

**XXXII Cracow Epiphany
Conference on the recent
results from Heavy Ion
Physics**

Report of Contributions

Contribution ID: 2

Type: **not specified**

Ultra-relativistic nuclear collisions: Overview of recent developments

Monday, 12 January 2026 09:30 (30 minutes)

(20 min + 5 min discussion)

Presenter: BRAUN-MUNZINGER, Peter (GSI - Helmholtzzentrum für Schwerionenforschung GmbH (DE))

Session Classification: Introduction Lecture

Contribution ID: 3

Type: **not specified**

ALICE experimental overview

Monday, 12 January 2026 10:00 (30 minutes)

(20 min + 5 min discussion)

Presenter: RZESA, Wioleta (Technische Universitat Munchen (DE))

Session Classification: Experimental Overview

Contribution ID: 4

Type: **not specified**

ATLAS experimental overview

Monday, 12 January 2026 11:00 (30 minutes)

(20 min + 5 min discussion)

Presenter: BOLD, Tomasz (AGH University of Krakow (PL))

Session Classification: Experimental Overview

Contribution ID: 5

Type: **not specified**

CMS experimental overview

Monday, 12 January 2026 11:30 (30 minutes)

(20 min + 5 min discussion)

Presenter: MIJUSKOVIC, Jelena (University of Montenegro (ME))

Session Classification: Experimental Overview

Contribution ID: 6

Type: **not specified**

LHCb experimental overview

Monday, 12 January 2026 12:00 (30 minutes)

(20 min + 5 min discussion)

Presenter: DA SILVA, Cesar Luiz (Los Alamos National Laboratory (US))

Session Classification: Experimental Overview

Contribution ID: 7

Type: **not specified**

sPhenix experimental overview

Monday, 12 January 2026 14:00 (30 minutes)

(20 min + 5 min discussion)

Presenter: KIMELMAN, Benjamin (Vanderbilt University)

Session Classification: Experimental Overview

Contribution ID: 8

Type: **not specified**

Star experimental overview

Monday, 12 January 2026 14:30 (30 minutes)

(20 min + 5 min discussion)

Presenter: MOONEY, Isaac

Session Classification: Experimental Overview

Contribution ID: 9

Type: **not specified**

NA61/SHINE experimental overview

Monday, 12 January 2026 15:00 (30 minutes)

(20 min + 5 min discussion)

Presenter: RYBICKI, Andrzej Krzysztof (Polish Academy of Sciences (PL))

Session Classification: Experimental Overview

Contribution ID: **10**

Type: **not specified**

Studies of baryonic matter with HADES at GSI/FAIR

Monday, 12 January 2026 15:30 (30 minutes)

(20 min + 5 min discussion)

Presenter: CIEPAŁ, Izabela (H. Niewodniczanski Institute of Nuclear Physics PAS)

Session Classification: Experimental Overview

Contribution ID: **11**

Type: **not specified**

nCTEQ25 nuclear PDFs

Tuesday, 13 January 2026 09:00 (30 minutes)

(20 min + 10 min discussion)

Presenter: JEZO, Tomas (WWU ITP)

Session Classification: Nuclear PDFs

Contribution ID: 12

Type: **not specified**

nNNDPF updates

Tuesday, 13 January 2026 09:30 (30 minutes)

(20 min + 10 min discussion)

Presenters: NOCERA, Emanuele Roberto; NOCERA, Emanuele Roberto (Università degli Studi di Torino and INFN Torino)

Session Classification: Nuclear PDFs

Contribution ID: 13

Type: **not specified**

EPPS nPDF update

Tuesday, 13 January 2026 10:00 (30 minutes)

(20 min + 10 min discussion)

Presenter: PAAKKINEN, Petja Kalle Matias

Session Classification: Nuclear PDFs

Contribution ID: 14

Type: **not specified**

ATLAS overview of physics of ultraperipheral collisions

Tuesday, 13 January 2026 11:00 (30 minutes)

(20 min + 5 min discussion)

Presenter: CIEŚLA, Krzysztof (AGH University of Krakow (PL))

Session Classification: Ultraperipheral collisions

Contribution ID: 15

Type: **not specified**

ALICE overview of physics of ultraperipheral collisions

Tuesday, 13 January 2026 11:30 (30 minutes)

