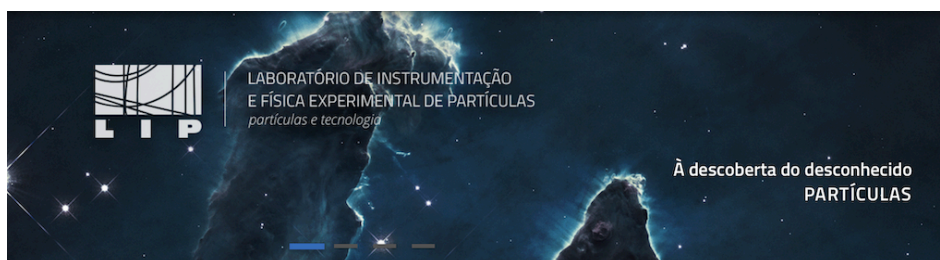


# Jornadas LIP - 2020



## Report of Contributions

Contribution ID: 1

Type: **not specified**

## Opening and Welcome

*Friday, 14 February 2020 14:20 (10 minutes)*

Contribution ID: 2

Type: **not specified**

## **LUX-ZEPLIN overview and status**

*Friday, 14 February 2020 14:30 (10 minutes)*

**Presenter:** CABRITA, Ricardo (LIP-Coimbra)

**Session Classification:** Session

Contribution ID: 3

Type: **not specified**

## **The SHiP experiment at CERN and the role of the LIP group within the collaboration**

*Friday, 14 February 2020 15:10 (10 minutes)*

**Presenter:** FRANCO, Celso (LIP)

**Session Classification:** Session

Contribution ID: 4

Type: **not specified**

## Computing

*Friday, 14 February 2020 16:25 (35 minutes)*

**Presenters:** GOMES, Jorge (LIP); PINA, João (LIP); DAVID, Mário (LIP)

**Session Classification:** Session

Contribution ID: 5

Type: **not specified**

## Neutrino Physics

*Friday, 14 February 2020 15:30 (25 minutes)*

**Presenter:** BARROS, Nuno (LIP)

**Session Classification:** Session

Contribution ID: 6

Type: **not specified**

## **LIP Minho - 10th Anniversary Celebration - Opening Session**

*Friday, 14 February 2020 17:30 (10 minutes)*

**Primary authors:** Prof. CUNHA, António (Laboratório Colaborativo em Transformação Digital - UMinho); Prof. PIMENTA, Mário (LIP and IST)

**Presenters:** Prof. CUNHA, António (Laboratório Colaborativo em Transformação Digital - UMinho); Prof. PIMENTA, Mário (LIP and IST)

