

# **HERA and the LHC**

## **Report of Contributions**

Contribution ID: 0

Type: **not specified**

## Experimental results

*Monday, May 26, 2008 7:20 AM (20 minutes)*

A. Bunyatyan,  
A. Cooper-Sarkar,  
C. Diaconu,  
R. Engel,  
C. Kiesling,  
K. Kutak,  
S. Ostapchenko,  
T. Pierog,  
T.C. Rogers,  
M.I. Strikman,  
T. Sako

**Session Classification:** WG: Cosmic Rays, HERA and the LHC

Contribution ID: 1

Type: **not specified**

## **Model predictions for HERA, LHC and cosmic rays**

*Monday, May 26, 2008 7:40 AM (20 minutes)*

**Session Classification:** WG: Cosmic Rays, HERA and the LHC

Contribution ID: 2

Type: **not specified**

## Summary

*Monday, May 26, 2008 8:00 AM (20 minutes)*

**Session Classification:** WG: Cosmic Rays, HERA and the LHC

Contribution ID: 3

Type: **not specified**

## Introduction

*Monday, May 26, 2008 7:00 AM (20 minutes)*

A. Bunyatyan,  
A. Cooper-Sarkar,  
C. Diaconu,  
R. Engel,  
C. Kiesling,  
K. Kutak,  
S. Ostapchenko,  
T. Pierog,  
T.C. Rogers,  
M.I. Strikman,  
T. Sako