(20 min + 5 min discussion)

Presenter: LAVICKA, Roman (Czech Technical University in Prague (CZ))

Session Classification: Ultraperipheral collisions

Contribution ID: 17

Type: **not specified**

Ultrapерipheral collisions in LHCb experiment

Tuesday, 13 January 2026 14:00 (30 minutes)

(20 min + 5 min discussion)

Presenter: NOGAROLLI, Pedro (Federal University of Rio de Janeiro (BR))

Session Classification: Ultrapерipheral collisions

Contribution ID: **18**

Type: **not specified**

Recent theory developments in UPC (photonuclear interactions)

Tuesday, 13 January 2026 14:30 (30 minutes)

(20 min + 5 min discussion)

Presenter: Dr MÄNTYSAARI, Heikki

Session Classification: Ultraperipheral collisions

Contribution ID: 19

Type: **not specified**

Recent theory developments in UPC (gamma-gamma collisions)

Tuesday, 13 January 2026 12:00 (30 minutes)

(20 min + 5 min discussion)

Presenter: Dr HARLAND-LANG, Lucian (University College London)

Session Classification: Ultraperipheral collisions

Contribution ID: **20**

Type: **not specified**

Phenomenology developments in UPC

Tuesday, 13 January 2026 15:00 (30 minutes)

(20 min + 5 discussion)

Presenter: JUCHA, Paweł (Institute of Nuclear Physics Polish Academy of Sciences)

Session Classification: Ultraperipheral collisions

Contribution ID: **21**

Type: **not specified**

QPG onset in small systems at LHC energies

(20 min + 5 min discussion)

Session Classification: Small systems

Contribution ID: 22

Type: **not specified**

Theory for intermediate systems OO, NeNe

Wednesday, 14 January 2026 11:00 (30 minutes)

Presenter: Dr MAZELIAUSKAS, Aleksas (Heidelberg University (DE))

Session Classification: Small systems

Contribution ID: 23

Type: **not specified**

Recent LHCb SMOG results sensitive to the initial stages of heavy ion collisions

(20 min + 5 min discussion)

Session Classification: Small systems

Contribution ID: 24

Type: **not specified**

Recent results from intermediate collision systems (OO/NeNe) from the ATLAS experiment

Wednesday, 14 January 2026 11:30 (30 minutes)

(20 min + 5 min discussion)

Presenter: VANA, Pavel (Charles University (CZ))

Session Classification: Small systems

Contribution ID: 25

Type: **not specified**

Recent results from intermediate collision systems (OO/NeNe) from the CMS experiment

(20 min + 5 min discussion)

Session Classification: Small systems

Contribution ID: 26

Type: **not specified**

Recent results from intermediate collision systems (OO/NeNe) from the ALICE experiment

Wednesday, 14 January 2026 12:00 (30 minutes)

(20 min + 5 min discussion)

Presenter: MODAK, Abhi (Universita e INFN Trieste (IT))

Session Classification: Small systems

Contribution ID: 27

Type: **not specified**

Experimental overview of results from small systems (pp, pPb) with the ALICE detector

Wednesday, 14 January 2026 09:00 (30 minutes)

(20 min + 5 min discussion)

Presenter: CATALANO, Fabio (University of Houston (US))

Session Classification: Small systems

Contribution ID: 28

Type: **not specified**

Experimental overview of results from small systems (pp, pPb) with the CMS detector

Wednesday, 14 January 2026 09:30 (30 minutes)

(20 min + 5 min discussion)

Presenter: LIU, Xiaoyu (Rice University (US))

Session Classification: Small systems

Contribution ID: 29

Type: **not specified**

Experimental overview of results from small systems (pp, pPb) with the ATLAS detector

Wednesday, 14 January 2026 10:00 (30 minutes)

(20 min + 5 min discussion)

Presenter: NOVOTNY, Patrik (Weizmann Institute of Science (IL))

Session Classification: Small systems

Contribution ID: **30**

Type: **not specified**

Star results from Beam Energy Scan

Friday, 16 January 2026 09:00 (30 minutes)

(20 min + 5 min discussion)

Presenter: ZBROSZCZYK, Hanna (Warsaw University of Technology (PL))