**Session Classification:** Session

Contribution ID: 7

Type: **not specified**

## **ATLAS: Introduction to LIP-ATLAS activities**

*Saturday, 15 February 2020 09:00 (4 minutes)*

**Presenter:** CONDE MUÑO, Patricia (LIP)

**Session Classification:** Session



Contribution ID: 8

Type: **not specified**

## **Introduction to LIP-CMS and Rare Processes**

*Saturday, 15 February 2020 09:52 (14 minutes)*

**Presenter:** LEONARDO, Nuno (LIP)

**Session Classification:** Session

Contribution ID: 9

Type: **not specified**

**LERHI**

Contribution ID: **10**

Type: **not specified**

## LATTES

*Saturday, 15 February 2020 14:30 (20 minutes)*

**Presenter:** CONCEIÇÃO, Rúben (LIP)

**Session Classification:** Session

Contribution ID: 11

Type: **not specified**

## **Phenomenology: Report of the Pheno Group**

*Saturday, 15 February 2020 11:25 (22 minutes)*

**Presenter:** APOLINÁRIO, Liliansa (LIP)

**Session Classification:** Session

Contribution ID: **12**

Type: **not specified**

## **Dark Matter**

Contribution ID: 13

Type: **not specified**

## **NPSTRONG: From quarks to nucleons and nuclei.**

*Saturday, 15 February 2020 15:20 (20 minutes)*

**Presenter:** PEÑA, Teresa

**Session Classification:** Session

Contribution ID: 14

Type: **not specified**

## News from Auger

*Saturday, 15 February 2020 12:05 (10 minutes)*

**Presenters:** RIEHN, Felix (LIP); ASSIS, Pedro (LIP)

**Session Classification:** Session

Contribution ID: 15

Type: **not specified**

## **COMPASS and AMBER activities**

*Saturday, 15 February 2020 14:55 (20 minutes)*

**Presenters:** QUARESMA, Marcia (LIP); STOLARSKI, Marcin (LIP)

**Session Classification:** Session



Contribution ID: **16**

Type: **not specified**

## Computing

Contribution ID: 17

Type: **not specified**

## **Big Data and Simulation Competence Centre: Simulation**

*Saturday, 15 February 2020 17:38 (10 minutes)*

**Presenter:** SARMENTO, Raul (LIP)

**Session Classification:** Session

Contribution ID: 18

Type: **not specified**

## **Monitoring and Slow Control Competence Centre: Status and Future Work**

*Saturday, 15 February 2020 17:50 (10 minutes)*

**Presenter:** NEVES, Francisco (LIP Coimbra)

**Session Classification:** Session

Contribution ID: **19**

Type: **not specified**

## **Mechanical Workshop Status**

*Saturday, 15 February 2020 18:05 (15 minutes)*

**Presenter:** BLANCO, Alberto (LIP)

**Session Classification:** Session

Contribution ID: **20**

Type: **not specified**

## **DL 2018-2019 report**

*Saturday, 15 February 2020 18:25 (15 minutes)*

**Presenter:** LOPES, Luis (LIP Coimbra)

**Session Classification:** Session

Contribution ID: 21

Type: **not specified**

## Tagus-LIP

Contribution ID: 22

Type: **not specified**

## LOMaC

*Saturday, 15 February 2020 18:45 (10 minutes)*

**Presenter:** MENDES SARAIVA, Joao Gentil (LIP)

**Session Classification:** Session

Contribution ID: 23

Type: **not specified**

## **ECR-Lab**

*Saturday, 15 February 2020 19:00 (10 minutes)*

**Presenter:** FERREIRA, Miguel (LIP Lisboa)

**Session Classification:** Session



Contribution ID: 24

Type: **not specified**

## **RPC R&D activities**

*Sunday, 16 February 2020 08:30 (20 minutes)*

**Presenter:** BLANCO, Alberto (LIP)

**Session Classification:** Session

Contribution ID: 25

Type: **not specified**

## **10B-RPC based Neutron Imaging Detectors**

*Sunday, 16 February 2020 08:55 (10 minutes)*

**Presenter:** Dr MARGATO, Luis (Laboratório de Instrumentação e Física Experimental de Partículas)

**Session Classification:** Session

Contribution ID: 26

Type: **not specified**

## **Actividades de I&D em xénon líquido**

*Sunday, 16 February 2020 09:10 (10 minutes)*

**Presenter:** CHEPEL, Vitaly (LIP)

**Session Classification:** Session

Contribution ID: 27

Type: **not specified**

## **Estudo das características de misturas gasosas baseadas em gás raro como meio de deteção**

*Sunday, 16 February 2020 09:25 (20 minutes)*

**Presenter:** ALEXANDRE, Trindade (LIP-Coimbra)

**Session Classification:** Session

Contribution ID: 28

Type: **not specified**

## SpaceRad

*Sunday, 16 February 2020 09:50 (25 minutes)*