**Session Classification:** WG: Cosmic Rays, HERA and the LHC

Contribution ID: 4

Type: **not specified**

## Executive Summary

*Monday, May 26, 2008 7:00 AM (20 minutes)*

M. Arneodo,

M. Diehl,

V.A.-Khoze,

P. Newman

**Session Classification:** WG: Diffraction

Contribution ID: 5

Type: **not specified**

## **Towards a Combined HERA Diffractive Deep Inelastic Scattering Measurement**

*Monday, May 26, 2008 7:20 AM (20 minutes)*

P. Newman,  
M. Ruspa

**Session Classification:** WG: Diffraction

Contribution ID: 6

Type: **not specified**

## **Diffractive Final States and Factorisation at HERA**

*Monday, May 26, 2008 7:40 AM (20 minutes)*

W. Slominski,

A. Valkarova

**Session Classification:** WG: Diffraction



Contribution ID: 7

Type: **not specified**

## Leading Baryon Production at HERA

*Monday, May 26, 2008 8:00 AM (20 minutes)*

W.B. Schmidke,  
A. Bunyatyan

**Session Classification:** WG: Diffraction

Contribution ID: 8

Type: **not specified**

## **Exclusive Vector Meson Production and Deeply Virtual Compton Scattering at HERA**

*Monday, May 26, 2008 8:20 AM (20 minutes)*

A. Bruni,  
X. Janssen,  
P. Marage

**Session Classification:** WG: Diffraction

Contribution ID: 9

Type: **not specified**

## **Exclusive Central Production and Diffractive W/Z Results from CDF-II**

*Monday, May 26, 2008 8:40 AM (20 minutes)*

K. Goulianos,  
J. L. Pinfold

**Session Classification:** WG: Diffraction

Contribution ID: **10**

Type: **not specified**

## **Survival probability in diffractive dijet photoproduction**

*Monday, May 26, 2008 9:00 AM (20 minutes)*

M. Klasen,  
G. Kramer

**Session Classification:** WG: Diffraction

Contribution ID: 11

Type: **not specified**

## Fracture Functions at HERA and LHC

*Monday, May 26, 2008 9:20 AM (20 minutes)*

F. A. Ceccopieri,  
L. Trentadue

**Session Classification:** WG: Diffraction

Contribution ID: 12

Type: **not specified**

## **Generalised parton distributions and exclusive vector meson production**

*Monday, May 26, 2008 9:40 AM (20 minutes)*

C. Nockles, T. Teubner

**Session Classification:** WG: Diffraction

Contribution ID: 13

Type: **not specified**

## **Dipole models and parton saturation in $ep$ scattering**

*Monday, May 26, 2008 10:00 AM (20 minutes)*

L. Motyka,  
K. Golec-Biernat,  
G. Watt

**Session Classification:** WG: Diffraction

Contribution ID: 14

Type: **not specified**

## **Checking formalism for central exclusive production in the first LHC runs**

*Monday, May 26, 2008 10:20 AM (20 minutes)*

A.D. Martin,  
V.A. Khoze,  
M.G. Ryskin

**Session Classification:** WG: Diffraction



Contribution ID: 15

Type: **not specified**

## **Rapidity gap survival probability and total cross sections**

*Monday, May 26, 2008 10:40 AM (20 minutes)*

A.D. Martin,  
V.A. Khoze,  
M.G. Ryskin

**Session Classification:** WG: Diffraction

Contribution ID: 16

Type: **not specified**

## **Rapidity gap survival in central exclusive diffraction: Dynamical mechanisms and uncertainties**

*Monday, May 26, 2008 11:00 AM (20 minutes)*