Session Classification: Low energy

Contribution ID: **31**

Type: **not specified**

NA61/SHINE results on search for critical point

Friday, 16 January 2026 10:00 (30 minutes)

(20 min + 5 discussion)

Presenter: DAVIS, Nikolaos (Polish Academy of Sciences (PL))

Session Classification: Low energy

Contribution ID: 32

Type: **not specified**

Investigating the onset of deconfinement with NA61/SHINE

Friday, 16 January 2026 09:30 (30 minutes)

(20 min + 5 min discussion)

Presenter: PANOVA, Oleksandra (Institute of Nuclear Physics Polish Academy of Sciences (PL))

Session Classification: Low energy

Contribution ID: 33

Type: **not specified**

Probing QCD phase diagram with heavy ion collisions

(20 min + 5 min discussion)

Session Classification: Low energy

Contribution ID: 34

Type: **not specified**

Quarkonium in heavy ion (quantum master equation)

Wednesday, 14 January 2026 14:00 (30 minutes)

(20 min + 5 min discussion)

Presenter: DELORME, Stéphane (University of Silesia)

Session Classification: Small systems

Contribution ID: 35

Type: **not specified**

Spin hydrodynamics

Thursday, 15 January 2026 14:30 (30 minutes)

(20 min + 5 min discussion)

Presenter: FLORKOWSKI, Wojciech (Jagiellonian University)

Session Classification: Collective dynamics

Contribution ID: **36**

Type: **not specified**

Spin and polarisation effects in heavy-ion collisions

Thursday, 15 January 2026 15:00 (30 minutes)

(20 min + 5 min discussion)

Presenter: Dr RYBLEWSKI, Radoslaw (Institute of Nuclear Physics PAN)

Session Classification: Collective dynamics

Contribution ID: 37

Type: **not specified**

Bulk properties of matter created in heavy-ion collisions from the ATLAS experiment

Thursday, 15 January 2026 12:00 (30 minutes)

(20 min + 5 min discussion)

Presenter: BALEK, Petr (AGH University of Krakow (PL))

Session Classification: Collective dynamics

Contribution ID: **38**

Type: **not specified**

Bulk properties of matter created in heavy-ion collisions from the CMS experiment

Thursday, 15 January 2026 11:30 (30 minutes)

(20 min + 5 min discussion)

Presenter: BEHERA, Subash Chandra (Sapienza Universita e INFN, Roma I (IT))

Session Classification: Collective dynamics

Contribution ID: 39

Type: **not specified**

Bulk properties of matter created in heavy-ion collisions from the ALICE experiment

Thursday, 15 January 2026 14:00 (30 minutes)

(20 min + 5 min discussion)

Presenter: SCHEID, Sebastian (CERN)

Session Classification: Collective dynamics

Contribution ID: 40

Type: **not specified**

Investigating structure of nuclei

(20 min + 5 min discussion)

Session Classification: Collective dynamics

Contribution ID: 41

Type: **not specified**

Jet production and modification in heavy ion collisions with the ATLAS detector

Thursday, 15 January 2026 09:00 (30 minutes)

(20 min + 5 min discussion)

Presenter: OGRODNIK, Agnieszka Ewa (Polish Academy of Sciences (PL))

Session Classification: Jets in heavy ion collisions

Contribution ID: 42

Type: **not specified**

Jet production and modification in heavy ion collisions with the ALICE detector

Thursday, 15 January 2026 10:00 (30 minutes)

(20 min + 5 min discussion)

Presenter: KRIZEK, Filip (Czech Academy of Sciences (CZ))

Session Classification: Jets in heavy ion collisions

Contribution ID: 43

Type: **not specified**

Jet production and modification in heavy ion collisions with the CMS detector

Thursday, 15 January 2026 09:30 (30 minutes)

(20 min + 5 min discussion)

Presenter: VLADIMIROV, Vangelis (Sapienza Universita e INFN, Roma I (IT))

Session Classification: Jets in heavy ion collisions

Contribution ID: 44

Type: **not specified**

Theoretical insights into jet quenching and medium response in heavy ion collisions

Thursday, 15 January 2026 11:00 (30 minutes)

(20 min + 5 min discussion)

Presenter: TYWONIUK, Konrad (University of Bergen (NO))