**Presenters:** ARRUDA, Luisa (LIP); PINTO, Marco (LIP)

**Session Classification:** Session

Contribution ID: 29

Type: **not specified**

## **iAstro: Resumo das atividades principais do grupo**

*Sunday, 16 February 2020 10:45 (5 minutes)*

**Presenter:** MAIA, Jorge (LIP)

**Session Classification:** Session

Contribution ID: **30**

Type: **not specified**

## **Compact gamma camera: from design to prototype**

*Sunday, 16 February 2020 11:30 (15 minutes)*

**Presenter:** MARCOS, João (LIP-Coimbra)

**Session Classification:** Session

Contribution ID: 31

Type: **not specified**

## **Orthogonal prompt-gama imaging (O-PGI) for monitoring proton therapy: feasibility studies**

*Sunday, 16 February 2020 11:50 (15 minutes)*

**Presenter:** CRESPO, Paulo (LIP)

**Session Classification:** Session



Contribution ID: 32

Type: **not specified**

## **Development of new instruments and methods for dosimetry in proton therapy.**

*Sunday, 16 February 2020 12:10 (15 minutes)*

**Presenter:** SAMPAIO, Jorge (LIP / FCUL)

**Session Classification:** Session

Contribution ID: 33

Type: **not specified**

## **LIP: Present and Future**

*Sunday, 16 February 2020 12:40 (20 minutes)*

**Presenter:** PIMENTA, Mário (LIP)

**Session Classification:** Session

Contribution ID: **34**

Type: **not specified**

## **LERHI (NUC-RIA + HADES) activities**

*Saturday, 15 February 2020 15:45 (25 minutes)*

**Presenters:** BLANCO, Alberto (LIP); GALAVIZ, Daniel (LIP)

**Session Classification:** Session

Contribution ID: 35

Type: **not specified**

## **LIP-ECO: Communication, Outreach, Education and Advanced Training - some highlights**

*Saturday, 15 February 2020 16:15 (30 minutes)*

**Presenters:** INÁCIO, Ana Sofia (LIP); AFONSO, Luís; LEONARDO, Nuno (LIP)

**Session Classification:** Session

Contribution ID: **36**

Type: **not specified**

## **Proton therapy**

*Sunday, 16 February 2020 11:15 (10 minutes)*

**Presenter:** GONÇALVES, Patricia (LIP)

**Session Classification:** Session

Contribution ID: 37

Type: **not specified**

## AMS

*Friday, 14 February 2020 16:00 (20 minutes)*

**Presenter:** BARÃO, Fernando (LIP)

**Session Classification:** Session

Contribution ID: 38

Type: **not specified**

## **Big Data and Simulation Competence Centre: Machine Learning**

*Saturday, 15 February 2020 17:15 (20 minutes)*

**Presenter:** CRISPIM ROMAO, Miguel (LIP)

**Session Classification:** Session

Contribution ID: 39

Type: **not specified**

## **Phenomenology: Composite Higgs models**

*Saturday, 15 February 2020 11:52 (8 minutes)*

**Presenter:** RAMOS, Maria (LIP)

**Session Classification:** Session



Contribution ID: 40

Type: **not specified**

## **ATLAS: Higgs and Heavy Ion Physics**

*Saturday, 15 February 2020 09:06 (9 minutes)*

**Presenter:** GOUVEIA, Emanuel (LIP)

**Session Classification:** Session

Contribution ID: 41

Type: **not specified**

## **ATLAS: Top precision measurements and searches for exotic particles at ATLAS**

*Saturday, 15 February 2020 09:17 (9 minutes)*

**Presenter:** VALE, Tiago (LIP)

**Session Classification:** Session

Contribution ID: 42

Type: **not specified**

## **ATLAS: High Voltage Distribution System for the TileCal Upgrade**

*Saturday, 15 February 2020 09:39 (9 minutes)*

**Presenter:** GOMES, Agostinho (LIP)

**Session Classification:** Session

Contribution ID: 43

Type: **not specified**

## **ATLAS TileCal hadronic calorimeter Operations, Calibration, Performance and Upgrades**

*Saturday, 15 February 2020 09:28 (9 minutes)*

**Presenter:** PEDRO, Rute (LIP)

**Session Classification:** Session

Contribution ID: 44

Type: **not specified**

## **Round table: how did I become a LIP-Minho student and how do I see the future**

*Friday, 14 February 2020 17:40 (30 minutes)*

**Primary authors:** PEIXOTO, Ana (LIP); NEIVA, Céu; GOUVEIA, Emanuel (LIP); RAMOS, Maria (LIP)

**Co-author:** SARMENTO, Raul (LIP)

**Presenters:** PEIXOTO, Ana (LIP); NEIVA, Céu; GOUVEIA, Emanuel (LIP); RAMOS, Maria (LIP); SARMENTO, Raul (LIP)

**Session Classification:** Session

Contribution ID: 45

Type: **not specified**

## **LIP-Minho: past, present and future**

*Friday, 14 February 2020 18:10 (20 minutes)*