M. Strikman,  
Ch. Weiss

**Session Classification:** WG: Diffraction

Contribution ID: 17

Type: **not specified**

## **Two-photon and photon-hadron interactions at the LHC**

*Monday, May 26, 2008 11:20 AM (20 minutes)*

J. Nystrand

**Session Classification:** WG: Diffraction

Contribution ID: **18**

Type: **not specified**

## **Searching for the Odderon at HERA and the LHC**

*Monday, May 26, 2008 11:40 AM (20 minutes)*

C. Ewerz

**Session Classification:** WG: Diffraction

Contribution ID: **19**

Type: **not specified**

## **Forward physics with CMS**

*Monday, May 26, 2008 12:00 PM (20 minutes)*

S. Erhan,  
S. Cerci,  
M. Grothe,  
J. Hollar,  
A. Vilela Pereira

**Session Classification:** WG: Diffraction

Contribution ID: 20

Type: **not specified**

## Diffraction at TOTEM

*Monday, May 26, 2008 12:20 PM (20 minutes)*

G. Antchev, P. Aspell, V. Avati, M.G. Bagliesi, V. Berardi, M. Berretti, U. Bottigli,  
M. Bozzo, E. Brucken, A. Buzzo, F. Cafagna, M. Calicchio, M.G. Catanesi,  
P.L. Catastini, R. Cecchi, M.A. Ciocci, M. Deile, E. Dimovasili, K. Eggert,  
V. Eremin, F. Ferro, F. Garcia, S. Giani, V. Greco, J. Heino, T. Hilden,  
J. Kaspar, J. Kopal, V. Kundra, K. Kurvinen, S. Lami, G. Latino,  
R. Lauhakangas, E. Lippmaa, M. Lokajivek, M. Lo Vetere, F. Lucas Rodriguez,  
M. Macri, G. Magazzu, M. Meucci, S. Minutoli, H. Niewiadomski, E. Noschis,  
G. Notarnicola, E. Oliveri, F. Oljemark, R. Orava, M. Oriunno, K. Osterberg,  
P. Palazzi, E. Pedreschi, J. Petajajarvi, M. Quinto, E. Radermacher, E. Radicioni,  
F. Ravotti, G. Rella, E. Robutti, L. Ropelewski, G. Ruggiero, A. Rummel,  
H. Saarikko, G. Sanguinetti, A. Santroni, A. Scribano, G. Sette, W. Snoeys,  
F. Spinella, P. Squillacioti, A. Ster, C. Taylor, A. Trummal, N. Turini, J. Whitmore, J. Wu

**Session Classification:** WG: Diffraction

Contribution ID: 21

Type: **not specified**

## **The ALFA Detector and Physics Program**

*Monday, May 26, 2008 12:40 PM (20 minutes)*

K.Hiller,  
H. Stenzel

**Session Classification:** WG: Diffraction

Contribution ID: 22

Type: **not specified**

## **Diffractive Physics in ALICE**

*Monday, May 26, 2008 1:00 PM (20 minutes)*

R. Schicker

**Session Classification:** WG: Diffraction



Contribution ID: 23

Type: **not specified**

## **Physics with forward FP420/FP220 tagging systems**

*Monday, May 26, 2008 1:20 PM (20 minutes)*

P. Bussey,  
P. Van Mechelen

**Session Classification:** WG: Diffraction

Contribution ID: 24

Type: **not specified**

## Introduction

*Monday, May 26, 2008 7:00 AM (20 minutes)*

M. Cacciari,  
D. Dainese,  
A. Geiser,  
H. Spiesberger

**Session Classification:** WG: Heavy Quarks (Charm and Beauty)

Contribution ID: 25

Type: **not specified**

## Experimental study of heavy flavour production at HERA

*Monday, May 26, 2008 7:20 AM (20 minutes)*

S. Boutle,  
J. Bracinik,  
A. Geiser,  
G. Grindhammer,  
A.W. Jung,  
P. Roloff,  
Z. Rurikova,  
M. Turcato,  
A. Yagues-Molina

