Trans-European School of High Energy Physics 2024

Report of Contributions

Welcome

Contribution ID: 1 Type: not specified

Welcome

Friday 12 July 2024 09:00 (1 hour)

Presenters: STOCCHI, Achille; Prof. STOCCHI, achille (IJCLab , UNiversite Paris-Saclay, CNRS)

Contribution ID: 2 Type: not specified

SM 1

Friday 12 July 2024 10:00 (1 hour)

Presenter: SCHAEFER, Wolfgang

Session Classification: Lectures

Trans-European \cdots / Report of Contributions

SM 2

Contribution ID: 3 Type: not specified

SM 2

Presenter: KORCHIN, Alexander

Session Classification: Lectures

Contribution ID: 4 Type: **not specified**

Detectors 1

Friday 12 July 2024 11:30 (1 hour)

Presenter: BARSUK, Sergey (Université Paris-Saclay (FR))

Session Classification: Lectures

Contribution ID: 5 Type: **not specified**

Hands-on Team1 / Students work with profs Team2

Friday 12 July 2024 15:00 (2 hours)

Primary author: STASZEWSKI, Rafał (IFJ PAN Cracow (PL))

Presenters: PIETRZYK, Guillaume Max (IJCLab (Orsay, FR)); STASZEWSKI, Rafał (IFJ PAN Cracow

(PL)); ZHOVKOVSKA, Valeriia (University of Warwick (GB))

Session Classification: Hands-on/Presentations

Contribution ID: 6 Type: not specified

Students work with profs

Monday 15 July 2024 18:30 (1 hour)

Session Classification: Hands-on/Presentations

Contribution ID: 7 Type: **not specified**

Hands-on Team2 / Students work with profs Team1

Friday 12 July 2024 17:30 (2 hours)

Primary author: STASZEWSKI, Rafał (IFJ PAN Cracow (PL))

Presenters: PIETRZYK, Guillaume Max (IJCLab (Orsay, FR)); STASZEWSKI, Rafał (IFJ PAN Cracow

(PL)); ZHOVKOVSKA, Valeriia (University of Warwick (GB))

Session Classification: Hands-on/Presentations

Contribution ID: 8 Type: **not specified**

SM 2

Saturday 13 July 2024 09:00 (1 hour)

Presenter: SCHAEFER, Wolfgang

Session Classification: Lectures

SM 3

Contribution ID: 9 Type: not specified

SM 3

Saturday 13 July 2024 10:00 (1 hour)

Presenter: SCHAEFER, Wolfgang

Session Classification: Lectures

Trans-European \cdots / Report of Contributions

Detectors 2

Contribution ID: 10 Type: not specified

Detectors 2

Saturday 13 July 2024 11:30 (1 hour)

Presenter: BARSUK, Sergey (Université Paris-Saclay (FR))

Session Classification: Lectures

Trans-European \cdots / Report of Contributions

Statistics 1

Contribution ID: 11 Type: not specified

Statistics 1

Saturday 13 July 2024 12:30 (1 hour)

Presenter: RADEMACKER, Jonas (University of Bristol (GB))

Session Classification: Lectures

Contribution ID: 12 Type: not specified

Students work with profs

Session Classification: Hands-on/Presentations

Contribution ID: 13 Type: not specified

Students work with profs

Monday 15 July 2024 20:30 (1 hour)

Session Classification: Hands-on/Presentations

Contribution ID: 14 Type: not specified

Students work with profs

Saturday 13 July 2024 17:30 (2 hours)

Session Classification: Hands-on/Presentations

Contribution ID: 15 Type: not specified

Statistical games

Saturday 13 July 2024 20:30 (1 hour)

Presenter: RADEMACKER, Jonas (University of Bristol (GB))

Trans-European $\cdots \hspace{0.1cm}$ / Report of Contributions

SM 4

Contribution ID: 16 Type: not specified

SM 4

Sunday 14 July 2024 10:00 (1 hour)

Presenter: SCHAEFER, Wolfgang

Session Classification: Lectures

Trans-European \cdots / Report of Contributions

Detector 4

Contribution ID: 17 Type: not specified

Detector 4

Sunday 14 July 2024 11:30 (1 hour)

Presenter: BARSUK, Sergey (Université Paris-Saclay (FR))

