PEREIRA, Rodrigo

**Session Classification:** Friday Chats

Contribution ID: 7

Type: **not specified**

## Heavy quarks as probes of the primordial plasma

*Friday, 23 July 2021 14:30 (5 minutes)*

**Presenters:** PEDROSA, Cláudio; LEGOINHA, Henrique

**Session Classification:** Friday Chats

Contribution ID: 8

Type: **not specified**

## Investigating the Flavor Anomalies

*Friday, 23 July 2021 14:35 (5 minutes)*

**Presenters:** BOTAS, Marta; JAFARI, Reza; POZZI, Ruben

**Session Classification:** Friday Chats



Contribution ID: 9

Type: **not specified**

## **Non invasive temperature monitoring device**

*Friday, 23 July 2021 14:40 (5 minutes)*

**Presenters:** SOUSA, Daniel; ROLDÃO, Miguel; MOLTER, Rafael

**Session Classification:** Friday Chats

Contribution ID: 11

Type: **not specified**

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

*Friday, 23 July 2021 14:45 (5 minutes)*

**Presenters:** MACEDO, Helena; SERRA, Inês

**Session Classification:** Friday Chats

Contribution ID: 13

Type: **not specified**

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

*Friday, 23 July 2021 14:55 (5 minutes)*

**Presenters:** GOMES, João; BAPTISTA, Margarida; GODINHO, Miguel

**Session Classification:** Friday Chats

Contribution ID: 16

Type: **not specified**

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

*Friday, 30 July 2021 14:05 (5 minutes)*

**Presenter:** PEIXOTO, Miguel

**Session Classification:** Friday Chats

Contribution ID: 18

Type: **not specified**

## **Muões num balão: medidas do fluxo de muões até à estratosfera**

*Friday, 30 July 2021 14:10 (5 minutes)*

**Presenters:** ÁVILA, Afonso; COELHO, Daniel; SANTOS, Júlio

**Session Classification:** Friday Chats

Contribution ID: 19

Type: **not specified**

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

*Friday, 30 July 2021 14:15 (5 minutes)*

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

**Session Classification:** Friday Chats

Contribution ID: 22

Type: **not specified**

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

*Friday, 30 July 2021 14:25 (5 minutes)*

**Presenter:** MENDEIROS, Pedro

**Session Classification:** Friday Chats

Contribution ID: 23

Type: **not specified**

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

*Friday, 30 July 2021 14:30 (5 minutes)*

**Presenter:** PIRES, Paulo

**Session Classification:** Friday Chats



Contribution ID: 24

Type: **not specified**

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

*Friday, 30 July 2021 14:35 (5 minutes)*

**Presenter:** DIAS, Inês

**Session Classification:** Friday Chats

Contribution ID: 25

Type: **not specified**

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

*Friday, 30 July 2021 14:40 (5 minutes)*

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

**Session Classification:** Friday Chats

Contribution ID: 26

Type: **not specified**

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

*Friday, 30 July 2021 14:45 (5 minutes)*

**Presenters:** SOUSA, Ana; RODRIGUES, Francisco

**Session Classification:** Friday Chats

Contribution ID: 27

Type: **not specified**

## **Assessing the class of functions learnt by Deep Learning models on low-level jet data formats**

*Friday, 30 July 2021 14:50 (5 minutes)*

**Presenter:** REASCOS, Leander

**Session Classification:** Friday Chats

Contribution ID: 29

Type: **not specified**

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

*Friday, 6 August 2021 14:05 (5 minutes)*

**Presenters:** CARAPUÇA, Matilde; MENDES, Tatiana

**Session Classification:** Friday Chats

Contribution ID: **30**

Type: **not specified**

## **Understanding hadronization timescales using jets**

*Friday, 6 August 2021 14:10 (5 minutes)*

**Presenters:** SIMÕES, Diogo; MADUREIRA, Nuno

**Session Classification:** Friday Chats

Contribution ID: 31

Type: **not specified**

## High-precision timing detectors for HL-LHC

*Friday, 6 August 2021 14:15 (5 minutes)*

**Presenter:** MENG, Cristina

**Session Classification:** Friday Chats

Contribution ID: 32

Type: **not specified**

## **Estudo de um microdosímetro de fibras cintilante em diferentes ambientes de radiação utilizando o codigo FLUKA**

*Friday, 6 August 2021 14:20 (5 minutes)*

**Presenter:** GAMBOA, Madalena

**Session Classification:** Friday Chats



Contribution ID: 33

Type: **not specified**

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

*Friday, 6 August 2021 14:25 (5 minutes)*

**Presenter:** NUNES, Raquel

**Session Classification:** Friday Chats

Contribution ID: 34

Type: **not specified**

## **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**

*Friday, 6 August 2021 14:30 (5 minutes)*

**Presenter:** COSTA, Diogo

**Session Classification:** Friday Chats

Contribution ID: 35

Type: **not specified**

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

*Friday, 6 August 2021 14:35 (5 minutes)*

**Presenters:** MENDONÇA, Diogo; FERREIRA, Francisco

**Session Classification:** Friday Chats

Contribution ID: 36

Type: **not specified**

## Exploring jet quenching effects during QGP initialization

*Friday, 6 August 2021 14:40 (5 minutes)*

**Presenters:** SANTOS, André; CARDOSO, Daniela

**Session Classification:** Friday Chats

Contribution ID: 38

Type: **not specified**

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

*Friday, 6 August 2021 14:45 (5 minutes)*

**Presenter:** SOUSA, Tomás

**Session Classification:** Friday Chats

Contribution ID: 39

Type: **not specified**

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

*Friday, 6 August 2021 14:50 (5 minutes)*

**Presenter:** AZEVEDO, André

**Session Classification:** Friday Chats

Contribution ID: 40

