### HERA/LHC Workshop

## **Report of Contributions**

Contribution ID: 1 Type: not specified

#### **Precision Measurements at the LHC**

Tuesday, 12 October 2004 17:30 (1 hour)

**Primary author:** M. MANGANO

**Presenter:** M. MANGANO

Session Classification: Plenary Meeting

Contribution ID: 2 Type: not specified

#### Averaging of DIS cross section measurements

Tuesday, 12 October 2004 09:00 (20 minutes)

**Primary author:** SASHA GLAZOV

**Presenter:** SASHA GLAZOV

Session Classification: WG1: Parton Density Functions

Contribution ID: 3 Type: not specified

## Unintegrated parton densities (in common with WG1)

Tuesday, 12 October 2004 16:00 (45 minutes)

Primary author: HANNES JUNG

**Presenter:** HANNES JUNG

Session Classification: WG1: Parton Density Functions

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

#### round table on LHC observables

Tuesday, 12 October 2004 14:30 (1 hour)

**Primary author:** MICHAEL DITTMAR

**Presenter:** MICHAEL DITTMAR

**Session Classification:** WG1: Parton Density Functions

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

#### Discussion and future tasks

Tuesday, 12 October 2004 15:30 (30 minutes)

**Primary author:** M. DITTMAR, S. FORTE, A. GLAZOV, S. MOCH

**Presenter:** M. DITTMAR, S. FORTE, A. GLAZOV, S. MOCH

**Session Classification:** WG1: Parton Density Functions

Contribution ID: 6 Type: not specified

#### PDFs from hadronic final state observables

Tuesday, 12 October 2004 09:20 (30 minutes)

Primary author: TANCREDI CARLI

Presenter: TANCREDI CARLI

**Session Classification:** WG1: Parton Density Functions

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

## ZEUS/H1 PDF analysis and prediction of Tevatron jet data

Tuesday, 12 October 2004 09:50 (30 minutes)

**Primary author:** MANDY COOPER-SARKAR

**Presenter:** MANDY COOPER-SARKAR

**Session Classification:** WG1: Parton Density Functions

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

## MRST update: PDFs with QED corrections and investigations of the high-x gluon

Tuesday, 12 October 2004 10:50 (30 minutes)

MRST update: PDFs with QED co ···

**Primary author:** JAMES STIRLING

**Presenter:** JAMES STIRLING

**Session Classification:** WG1: Parton Density Functions

Contribution ID: 9 Type: not specified

#### Stability of global NLO pdf analyses

Tuesday, 12 October 2004 11:20 (30 minutes)

**Primary author:** JOEY HUSTON

**Presenter:** JOEY HUSTON

Session Classification: WG1: Parton Density Functions

Contribution ID: 10 Type: not specified

#### NNLO partons from HERA to LHC

Tuesday, 12 October 2004 11:50 (30 minutes)

**Primary author:** SERGEY ALEKHIN

**Presenter:** SERGEY ALEKHIN

**Session Classification:** WG1: Parton Density Functions

Contribution ID: 11 Type: not specified

#### Impact of soft resummation on structure functions

Tuesday, 12 October 2004 12:20 (30 minutes)

Primary author: GENNARO CORCELLA

Presenter: GENNARO CORCELLA

**Session Classification:** WG1: Parton Density Functions

Contribution ID: 12 Type: not specified

## Multi-jet topologies and multi-scale QCD (in common with WG5)

Tuesday, 12 October 2004 10:00 (1 hour)

**Session Classification:** WG2: Multi-jet Final States and Energy Flow

Contribution ID: 13 Type: not specified

#### Multi-jet topologies and multi-scale QCD

Tuesday, 12 October 2004 14:00 (45 minutes)

Session Classification: WG2: Multi-jet Final States and Energy Flow

Contribution ID: 14 Type: not specified

# Discussion: What will go in tomorrows summary? What will go in the proceedings?

Tuesday, 12 October 2004 14:45 (45 minutes)

Discussion: What will go in tomo  $\, \cdots \,$ 

Session Classification: WG2: Multi-jet Final States and Energy Flow

Contribution ID: 15 Type: not specified

# Unintegrated parton densities (in common with WG1)

Tuesday, 12 October 2004 16:00 (50 minutes)

Session Classification: WG2: Multi-jet Final States and Energy Flow

Contribution ID: 16 Type: not specified

#### Parton shower/ME matching (in common with WG5)

Tuesday, 12 October 2004 11:30 (1 hour)