Session Classification: Lectures

Contribution ID: 18 Type: not specified

Statistics 2

Sunday 14 July 2024 12:30 (1 hour)

Presenter: RADEMACKER, Jonas (University of Bristol (GB))

Session Classification: Lectures

Contribution ID: 19 Type: not specified

Statistical games

Monday 15 July 2024 17:30 (1 hour)

Presenter: RADEMACKER, Jonas (University of Bristol (GB))

Session Classification: Lectures

Contribution ID: 20 Type: not specified

Hand-on Team 1 / Students work with profs Team 2

Sunday 14 July 2024 15:00 (2 hours)

Session Classification: Hands-on/Presentations

Contribution ID: 21 Type: not specified

Students work with profs

Wednesday 17 July 2024 17:30 (2 hours)

Session Classification: Hands-on/Presentations

Football

Contribution ID: 22 Type: not specified

Football

Thursday 18 July 2024 17:30 (2 hours)

Topical Highlight 1: Charm 50 years

Contribution ID: 23 Type: not specified

Topical Highlight 1: Charm 50 years

Monday 15 July 2024 11:30 (2 hours)

Presenter: BARSUK, Sergey (Université Paris-Saclay (FR))

Session Classification: Topical Highlight

Contribution ID: 24 Type: not specified

Topical Highlight 2: QCD and Diffraction

Presenter: SCHAFER, Wolfgang

Session Classification: Topical Highlight

Contribution ID: 25 Type: not specified

Topical Highlight 3: Cosmologie

Presenter: ASTIER, Pierre

Session Classification: Topical Highlight

Accelerators 1

Contribution ID: 26 Type: not specified

Accelerators 1

Monday 15 July 2024 09:00 (1 hour)

Presenter: HERMES, Pascal (CERN)

Session Classification: Lectures

Contribution ID: 27 Type: not specified

Statistics 1

Presenter: MONTEIL, Stephane (Université Clermont Auvergne (FR))

Session Classification: Lectures

Contribution ID: 28 Type: not specified

Conference by former students

Presenter: Dr MACIULA, Rafal

Session Classification: Conference by former students

Contribution ID: 29 Type: not specified

Conference by former students

Session Classification: Conference by former students

Contribution ID: 30 Type: not specified

Intro to CERN

Wednesday 17 July 2024 20:30 (1 hour)

Contribution ID: 31 Type: not specified

Topical Highlight 4: emergence of Flavour

Presenter: Prof. STOCCHI, achille (IJCLab , UNiversite Paris-Saclay, CNRS)

Session Classification: Topical Highlight

Topical Highlight 1: Charm 50 years

Contribution ID: 32 Type: not specified

Topical Highlight 1: Charm 50 years

Monday 15 July 2024 15:00 (2 hours)

Presenter: PIETRZYK, Guillaume Max (IJCLab (Orsay, FR))

Session Classification: Topical Highlight

Contribution ID: 33 Type: not specified

Topical Highlight 2: QCD and Diffraction

Presenter: SCHAFER, Wolfgang

Session Classification: Topical Highlight

Seminar 4

Contribution ID: 34 Type: not specified

Seminar 4

Friday 19 July 2024 12:30 (1 hour)

Presenter: KLUSEK-GAWENDA, Mariola (Institute of Nuclear Physics Polish Academy of Sciences)

Session Classification: Seminar

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Excursion

Contribution ID: 35 Type: not specified

Excursion

Tuesday 16 July 2024 15:00 (4 hours)

Contribution ID: 36 Type: not specified

Topical Highlight 2: Flavours & CPV

Wednesday 17 July 2024 09:00 (2 hours)

Presenters: STOCCHI, Achille; Prof. STOCCHI, achille (IJCLab , UNiversite Paris-Saclay, CNRS)

Session Classification: Topical Highlight

Contribution ID: 37 Type: not specified

Topical Highlight 4: emergence of Flavour

Presenter: Prof. STOCCHI, achille (IJCLab , UNiversite Paris-Saclay, CNRS)

Session Classification: Topical Highlight

Contribution ID: 38 Type: not specified

Topical Highlight 2: Flavours & CPV

Wednesday 17 July 2024 11:30 (2 hours)

Presenters: STOCCHI, Achille; Prof. STOCCHI, achille (IJCLab , UNiversite Paris-Saclay, CNRS)

