

**ESIPAP 2014 - Module 1 -
Physics of particle and
astroparticle detectors**

Report of Contributions

Contribution ID: 0

Type: **not specified**

Full lecture notes, tutorial on CMB experiments, tutorial on LSS experiments

Monday 20 January 2014 10:45 (1h 30m)

Presenter: MACIAS-PEREZ, Juan Francisco (L)

Session Classification: Experimental Astroparticle and Cosmological Physics

Contribution ID: 1

Type: **not specified**

Introduction

Monday 20 January 2014 09:00 (5 minutes)

Session Classification: Experimental subatomic physics

Contribution ID: 2

Type: **not specified**

Units, quantities, kinematics, measurements

Monday 20 January 2014 09:05 (1h 25m)

Session Classification: Experimental subatomic physics

Contribution ID: 3

Type: **not specified**

A few things about particle accelerators

Monday 20 January 2014 14:00 (1h 30m)

Session Classification: Experimental subatomic physics

Contribution ID: 4

Type: **not specified**

Particle interactions in particle detectors

Tuesday 21 January 2014 09:00 (1h 30m)

Session Classification: Experimental subatomic physics

Contribution ID: 5

Type: **not specified**

Tutorial 1: kinematics, particle interaction and detector response

Tuesday 21 January 2014 14:00 (1h 30m)

Session Classification: Experimental subatomic physics

Contribution ID: 6

Type: **not specified**

Systems used to identify and measure particle properties

Wednesday 22 January 2014 09:00 (1h 30m)

Session Classification: Experimental subatomic physics

Contribution ID: 7

Type: **not specified**

Tutorial 2; analysis of classic experiments

Wednesday 22 January 2014 10:45 (1h 30m)

Session Classification: Experimental subatomic physics

Contribution ID: 8

Type: **not specified**

Particle experiment design

Thursday 23 January 2014 09:00 (1h 30m)

Session Classification: Experimental subatomic physics

Contribution ID: 9

Type: **not specified**

Tutorial 3: analysis of Higgs discovery papers

Thursday 23 January 2014 10:45 (1h 30m)

Session Classification: Experimental subatomic physics

Contribution ID: **10**

Type: **not specified**

Detection of neutrinos (and other invisible particles)

Monday 27 January 2014 09:00 (1h 30m)

Session Classification: Experimental subatomic physics

Contribution ID: 11

Type: **not specified**

Tutorial 4: analysis of neutrino experiments

Monday 27 January 2014 10:45 (1h 30m)

Session Classification: Experimental subatomic physics

Contribution ID: 12

Type: **not specified**

Lecture 1

Friday 24 January 2014 09:00 (1h 30m)

Basics in probability theory

Presenter: CLEMENT, Benoit Eric (Université Joseph Fourier/LPSC)

Session Classification: Stochastic and statistical aspects

Contribution ID: 13

Type: **not specified**

Lecture 2

Friday 24 January 2014 14:00 (1h 30m)

Statistic and estimators (mean, variance, maximum likelihood, chi-square fit)

Presenter: CLEMENT, Benoit Eric (Université Joseph Fourier/LPSC)

Session Classification: Stochastic and statistical aspects

Contribution ID: 14

Type: **not specified**

Experimental astroparticle physics : lecture 1

Thursday 23 January 2014 14:00 (1h 30m)

Presenter: Prof. MONTANET, Francois (LPSC IN2P3/CNRS Univ. Grenoble)

Session Classification: Experimental Astroparticle and Cosmological Physics

Contribution ID: 15

Type: **not specified**

Experimental astoparticle physics : lecture 2

Thursday 23 January 2014 15:45 (1h 30m)

Presenter: Prof. MONTANET, Francois (LPSC IN2P3/CNRS Univ. Grenoble)

Session Classification: Experimental Astoparticle and Cosmological Physics

Contribution ID: 16

Type: **not specified**

Experimental astroparticle physics : lecture 3

Friday 24 January 2014 10:45 (1h 30m)

Presenter: Prof. MONTANET, Francois (LPSC IN2P3/CNRS Univ. Grenoble)

Session Classification: Experimental Astroparticle and Cosmological Physics

Contribution ID: 17

Type: **not specified**

Experimental astroparticle physics : tutorial

Friday 24 January 2014 15:45 (1h 30m)

Presenter: Prof. MONTANET, Francois (LPSC IN2P3/CNRS Univ. Grenoble)

Session Classification: Experimental Astroparticle and Cosmological Physics

Contribution ID: **18**

Type: **not specified**

Interaction of particles with matter

Presenter: COLLOT, Johann (Centre National de la Recherche Scientifique (FR))

Contribution ID: **19**

Type: **not specified**

Lecture 1

Tuesday 28 January 2014 14:00 (1h 30m)

Presenter: COLLOT, Johann (Centre National de la Recherche Scientifique (FR))

Session Classification: Interaction of particles with matter

Contribution ID: **20**

Type: **not specified**

Tutorial 1

Tuesday 28 January 2014 15:45 (1h 30m)

Presenter: COLLOT, Johann (Centre National de la Recherche Scientifique (FR))

Session Classification: Interaction of particles with matter

Contribution ID: 21

Type: **not specified**

Lecture 2

Wednesday 29 January 2014 09:00 (1h 30m)

Presenter: COLLOT, Johann (Centre National de la Recherche Scientifique (FR))

Session Classification: Interaction of particles with matter

Contribution ID: 22

Type: **not specified**

Tutorial 2

Wednesday 29 January 2014 14:00 (1h 30m)

Presenter: COLLOT, Johann (Centre National de la Recherche Scientifique (FR))

Session Classification: Interaction of particles with matter

Contribution ID: 23

Type: **not specified**

Lecture 1

Wednesday 29 January 2014 10:45 (1h 30m)

Presenter: COADOU, Yann (CPPM, Aix-Marseille Université, CNRS/IN2P3 (FR))

Session Classification: Stochastic and statistical aspects

Contribution ID: 24

Type: **not specified**

Lecture 2

Wednesday 29 January 2014 15:45 (1h 30m)

Presenter: COADOU, Yann (CPPM, Aix-Marseille Université, CNRS/IN2P3 (FR))

Session Classification: Stochastic and statistical aspects

Contribution ID: 25

Type: **not specified**

Lecture 3

Thursday 30 January 2014 10:45 (1h 30m)

Presenter: COADOU, Yann (CPPM, Aix-Marseille Université, CNRS/IN2P3 (FR))

Session Classification: Stochastic and statistical aspects

Contribution ID: 26

Type: **not specified**

Lecture 4

Thursday 30 January 2014 15:45 (1h 30m)

Presenter: COADOU, Yann (CPPM, Aix-Marseille Université, CNRS/IN2P3 (FR))

Session Classification: Stochastic and statistical aspects

Contribution ID: 27

Type: **not specified**

Exam material

Friday 31 January 2014 14:00 (1h 30m)

Session Classification: EXAM