**Primary authors:** ONOFRE, António (LIP and University of Minho); CASTRO, Nuno (LIP and University of Minho)

**Presenters:** ONOFRE, António (LIP and University of Minho); CASTRO, Nuno (LIP and University of Minho)

**Session Classification:** Session

Contribution ID: 46

Type: **not specified**

## Closing session

*Friday, 14 February 2020 18:30 (15 minutes)*

**Primary author:** Prof. VIEIRA DE CASTRO, Rui (Reitor da Universidade do Minho)

**Presenter:** Prof. VIEIRA DE CASTRO, Rui (Reitor da Universidade do Minho)

**Session Classification:** Session

Contribution ID: 48

Type: **not specified**

## **Sensitivity to anomalous HWW couplings at ATLAS**

*Friday, 14 February 2020 17:10 (20 minutes)*

**Presenter:** BARRUÉ, Ricardo (LIP)

**Session Classification:** Coffee Break



Contribution ID: 49

Type: **not specified**

## **The ATLAS Hardware Track Trigger fast simulation**

*Friday, 14 February 2020 17:10 (20 minutes)*

**Presenter:** CARVALHO, Ana Luisa (LIP)

**Session Classification:** Coffee Break

Contribution ID: 50

Type: **not specified**

## **DCS of ATLAS Roman Pots Upgrade for Run 3**

*Friday, 14 February 2020 17:10 (20 minutes)*

**Presenter:** SEABRA, Luis (LIP)

**Session Classification:** Coffee Break

Contribution ID: 51

Type: **not specified**

## Detector Control System for TileCal Phase II

*Friday, 14 February 2020 17:10 (20 minutes)*

**Presenter:** MARTINS, Filipe (LIP)

**Session Classification:** Coffee Break

Contribution ID: 52

Type: **not specified**

## **title to be decided**

*Friday, 14 February 2020 17:10 (20 minutes)*

**Presenter:** CUIM, Filipe

**Session Classification:** Coffee Break

Contribution ID: 53

Type: **not specified**

## **title to be announced**

*Friday, 14 February 2020 17:10 (20 minutes)*

**Presenter:** FERNANDEZ, Rui

**Session Classification:** Coffee Break

Contribution ID: 54

Type: **not specified**

## **Probing the CP nature of the Higgs coupling to top quarks with the ATLAS experiment**

*Friday, 14 February 2020 17:10 (20 minutes)*

**Presenter:** GOUVEIA, Emanuel (LIP)

**Session Classification:** Coffee Break

Contribution ID: 55

Type: **not specified**

## **Search for vector-like quarks with the ATLAS Experiment**

*Friday, 14 February 2020 17:10 (20 minutes)*

**Presenter:** VALE, Tiago (LIP)

**Session Classification:** Coffee Break

Contribution ID: 56

Type: **not specified**

## **Search for Flavour Changing Neutral Currents interactions in the $tZq$ vertex with the ATLAS Experiment at 13 TeV**

*Friday, 14 February 2020 17:10 (20 minutes)*

**Presenter:** PEIXOTO, Ana (LIP)

**Session Classification:** Coffee Break



Contribution ID: 57

Type: **not specified**

## **Determination of the Higgs CP properties in hadron colliders**

*Friday, 14 February 2020 17:10 (20 minutes)*

**Presenter:** SANTOS, Susana (LIP Coimbra)

**Session Classification:** Coffee Break

Contribution ID: 58

Type: **not specified**

## **Search for the Supersymmetric partner of the top quark at the LHC with multivariate approach**

*Friday, 14 February 2020 17:10 (20 minutes)*

**Presenter:** BASTOS, Diogo (LIP)

**Session Classification:** Coffee Break

Contribution ID: 59

Type: **not specified**

## **Non-minimal composite Higgs models: phenomenology**

*Friday, 14 February 2020 17:10 (20 minutes)*

**Presenter:** RAMOS, Maria

**Session Classification:** Coffee Break

Contribution ID: **60**

Type: **not specified**

## **A global approach to the phenomenology of Little Higgs models**

*Friday, 14 February 2020 17:10 (20 minutes)*

**Presenter:** GUEDES, Guilherme

**Session Classification:** Coffee Break

Contribution ID: 61

Type: **not specified**

## **BigDataHEP, Machine learning for LHC data: searching for new physics phenomena**

*Saturday, 15 February 2020 16:45 (30 minutes)*

**Presenter:** PEDRO, Rute (LIP)

**Session Classification:** Coffee Break

Contribution ID: 62

Type: **not specified**

## **Determination of printed circuit boards' manufacturing conditions by SLE-HPLC-MS and machine learning methods. Development of a data augmentation technique for chemical data**