Session Classification: Topical Highlight

Trans-European $\cdots \hspace{0.1cm}$ / Report of Contributions

Seminar2

Contribution ID: 39 Type: not specified

Seminar2

Saturday 13 July 2024 15:00 (1 hour)

Presenter: LUSZCZAK, Marta

Session Classification: Seminar

Contribution ID: 40 Type: not specified

Seminar3: Event-by-event correlations in heavy ions

Wednesday 17 July 2024 15:00 (1 hour)

Presenter: SPUTOWSKA, Iwona Anna (Polish Academy of Sciences (PL))

Session Classification: Seminar

Contribution ID: 41 Type: not specified

Feynman Graph1

Presenter: SAPETA, Sebastian Piotr (Polish Academy of Sciences (PL))

Session Classification: Lectures

Contribution ID: 42 Type: not specified

Feynman Graph1

Presenter: SAPETA, Sebastian Piotr (Polish Academy of Sciences (PL))

Session Classification: Lectures

Contribution ID: 43 Type: not specified

Topical Highlight 2: QCD and Diffraction

Presenter: SCHAFER, Wolfgang

Session Classification: Topical Highlight

Contribution ID: 44 Type: **not specified**

Topical Highlight 3: Cosmologie

Presenter: ASTIER, Pierre

Session Classification: Topical Highlight

Contribution ID: 45 Type: not specified

Topical Highlight 3: Cosmic rays and CREDO

Thursday 18 July 2024 11:30 (2 hours)

Presenter: KAMINSKI, Robert

Session Classification: Topical Highlight

Contribution ID: 46 Type: not specified

Spherically Symmetric Solutions Of Cotton Gravity

Friday 19 July 2024 14:45 (7 minutes)

Presenter: DIDIDZE, Vitali

Session Classification: Students projects

Contribution ID: 47 Type: **not specified**

Study on Proton Radius based on Lepton Pair Production in p-p Collision and Electromagnetic Form Factors

Friday 19 July 2024 14:52 (7 minutes)

Presenter: KRISHNA, Nikhil

Session Classification: Students projects

Trans-European \cdots / Report of Contributions

Summary

Contribution ID: 48 Type: not specified

Summary

Friday 19 July 2024 19:00 (45 minutes)

Session Classification: Students projects

Contribution ID: 49 Type: not specified

Transfer to Rzeszow

Saturday 20 July 2024 07:30 (2 hours)

Contribution ID: 50 Type: not specified

Detectors 3

Sunday 14 July 2024 09:00 (1 hour)

Presenter: BARSUK, Sergey (Université Paris-Saclay (FR))

Session Classification: Lectures

Contribution ID: 51 Type: not specified

Conference by former students

Presenter: ZHOVKOVSKA, Valeriia (University of Warwick (GB))

Session Classification: Conference by former students

Contribution ID: 52 Type: not specified

Conference by former students

Presenter: SPUTOWSKA, Iwona Anna (Polish Academy of Sciences (PL))

Session Classification: Conference by former students

Contribution ID: 53 Type: not specified

Conference by former students

Presenter: MAJ, Klaudia (AGH University of Krakow (PL))

Session Classification: Conference by former students

Contribution ID: 54 Type: not specified

Conference by former students

Presenter: KUKULAK, Szymon Piotr (Polish Academy of Sciences (PL))

Session Classification: Conference by former students

Contribution ID: 55 Type: not specified

Quantum control and enhancement of superconducting pairing in one-dimensional Fermi-Hubbard chains

Friday 19 July 2024 14:59 (7 minutes)

Presenter: POVITCHAN, Oleksandr

Session Classification: Students projects

Contribution ID: 56 Type: not specified

"Paradoxes" of Quantum Mechanics

Friday 19 July 2024 15:06 (7 minutes)

Presenter: KOMPANIIETS, Rina

Session Classification: Students projects

Contribution ID: 57 Type: not specified

Students persentations

Presenter: OZYURDA, Mehmet Umut (Istanbul Technical University (TR))

Session Classification: Students projects

Contribution ID: 58 Type: not specified

Strangeness production (K^0 , Λ^0) in diffractive pp collisions on STAR experiment at RHIC accelerator.