**Session Classification:** WG: Heavy Quarks (Charm and Beauty)

Contribution ID: 26

Type: **not specified**

## **Experimental study of heavy flavour production at RHIC and LHC**

*Monday, May 26, 2008 7:40 AM (20 minutes)*

M. Biasini,  
C. Bombonati,  
G.E. Bruno,  
E. Lytken,  
A. Mischke,  
C. Rosemann,  
A. Starodumov,  
D. Stocco,  
R. Wolf,  
M. zur Nedden

**Session Classification:** WG: Heavy Quarks (Charm and Beauty)

Contribution ID: 27

Type: **not specified**

## Heavy flavour production at the LHC: Theoretical Aspects

*Monday, May 26, 2008 8:00 AM (20 minutes)*

Z.J. Ajaltouni, A. Banfi, S. Baranov, I. Bierenbaum, J. Blumlein, G. Corcella,  
M. Czakon, G. Ferrera, S. Klein, B.A. Kniehl, G. Kramer, A. Likhoded,  
D.A. Milstead, O.I. Piskounova, V.A. Saleev, I. Schienbein, H. Spiesberger,  
R.S. Thorne, W.K. Tung, G. Zanderighi, N. Zotov

**Session Classification:** WG: Heavy Quarks (Charm and Beauty)

Contribution ID: 28

Type: **not specified**

## **Introduction to Monte Carlo models and Tools working group**

*Monday, May 26, 2008 7:00 AM (20 minutes)*

P. Bartalini, S.Chekanov, S. Gieseke, F. Krauss

**Session Classification:** WG: Monte Carlo and Tools

Contribution ID: 29

Type: **not specified**

## **A multi-channel Poissonian model for multi-parton scatterings**

*Monday, May 26, 2008 7:20 AM (20 minutes)*

D. Treleani

**Session Classification:** WG: Monte Carlo and Tools

Contribution ID: **30**

Type: **not specified**

## **Underlying events in Herwig++**

*Monday, May 26, 2008 7:40 AM (20 minutes)*

M. Bahr,  
S. Gieseke,  
M.H. Seymour

**Session Classification:** WG: Monte Carlo and Tools



Contribution ID: **31**

Type: **not specified**

## **Multiparton Interactions at HERA**

*Monday, May 26, 2008 8:00 AM (20 minutes)*

H. Jung, Ll. Marti, T. Namsou, S. Osman

**Session Classification:** WG: Monte Carlo and Tools

Contribution ID: 32

Type: **not specified**

## **Modeling the underlying event: generating predictions for the LHC**

*Monday, May 26, 2008 8:20 AM (20 minutes)*

A. Moares

**Session Classification:** WG: Monte Carlo and Tools

Contribution ID: 33

Type: **not specified**

## **Measurement of the Underlying Event in Jet Topologies using Charged Particle and Momentum Densities**

*Monday, May 26, 2008 8:40 AM (20 minutes)*

F. Ambroglini,  
P. Bartalini,  
F. Bechtel,  
L. Fano,  
R. Field

**Session Classification:** WG: Monte Carlo and Tools

Contribution ID: 34

Type: **not specified**

## **Double-Parton-Scattering in Photon-Three-Jet Final States at the LHC**

*Monday, May 26, 2008 9:00 AM (20 minutes)*

F. Bechtel

**Session Classification:** WG: Monte Carlo and Tools

Contribution ID: 35

Type: **not specified**

## **Underlying Event Studies with CASTOR in the CMS Experiment**

*Monday, May 26, 2008 9:20 AM (20 minutes)*

Z. Rurikova,  
A. Bunyatyan

**Session Classification:** WG: Monte Carlo and Tools

Contribution ID: 36

Type: **not specified**

## **Direct photon production at HERA, the Tevatron and the LHC**

*Monday, May 26, 2008 9:40 AM (20 minutes)*

R.E. Blair,  
S. Chekanov,  
G. Heinrich,  
A. Lipatov ,  
N. Zotov

**Session Classification:** WG: Monte Carlo and Tools

Contribution ID: 37

Type: **not specified**

## **Propagation of Uncertainty in a Parton Shower**

*Monday, May 26, 2008 10:00 AM (20 minutes)*

Ph. Stephens,  
A. van Hameren

**Session Classification:** WG: Monte Carlo and Tools

Contribution ID: **38**

Type: **not specified**

## **Perturbative description of inclusive single hadron production at HERA**

*Monday, May 26, 2008 10:20 AM (20 minutes)*

S. Albino

**Session Classification:** WG: Monte Carlo and Tools



Contribution ID: 39

Type: **not specified**

## **Nonperturbative corrections from an s-channel approach**

*Monday, May 26, 2008 10:40 AM (20 minutes)*

F. Hautmann

**Session Classification:** WG: Monte Carlo and Tools

Contribution ID: 40

Type: **not specified**

## **Single top production in the Wt mode with MC@NLO**

*Monday, May 26, 2008 11:00 AM (20 minutes)*

Ch. White

**Session Classification:** WG: Monte Carlo and Tools

Contribution ID: 41

Type: **not specified**

## **PYTHIA 8 Status Report**

*Monday, May 26, 2008 11:20 AM (20 minutes)*

T. Sjostrand

**Session Classification:** WG: Monte Carlo and Tools

Contribution ID: 42

Type: **not specified**

## **ThePEG: Toolkit for High Energy Physics Event Generation**

*Monday, May 26, 2008 11:40 AM (20 minutes)*

L. Lonnblad

**Session Classification:** WG: Monte Carlo and Tools

Contribution ID: 43

Type: **not specified**

## CASCADE

*Monday, May 26, 2008 12:00 PM (20 minutes)*

M. Deak,  
H. Jung,  
K. Kutak

**Session Classification:** WG: Monte Carlo and Tools

Contribution ID: 44

Type: **not specified**

## **AlpGen and SHERPA in Z/gamma\*+jets at LHC**

*Monday, May 26, 2008 12:20 PM (20 minutes)*

P. Lenzi

**Session Classification:** WG: Monte Carlo and Tools

Contribution ID: 45

Type: **not specified**

## **Generator comparison for top-pair production at CMS**

*Monday, May 26, 2008 12:40 PM (20 minutes)*

R. Chierici

**Session Classification:** WG: Monte Carlo and Tools

Contribution ID: 46

Type: **not specified**

## Herwig++ Status Report

*Monday, May 26, 2008 1:00 PM (20 minutes)*

M. Bahr, S. Gieseke, M.A. Gigg, D. Grellscheid, K. Hamilton,  
O. Latunde-Dada, S. Platzer, P. Richardson, M.H. Seymour,  
A. Sherstnev, J. Tully, B.R. Webber