*Friday, 14 February 2020 17:10 (20 minutes)*

**Presenter:** BARROS, Diogo (LIP-Minho)

**Session Classification:** Coffee Break

Contribution ID: **63**

Type: **not specified**

## **Rootless Containers with Udocker**

*Saturday, 15 February 2020 16:45 (30 minutes)*

**Presenters:** GOMES, Jorge (LIP); DAVID, Mário (LIP)

**Session Classification:** Coffee Break

Contribution ID: 64

Type: **not specified**

## **EOSC-Synergy: Extending EOSC coordination at the National level**

*Saturday, 15 February 2020 16:45 (30 minutes)*

**Presenters:** PINA, João (LIP); DAVID, Mário (LIP); BERNARDO, Samuel (LIP)

**Session Classification:** Coffee Break



Contribution ID: 65

Type: **not specified**

## **Development of the Underground Processing Monitor for LZ**

*Saturday, 15 February 2020 16:45 (30 minutes)*

**Presenter:** SILVA, João

**Session Classification:** Coffee Break

Contribution ID: 66

Type: **not specified**

## **Prototype Detector for Neutrinoless Double Beta Decay Studies**

*Saturday, 15 February 2020 16:45 (30 minutes)*

**Presenter:** ALCASO, Fátima (LIP-Coimbra)

**Session Classification:** Coffee Break

Contribution ID: 67

Type: **not specified**

## **The nervous system for the LUX-ZEPLIN experiment**

*Saturday, 15 February 2020 16:45 (30 minutes)*

**Presenter:** PEREIRA, Guilherme (LIP)

**Session Classification:** Coffee Break

Contribution ID: **68**

Type: **not specified**

## **Optical Calibration in the SNO+ Water Phase**

*Saturday, 15 February 2020 16:45 (30 minutes)*

**Presenter:** INÁCIO, Ana Sofia (LIP)

**Session Classification:** Coffee Break

Contribution ID: 69

Type: **not specified**

## **AlphaN background analysis in scintillator for SNO+**

*Saturday, 15 February 2020 16:45 (30 minutes)*

**Presenter:** COX, Matthew (LIP & University of Liverpool)

**Session Classification:** Coffee Break

Contribution ID: 70

Type: **not specified**

## **Charge and time signal modelization in SNO+ using a numerical grid method**

*Saturday, 15 February 2020 16:45 (30 minutes)*

**Presenter:** ANTUNES, João

**Session Classification:** Coffee Break

Contribution ID: 71

Type: **not specified**

## **AMBER experiment at CERN**

*Saturday, 15 February 2020 16:45 (30 minutes)*

**Presenter:** SILVA, Rita

**Session Classification:** Coffee Break

Contribution ID: 72

Type: **not specified**

## **Determination of $^{118}\text{Sn}(p,\gamma)^{119}\text{Sb}$ cross-section at astrophysical energies from X-ray emission yields**

*Saturday, 15 February 2020 16:45 (30 minutes)*

**Presenter:** XAREPE, Manuel

**Session Classification:** Coffee Break



Contribution ID: 73

Type: **not specified**

## **First Experimental Campaigns at FAIR: Heavy Ion Tracker Systems Based on Scintillating fibres**

*Saturday, 15 February 2020 16:45 (30 minutes)*

**Presenter:** PEREIRA, Beatriz

**Session Classification:** Coffee Break

Contribution ID: 74

Type: **not specified**

**INVERSE-ALPHA: A new approach to measure the elastic scattering of  $\alpha$  particles in inverse kinematics at energies around the Coulomb barrier for the astrophysical p-process**

*Saturday, 15 February 2020 16:45 (30 minutes)*

**Presenter:** GERALDES BARBA, Francisco

**Session Classification:** Coffee Break

Contribution ID: 75

Type: **not specified**

## **Particle Energy Spectra Reconstruction of the MFS Data using Machine Learning Techniques**

*Saturday, 15 February 2020 16:45 (30 minutes)*

**Presenter:** SINTRA, Luís (LIP Lisboa)

**Session Classification:** Coffee Break

Contribution ID: 76

Type: **not specified**

## **Study by Simulation and Reconstruction of a Brain-Dedicated Positron Emission Tomograph Based on Resistive Plate Chambers**