Friday 19 July 2024 15:13 (7 minutes)

Presenter: WĄTROBA, Adam

Session Classification: Students projects

Contribution ID: 59 Type: not specified

Development of isotopes for theranostics and nuclear medicine in Ukraine

Friday 19 July 2024 15:20 (7 minutes)

Presenter: KADENKO, Viktoriia

Session Classification: Students projects

Contribution ID: 60 Type: not specified

Accelerators in Medicine

Friday 19 July 2024 15:27 (7 minutes)

Presenter: TCHIKADZE, Nikoloz

Session Classification: Students projects

Contribution ID: 61 Type: not specified

Students presentation

Presenter: BYSLINSKA, Anastasia

Session Classification: Students projects

Contribution ID: **62** Type: **not specified**

An Unbinned Angular Analysis of $B^\pm \to K^\pm \mu\mu$ Decays

Friday 19 July 2024 15:34 (7 minutes)

Presenter: WILLIAMS, Zak Owen (University of Bristol (GB))

Session Classification: Students projects

Amplitude Analysis on $\Lambda_c^+ \to \cdots$

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Contribution ID: 63 Type: not specified

Amplitude Analysis on $\Lambda_c^+ \to \Sigma^0 \pi^+ \pi^0$

Friday 19 July 2024 15:41 (7 minutes)

Presenter: ZENG, Shenghui (University of Bristol (GB))

Session Classification: Students projects

Contribution ID: 64 Type: not specified

ATLAS Forward Proton Detector Alignment

Friday 19 July 2024 15:48 (7 minutes)

Presenter: MROZ, Tomasz Grzegorz (Polish Academy of Sciences (PL))

Session Classification: Students projects

Contribution ID: 65 Type: not specified

SIMULATION OF BACKGROUND MUONS FROM COSMIC RAYS

Friday 19 July 2024 15:55 (7 minutes)

Presenter: SHARMA, Shreya (Institute of Nuclear Physics, Polish Academy of Sciences (IFJ PAN))

Session Classification: Students projects

Contribution ID: 66 Type: not specified

Angular analysis of the $B^0\to K^{*0}e^-e^+$ decay in the high dilepton invariant mass

Friday 19 July 2024 16:02 (7 minutes)

Presenter: YAHYA, Baraa (IJCLAB)

Session Classification: Students projects

Contribution ID: 67 Type: not specified

USING FREE SOFTWARE TO TEACH MEDICAL PHYSICS STUDENTS

Friday 19 July 2024 16:09 (7 minutes)

Presenter: LEBED, Viktoriia

Session Classification: Students projects

Contribution ID: 68 Type: not specified

Influence of Dose Rate and Temperature on Radiation-Induced Segregation

Friday 19 July 2024 16:16 (7 minutes)

Presenter: SKOROKHOD, Roman

Session Classification: Students projects

Contribution ID: 69 Type: not specified

Students presentation

Presenter: BAMWIDHI, Isaac (United Arab Emirates University (AE))

Session Classification: Students projects

Contribution ID: **70** Type: **not specified**

Quantum Chromodynamics: A Study of Some Hard Processes

Friday 19 July 2024 16:23 (7 minutes)

Presenter: ET-TAHERI, Yassir

Session Classification: Students projects

Contribution ID: 71 Type: not specified

Students presentation

Presenter: GOURE, KHALID (LPHEA, Faculty of Science Semlalia, Cadi Ayyad University, P.O.B.

2390 Marrakech)

Session Classification: Students projects

Contribution ID: **72** Type: **not specified**

FTIR for detection of impurities in Nal(I), Csl(Tl) and Csl(Na) crystalline scintillators

Friday 19 July 2024 17:00 (7 minutes)

Presenter: OSYPOVA, Renata

Session Classification: Students projects

Contribution ID: 73 Type: not specified

Acceleration of YAG:Ce decay time for application in new generation of colliders

Friday 19 July 2024 17:07 (7 minutes)

Presenter: PAVLIUCHENKO, Marina

Session Classification: Students projects

Contribution ID: 74 Type: **not specified**

Track-based alignment of the ATLAS-ALFA detectors

Friday 19 July 2024 17:14 (7 minutes)

Presenters: BASHIRI, Saleh (Polish Academy of Sciences (PL)); BASHIRI, Saleh (Institute for Re-

search in Fundamental Sciences (IR))

Session Classification: Students projects

Contribution ID: 75 Type: **not specified**

Simulation of diffractive jet production processes in pp collisions at the LHC

Friday 19 July 2024 17:21 (7 minutes)