Session Classification: Jets in heavy ion collisions

Contribution ID: 45

Type: **not specified**

Physics opportunities at the Electron-Ion Collider

Friday, 16 January 2026 15:00 (30 minutes)

(20 min + 5 min discussion)

Presenter: NADEL-TURONSKI, Pawel (University of South Carolina)

Session Classification: Future projects for heavy ion physics

Contribution ID: 46

Type: **not specified**

Potential of the FCC-hh as a heavy ion collider

Friday, 16 January 2026 15:30 (30 minutes)

(20 min + 5 min discussion)

Presenter: JOWETT, John (GSI - Helmholtzzentrum für Schwerionenforschung GmbH (DE))

Session Classification: Future projects for heavy ion physics

Contribution ID: 47

Type: **not specified**

Heavy Ion and Hadron Physics at FAIR

Friday, 16 January 2026 14:00 (30 minutes)

(20 min + 5 min discussion)

Presenter: ZBROSZCZYK, Hanna (Warsaw University of Technology (PL))

Session Classification: Future projects for heavy ion physics

Contribution ID: 48

Type: **not specified**

Ultrapерipheral collisions in STAR

(20 min + 5. min discussion)

Presenter: WU, Xin (University of Science and Technology of China)

Session Classification: Ultrapерipheral collisions

Contribution ID: 49

Type: **not specified**

ALICE upgrade plans

Friday, 16 January 2026 14:30 (30 minutes)

(20 min + 5 min discussion)

Presenter: OTWINOWSKI, Jacek Tomasz (Institute of Nuclear Physics Polish Academy of Sciences (PL))

Session Classification: Future projects for heavy ion physics

Contribution ID: 50

Type: **not specified**

Wounded nucleons, wounded quarks - a personal story

Monday, 12 January 2026 16:30 (30 minutes)

Presenter: BIALAS, Andrzej

Session Classification: Open Lecture

Contribution ID: 51

Type: **not specified**

**Measurement of coherent exclusive J/ψ production
in ultraperipheral Pb+Pb collisions at $\sqrt{s_{NN}} = 5.36$
TeV with the ATLAS detector**

Tuesday, 13 January 2026 16:00 (15 minutes)

Presenter: RYBCZYNSKI, Pawel (AGH University of Krakow (PL))

Session Classification: Young Scientist

Contribution ID: 52

Type: **not specified**

Probing the $X(6900)$ via Two-Photon Production in Ultraperipheral Collisions

Tuesday, 13 January 2026 16:15 (15 minutes)

Presenter: CHEN, Longjie (Instytut Fizyki Jądrowej PAN)

Session Classification: Young Scientist

Contribution ID: 53

Type: **not specified**

Charge-Dependent Directed Flow Splitting from EM Fields and Conserved-Charge Dynamics

Wednesday, 14 January 2026 15:00 (15 minutes)

Presenter: Mr PARIDA, Tribhuban (IISER Berhampur)

Session Classification: Young Scientist

Contribution ID: 54

Type: **not specified**

Entropy and multiplicity of hadrons in the high energy limit within dipole cascade models

Wednesday, 14 January 2026 15:15 (15 minutes)

Presenter: LOKOS, Sandor (Institute of Nuclear Physics Polish Academy of Sciences (PL))

Session Classification: Young Scientist

Contribution ID: 55

Type: **not specified**

Drift circle error calibration in the TRT detector

Thursday, 15 January 2026 16:00 (15 minutes)

Presenter: LESZCZYNSKA, Julia (Polish Academy of Sciences (PL))

Session Classification: Young Scientist

Contribution ID: 56

Type: **not specified**

On the Charged Fragments Tagging in the ATLAS Detector during the 2025 Oxygen Campaign

Thursday, 15 January 2026 16:15 (15 minutes)

Presenter: SOBIEN, Weronika Karolina (Polish Academy of Sciences (PL))

Session Classification: Young Scientist

Contribution ID: 57

Type: **not specified**

Characterization of the custom step-down DC/DC converter system for the ATLAS ITk Strip detector

Friday, 16 January 2026 11:00 (15 minutes)

Presenter: BULANOWSKA, Weronika Emilia (AGH University of Krakow (PL))