**Session Classification:** WG: Monte Carlo and Tools



Contribution ID: 47

Type: **not specified**

## **Forward Physics Monte Carlo (FPMC)**

*Monday, May 26, 2008 1:20 PM (20 minutes)*

M. Boonekamp, V. Juranek, O. Kepka, C. Royon

**Session Classification:** WG: Monte Carlo and Tools

Contribution ID: 48

Type: **not specified**

## **HEP data analysis using jHepWork and Java**

*Monday, May 26, 2008 1:40 PM (20 minutes)*

S. Chekanov

**Session Classification:** WG: Monte Carlo and Tools

Contribution ID: 49

Type: **not specified**

## **Tools for event generator tuning and validation**

*Monday, May 26, 2008 2:00 PM (20 minutes)*

A. Buckley

**Session Classification:** WG: Monte Carlo and Tools

Contribution ID: 50

Type: **not specified**

## **Prerequisites for the Validation of Experiment and Theory**

*Monday, May 26, 2008 2:20 PM (20 minutes)*

L. Sonnenschein

**Session Classification:** WG: Monte Carlo and Tools

Contribution ID: 51

Type: **not specified**

## Introduction

*Monday, May 26, 2008 7:00 AM (20 minutes)*

C. Gwenlan,  
L. Lonnblad,  
E. Rodrigues,  
G. Zanderighi (Eds.)

**Session Classification:** WG: Multi-Jet final states and energy flows

Contribution ID: 52

Type: **not specified**

## Higher-order calculations

*Monday, May 26, 2008 7:20 AM (20 minutes)*

G. Zanderighi,  
G. Rodrigo,  
M. Treccani,  
G. Somogyi

**Session Classification:** WG: Multi-Jet final states and energy flows

Contribution ID: 53

Type: **not specified**

## Event shapes and resummation

*Monday, May 26, 2008 7:40 AM (20 minutes)*

A. Banfi, G. Corcella,  
M. Dasgupta, S. Joseph  
G. Luisoni, S. Majhi,  
B.F.L. Ward, S.A. Yost

**Session Classification:** WG: Multi-Jet final states and energy flows

Contribution ID: 54

Type: **not specified**

## **Jets and jet algorithms**

*Monday, May 26, 2008 8:00 AM (20 minutes)*

V. Coco, P.A. Delsart, J. Rojo, C. Sander, G. Soyez

**Session Classification:** WG: Multi-Jet final states and energy flows



Contribution ID: 55

Type: **not specified**

## **$k_t$ -factorization and forward jets**

*Monday, May 26, 2008 8:20 AM (20 minutes)*

S. Baranov, J. Bartels, M. Deak, F. Hautmann, H. Jung, A. Knutsson,  
K. Kutak, A. Lipatov, Ch. Royon, A. Sabio-Vera, F. Schwennsen, N. Zotov

**Session Classification:** WG: Multi-Jet final states and energy flows

Contribution ID: 56

Type: **not specified**

## HERA Results

*Monday, May 26, 2008 8:40 AM (20 minutes)*

K. Muller,  
H. Perrey,  
T. Schorner-Sadenius

**Session Classification:** WG: Multi-Jet final states and energy flows

Contribution ID: 57

Type: **not specified**

## Interactions at high gluon densities

*Monday, May 26, 2008 9:00 AM (20 minutes)*

M. Strikman,  
I.M. Dremin

**Session Classification:** WG: Multi-Jet final states and energy flows

Contribution ID: **58**

Type: **not specified**

## **Introduction**

*Monday, May 26, 2008 7:00 AM (20 minutes)*

M. Dittmar, S. Forte, A. Glazov, S. Moch et al

**Session Classification:** WG: Parton Density Functions

Contribution ID: 59

Type: **not specified**

## Theoretical issues

*Monday, May 26, 2008 7:20 AM (20 minutes)*

S. Moch, M. Rogal, J.A.M. Vermaseren, A. Vogt,  
G. Altarelli, R. D. Ball, M. Ciafaloni, D. Colferai, G.P. Salam,  
A. Sta'sto, R.S. Thorne, C.D. White, G. Beuf, F. Caola, F. Gelis,  
L. Motyka, Ch. Royon, D. Salek, A.M. Stasto

**Session Classification:** WG: Parton Density Functions

Contribution ID: **60**

Type: **not specified**

## **Benchmarking of parton distributions and their uncertainties**

*Monday, May 26, 2008 7:40 AM (20 minutes)*

R.D. Ball, L. Del Debbio, J. Feltesse, S. Forte, A. Glazov, A. Guffanti,  
J.I. Latorre, A. Piccione, V. Radescu, J. Rojo, R.S. Thorne, M. Ubiali, G. Watt

**Session Classification:** WG: Parton Density Functions

Contribution ID: **61**

Type: **not specified**

## **Determination of parton distributions**

*Monday, May 26, 2008 8:00 AM (20 minutes)*

A. Cooper-Sarkar, A. Glazov, G. Li,  
J. Grebenyuk, V. Lendermann

**Session Classification:** WG: Parton Density Functions

Contribution ID: 62

Type: **not specified**

## **Proton-proton luminosity, standard candles and PDFs at the LHC**

*Monday, May 26, 2008 8:20 AM (20 minutes)*

J. Anderson, M. Boonekamp, H. Burkhardt, M. Dittmar, V. Halyo, T. Petersen

**Session Classification:** WG: Parton Density Functions



Contribution ID: **63**

Type: **not specified**

## **Outlook: the PDF4LHC initiative**

*Monday, May 26, 2008 8:40 AM (20 minutes)*

A. De Roeck

**Session Classification:** WG: Parton Density Functions

Contribution ID: **64**

Type: **not specified**

## **Introduction and Preface**

*Monday, May 26, 2008 6:00 AM (20 minutes)*

H. Jung and A. De Roeck

Contribution ID: 65

Type: **not specified**

## List of Authors

*Monday, May 26, 2008 7:00 PM (20 minutes)*

Contribution ID: **66**

Type: **not specified**

## List of Participants

*Monday, May 26, 2008 7:20 PM (20 minutes)*