Type: **not specified**

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

*Friday, 6 August 2021 14:55 (5 minutes)*

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

**Session Classification:** Friday Chats

Contribution ID: 41

Type: **not specified**

## **Advanced Machine Learning for Exclusive Processes**

*Friday, 13 August 2021 14:00 (5 minutes)*

**Presenter:** PEIXOTO, Manuel

**Session Classification:** Friday Chats



Contribution ID: 42

Type: **not specified**

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

*Friday, 13 August 2021 14:05 (5 minutes)*

**Presenter:** REHAHN, Helene

**Session Classification:** Friday Chats

Contribution ID: 43

Type: **not specified**

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

*Friday, 13 August 2021 14:10 (5 minutes)*

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

**Session Classification:** Friday Chats

Contribution ID: 44

Type: **not specified**

## Calibração de detetores RPC para muografia

*Friday, 13 August 2021 14:15 (5 minutes)*

**Presenter:** SILVA, Jorge

**Session Classification:** Friday Chats

Contribution ID: 45

Type: **not specified**

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

*Friday, 13 August 2021 14:20 (5 minutes)*

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

**Session Classification:** Friday Chats

Contribution ID: 46

Type: **not specified**

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

*Friday, 13 August 2021 14:25 (5 minutes)*

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

**Session Classification:** Friday Chats

Contribution ID: 47

Type: **not specified**

## The analytic structure of quarks

*Friday, 13 August 2021 14:30 (5 minutes)*

**Presenter:** OSTERDAHL, Heitor

**Session Classification:** Friday Chats

Contribution ID: 48

Type: **not specified**

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

*Friday, 13 August 2021 14:35 (5 minutes)*

**Presenters:** MONFORTE, Alexandre; FERNANDES, João; LUIS, Lénea

**Session Classification:** Friday Chats

Contribution ID: 49

Type: **not specified**

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

*Friday, 13 August 2021 14:40 (5 minutes)*

**Presenters:** SOARES, André; MIRANDA, Teresa

**Session Classification:** Friday Chats



Contribution ID: 50

Type: **not specified**

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

*Friday, 13 August 2021 14:45 (5 minutes)*

**Presenter:** ALEXANDRE, Isabel

**Session Classification:** Friday Chats

Contribution ID: 51

Type: **not specified**

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

*Friday, 13 August 2021 14:50 (5 minutes)*

**Presenters:** NUNES, André; AMARO, Mário

**Session Classification:** Friday Chats

Contribution ID: 52

Type: **not specified**

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

*Friday, 13 August 2021 14:55 (5 minutes)*

**Presenter:** SILVA, Rodrigo

**Session Classification:** Friday Chats

Contribution ID: 53

Type: **not specified**

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

*Friday, 13 August 2021 15:00 (5 minutes)*

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

**Session Classification:** Friday Chats

Contribution ID: 54

Type: **not specified**

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

*Friday, 13 August 2021 15:05 (5 minutes)*

**Presenter:** AZUL, João

**Session Classification:** Friday Chats

Contribution ID: 55

Type: **not specified**

## Gathertown

*Friday, 23 July 2021 16:00 (1 hour)*

<https://gather.town/app/QOjwkPHx60WNYpXz/MidTermActivitiesLIP1>

<https://gather.town/app/DL6Kl0KCVs4CXOVX/MidTermActivitiesLIP2>

<https://gather.town/app/VllZpPrrBXgAJv0U/MidTermActivitiesLIP3>

**Session Classification:** Friday Chats

Contribution ID: 56

Type: **not specified**

## Skribbl

*Friday, 30 July 2021 15:30 (1 hour)*

**Session Classification:** Friday Chats

Contribution ID: 57

Type: **not specified**

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

*Friday, 30 July 2021 15:05 (5 minutes)*

**Presenters:** AL-HABSI, Al-Maha; HANLON, Bettina

**Session Classification:** Friday Chats



Contribution ID: 58

Type: **not specified**

## Using the HiggsML dataset to benchmark machine learning techniques

*Friday, 6 August 2021 15:00 (5 minutes)*

**Presenters:** SAMPAIO, Pedro; ALMADA, Sarah

**Session Classification:** Friday Chats

Contribution ID: 59

Type: **not specified**

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

*Friday, 30 July 2021 14:55 (5 minutes)*

**Presenter:** TEIXEIRA, João

**Session Classification:** Friday Chats

Contribution ID: **60**

Type: **not specified**

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

*Friday, 30 July 2021 15:00 (5 minutes)*

**Presenter:** BENQUERENÇA, Ana

**Session Classification:** Friday Chats

Contribution ID: **61**

Type: **not specified**

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

*Friday, 6 August 2021 15:05 (5 minutes)*

**Presenter:** SIMPLÍCIO, Guilherme

**Session Classification:** Friday Chats

Contribution ID: 62

Type: **not specified**

## De que são feitos os nucleões e os piões?

*Friday, 13 August 2021 15:10 (5 minutes)*

**Presenters:** ALMEIDA, Guilherme; TOMÉ, Pedro

**Session Classification:** Friday Chats

Contribution ID: 63

Type: **not specified**

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

*Friday, 13 August 2021 15:15 (5 minutes)*

**Presenters:** FALORCA, Anselmo; LOURENÇO, Bruno

**Session Classification:** Friday Chats

Contribution ID: 65

Type: **not specified**

## Gartic Phone

*Friday, 13 August 2021 15:30 (1 hour)*

**Session Classification:** Friday Chats