Session Classification: Young Scientist

Contribution ID: 58

Type: **not specified**

Atmospheric Muon Simulation and study of Reconstruction resolutions for P-ONE

Friday, 16 January 2026 11:45 (15 minutes)

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

Session Classification: Young Scientist

Contribution ID: 59

Type: **not specified**

Fast Cascade Generator GAN in the P-ONE Experiment

Friday, 16 January 2026 12:00 (15 minutes)

Presenter: WROŃSKI, Rafał (IFJ PAN)

Session Classification: Young Scientist

Contribution ID: **60**

Type: **not specified**

Fast Interpolation Grids and Determination of Parton Distribution Functions

Wednesday, 14 January 2026 16:00 (15 minutes)

Presenter: Mr DEY, BUDDHADEB (IFJ PAN)

Session Classification: Young Scientist

Contribution ID: **61**

Type: **not specified**

The Lund String Hadronization model with Herwig 7 and its effect on collider observables

Wednesday, 14 January 2026 17:00 (15 minutes)

Presenter: SARMAH, Pratixan (UJ)

Session Classification: Young Scientist

Contribution ID: 62

Type: **not specified**

Extraction of quark/gluon jets angularities at the LHC using OpenData

Thursday, 15 January 2026 16:30 (15 minutes)

Presenter: LE, Van Dung (Helsinki Institute of Physics)

Session Classification: Young Scientist

Contribution ID: 63

Type: **not specified**

D^0 -Tagged Jet Substructure in pp Collisions with ALICE

Thursday, 15 January 2026 16:45 (15 minutes)

Presenter: RECKZIEGEL, Christian (Universidade Federal Do ABC (BR))

Session Classification: Young Scientist

Contribution ID: 64

Type: **not specified**

Machine learning based tracking for MUonE experiment

Friday, 16 January 2026 11:30 (15 minutes)

Presenter: MIZERA, Damian Artur (Polish Academy of Sciences (PL))

Session Classification: Young Scientist

Contribution ID: 65

Type: **not specified**

Development of Pacific++ front-end ASIC for SciFi and Magnet Station detectors in LHCb Upgrade experiment

Friday, 16 January 2026 11:15 (15 minutes)

Presenter: PRUS, Patryk Artur (AGH University of Krakow (PL))

Session Classification: Young Scientist

Contribution ID: 66

Type: **not specified**

Towards the search for lepton flavor violating $B \rightarrow K\tau l$ ($l=e,\mu$) decays at Belle and Belle II

Wednesday, 14 January 2026 16:15 (15 minutes)

Presenter: UR REHMAN, Junaid

Session Classification: Young Scientist

Contribution ID: 67

Type: **not specified**

D* polarisation measurements in semitauonic B-meson decays at Belle and Belle II experiments

Wednesday, 14 January 2026 16:30 (15 minutes)

Presenter: KALETA, Mateusz (IFJ PAN)

Session Classification: Young Scientist

Contribution ID: **68**

Type: **not specified**

Four Polarizations of the W at High Energies

Wednesday, 14 January 2026 16:45 (15 minutes)

Presenter: BASU, Trina (IFJ PAN)

Session Classification: Young Scientist

Contribution ID: **69**

Type: **not specified**

Fast Photon Propagation Simulation for the P-ONE Optical Calibration System

Friday, 16 January 2026 12:15 (15 minutes)

Presenter: NOGA, Wojciech (The Henryk Niewodniczański Institute of Nuclear Physics Polish Academy of Sciences)

Session Classification: Young Scientist

Contribution ID: 70

Type: **not specified**

The charm quark hadronisation with the PYTHIA8/Angantyr model

Wednesday, 14 January 2026 14:30 (30 minutes)

(20 min + 5 min discussion)

Presenter: SHAH, Harsh Rajendrabhai (Polish Academy of Sciences (PL))

Session Classification: Small systems

Contribution ID: 71

Type: **not specified**

Opening and Welcome

Monday, 12 January 2026 09:00 (20 minutes)

Presenters: OBLAKOWSKA-MUCHA, Agnieszka (AGH University of Krakow (PL)); DERENDARZ, Dominik Karol (Polish Academy of Sciences (PL)); LESIAK, Tadeusz (Polish Academy of Sciences (PL))

Session Classification: Opening and Welcome