*Saturday, 15 February 2020 16:45 (30 minutes)*

**Presenter:** LOPES, Ana Luísa

**Session Classification:** Coffee Break

Contribution ID: 77

Type: **not specified**

## **Simulações da eficácia da radiosensibilização de nanopartículas em terapia com prótons**

*Saturday, 15 February 2020 16:45 (30 minutes)*

**Presenter:** ANTUNES, Joana

**Session Classification:** Coffee Break

Contribution ID: 78

Type: **not specified**

## **Medida da atenuação de raios cósmicos num edifício**

*Saturday, 15 February 2020 16:45 (30 minutes)*

**Presenter:** ALVES, José Pedro

**Session Classification:** Coffee Break

Contribution ID: 79

Type: **not specified**

## **Radon exhalation from building materials.**

*Sunday, 16 February 2020 12:30 (5 minutes)*

**Presenter:** SOARES, Sandra (LIP)

**Session Classification:** Session

Contribution ID: **80**

Type: **not specified**

## **CMS: The Precision Proton Spectrometer**

*Saturday, 15 February 2020 10:07 (9 minutes)*

**Presenter:** HOLLAR, Jonathan (LIP)

**Session Classification:** Session



Contribution ID: **81**

Type: **not specified**

## **CMS: Top quarks and tau leptons**

*Saturday, 15 February 2020 10:19 (9 minutes)*

**Presenter:** TOLDAIEV, Alex (CMS LIP)

**Session Classification:** Session

Contribution ID: **82**

Type: **not specified**

## **CMS: Searches for the supersymmetric partner of the top quark**

*Saturday, 15 February 2020 10:31 (9 minutes)*

**Presenter:** BASTOS, Diogo (LIP)

**Session Classification:** Session

Contribution ID: **83**

Type: **not specified**

## **CMS/Tagus: The MIP Timing Detector for the CMS Phase-2 Upgrade**

*Saturday, 15 February 2020 10:43 (9 minutes)*

**Presenter:** NIKNEJAD, Tahereh (LIP)

**Session Classification:** Session

Contribution ID: **84**

Type: **not specified**

## **Optimisation of the selection of Hidden Particles at SHiP**

*Friday, 14 February 2020 15:23 (5 minutes)*

**Presenter:** SOARES, Guilherme (Universidade de Lisboa, IST (PT))

**Session Classification:** Session

Contribution ID: 85

Type: **not specified**

## **iAstro: Apresentação do projeto STRATOSPOLCA**

*Sunday, 16 February 2020 10:55 (15 minutes)*

**Presenters:** NEVES, David; AFILHADA, Joana; FERREIRA, Maria Inês; CURADO SILVA, Rui (LIP)

**Session Classification:** Session

Contribution ID: **86**

Type: **not specified**

## **Search for rare xenon decays and study of the Migdall effect in LZ**

*Friday, 14 February 2020 14:44 (15 minutes)*

**Presenter:** BRAZ, Paulo (LIP)

**Session Classification:** Session

Contribution ID: 87

Type: **not specified**

## **Measurement of optical properties of PTFE**

*Friday, 14 February 2020 15:03 (5 minutes)*

**Presenter:** PORZIO, Davide (LIP-Coimbra)

**Session Classification:** Session

Contribution ID: **88**

Type: **not specified**

## **Marta: a novel detector at Auger**

*Saturday, 15 February 2020 12:18 (10 minutes)*

**Presenter:** LUZ, Ricardo (LIP)

**Session Classification:** Session



Contribution ID: 89

Type: **not specified**

## **Auger: Muon Tomography - LouMu Project**

*Saturday, 15 February 2020 12:31 (10 minutes)*

**Presenter:** TEIXEIRA, Pedro (LIP / UÉvora)

**Session Classification:** Session

Contribution ID: **90**

Type: **not specified**

## **Top quarks and tau leptons at CMS**

*Saturday, 15 February 2020 16:45 (30 minutes)*

**Presenter:** TOLDAIEV, Alex (CMS LIP)

**Session Classification:** Coffee Break