Presenter: STRAKA, Jan

Session Classification: Students projects

Contribution ID: **76** Type: **not specified**

Outreach event

Thursday 11 July 2024 17:00 (2h 15m)

Contribution ID: 77 Type: **not specified**

Transfer from Rzeszów to the school venue

Thursday 11 July 2024 19:15 (2 hours)

Contribution ID: 78

Seminar 1: FCC

Friday 12 July 2024 12:30 (1 hour)

Type: not specified

Seminar 1: FCC

Presenter: LESIAK, Tadeusz (Polish Academy of Sciences (PL))

Session Classification: Seminar

Contribution ID: 79 Type: not specified

Hot topic discussion

Saturday 13 July 2024 16:00 (1 hour)

Presenter: Prof. STOCCHI, achille (IJCLab , UNiversite Paris-Saclay, CNRS)

Contribution ID: 80 Type: not specified

Hand-on Team 2 / Students work with profs Team 1

Sunday 14 July 2024 17:30 (2 hours)

Session Classification: Hands-on/Presentations

Contribution ID: 81 Type: not specified

Hand-on Team 2 / Students work with profs Team 1

Session Classification: Hands-on/Presentations

Contribution ID: 82 Type: not specified

Statistical games

Sunday 14 July 2024 20:30 (1 hour)

Presenter: RADEMACKER, Jonas (University of Bristol (GB))

Contribution ID: 83 Type: not specified

Hot topic discussion

Wednesday 17 July 2024 16:00 (1 hour)

Presenter: Prof. STOCCHI, achille (IJCLab , UNiversite Paris-Saclay, CNRS)

Intro to QCD 1

Contribution ID: 84 Type: not specified

Intro to QCD 1

Monday 15 July 2024 10:00 (1 hour)

Presenter: Dr MACIULA, Rafal

Session Classification: Lectures

Contribution ID: 85 Type: not specified

Accelerators 2

Tuesday 16 July 2024 09:00 (1 hour)

Presenter: HERMES, Pascal (CERN)

Session Classification: Lectures

Contribution ID: 86 Type: not specified

Intro to QCD 2

Tuesday 16 July 2024 10:00 (1 hour)

Presenter: Dr MACIULA, Rafal

Session Classification: Lectures

Accelerators 3

Contribution ID: 87 Type: not specified

Accelerators 3

Tuesday 16 July 2024 11:30 (1 hour)

Presenter: HERMES, Pascal (CERN)

Session Classification: Lectures

Contribution ID: 88 Type: not specified

Detectors 5

Tuesday 16 July 2024 12:30 (1 hour)

Presenter: BARSUK, Sergey (Université Paris-Saclay (FR))

Session Classification: Lectures

Contribution ID: 89 Type: not specified

BSM

Thursday 18 July 2024 09:00 (2 hours)

Presenters: GLUZA, Janusz (U. Silesia); GLUZA, Janusz (University of Silesia (PL))

Session Classification: Lectures

Contribution ID: 90 Type: not specified

Topical highlight 3: Cosmic rays and CREDO

Thursday 18 July 2024 15:00 (2 hours)

Presenter: KAMINSKI, Robert

Session Classification: Topical Highlight

Contribution ID: 91 Type: not specified

Future physics challenges

Friday 19 July 2024 09:00 (2 hours)

Presenter: VAGNONI, Vincenzo (INFN Bologna (IT))

Session Classification: Future physics challenges

Contribution ID: 92 Type: not specified

Future physics challenges

Friday 19 July 2024 11:30 (1 hour)

Presenter: VAGNONI, Vincenzo (INFN Bologna (IT))

Session Classification: Future physics challenges

Contribution ID: 93 Type: not specified

Simulations for WCTE experiment

Friday 19 July 2024 17:28 (7 minutes)

Presenter: HRUBY, Frantisek (Palacky University (CZ))

Session Classification: Students projects

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Radar Systems

Contribution ID: 94 Type: not specified

Radar Systems

Friday 19 July 2024 17:35 (7 minutes)

Presenter: YEZLOVETSKA, Iryna

Session Classification: Students projects

Contribution ID: 95 Type: not specified

The Mighty Tracker at the LHCb

Friday 19 July 2024 17:42 (7 minutes)

Presenter: Mr BOHARE, Abhishek (The University of Edinburgh (GB))

Session Classification: Students projects