Session Classification: WG2: Multi-jet Final States and Energy Flow

Contribution ID: 17 Type: not specified

#### Discussion on benchmark cross sections

Tuesday, 12 October 2004 09:00 (1 hour)

**Primary author:** M. CORRADI

**Presenter:** M. CORRADI

Session Classification: WG3: Heavy Flavours

Contribution ID: 18 Type: not specified

#### Structure of the final WG3 writeup

Tuesday, 12 October 2004 10:00 (1 hour)

**Primary author:** ALL PARTICIPANTS

**Presenter:** ALL PARTICIPANTS

Session Classification: WG3: Heavy Flavours

Contribution ID: 19 Type: not specified

#### Discussion on contributions, authorship and editors

Tuesday, 12 October 2004 11:00 (1 hour)

**Primary author:** ALL PARTICIPANTS

**Presenter:** ALL PARTICIPANTS

**Session Classification:** WG3: Heavy Flavours

Contribution ID: 20 Type: not specified

#### Preparation of review talk for plenary session

Tuesday, 12 October 2004 14:00 (2h 30m)

Primary author: WG3 CONVENERS

**Presenter:** WG3 CONVENERS

**Session Classification:** WG3: Heavy Flavours

Contribution ID: 21 Type: not specified

#### AGK cutting rules for ep and pp collisions

Tuesday, 12 October 2004 09:00 (30 minutes)

**Primary author:** J. BARTELS

**Presenter:** J. BARTELS

Session Classification: WG4: Diffraction

Contribution ID: 22 Type: not specified

#### Central Diffraction at the LHC - An Update

Tuesday, 12 October 2004 14:25 (25 minutes)

**Primary author:** R. ORAVA

Presenter: R. ORAVA

Session Classification: WG4: Diffraction

Contribution ID: 23 Type: not specified

#### Idea for an Upgrade of Forward Region at H1

Tuesday, 12 October 2004 11:15 (20 minutes)

**Primary author:** V. ANDREEV

**Presenter:** V. ANDREEV

Session Classification: WG4: Diffraction

Contribution ID: 24 Type: not specified

# Analysis of Non-Forward Gluon Amplitudes at High Energies - Nonforward Case

Tuesday, 12 October 2004 10:55 (20 minutes)

**Primary author:** A. SABIO-VERA

**Presenter:** A. SABIO-VERA

Session Classification: WG4: Diffraction

Contribution ID: 25 Type: not specified

# 3D structure of the nucleon gluon field and its implications for associated hadron production in events with dijets and new particles and for diffraction

Tuesday, 12 October 2004 09:30 (50 minutes)

**Primary author:** M. STRIKMAN

**Presenter:** M. STRIKMAN

Session Classification: WG4: Diffraction

Contribution ID: 26 Type: not specified

#### Recent results on central production

Tuesday, 12 October 2004 14:00 (25 minutes)

**Primary author:** M. BOONEKAMP

**Presenter:** M. BOONEKAMP

Session Classification: WG4: Diffraction

(no title)

Contribution ID: 27 Type: not specified

#### (no title)

Tuesday, 12 October 2004 14:50 (35 minutes)

Session Classification: WG4: Diffraction

Contribution ID: 28 Type: not specified

## Zero Degree Calorimeters and Forward Physics in CMS

Tuesday, 12 October 2004 15:25 (30 minutes)

**Primary author:** M. MURRAY (VRVS)

**Presenter:** M. MURRAY (VRVS)

Session Classification: WG4: Diffraction

Contribution ID: 29 Type: not specified

#### Final states at HERA and the LHC

Wednesday, 13 October 2004 09:00 (40 minutes)

**Primary author:** G. GUSTAFSON

**Presenter:** G. GUSTAFSON

Session Classification: Plenary session

Contribution ID: 30 Type: not specified

#### Report on the TeV4LHC workshop

Wednesday, 13 October 2004 09:40 (40 minutes)

**Primary author:** J. HUSTON

**Presenter:** J. HUSTON

Session Classification: Plenary session

Contribution ID: 31 Type: not specified

#### **Diffractive Higgs Production**

Wednesday, 13 October 2004 10:50 (40 minutes)

**Primary author:** V. KHOZE

**Presenter:** V. KHOZE

Session Classification: Plenary session

Contribution ID: 32 Type: not specified

#### Precisions measurments at HERA

Wednesday, 13 October 2004 11:30 (40 minutes)

**Primary author:** M. KLEIN

**Presenter:** M. KLEIN

**Session Classification:** Plenary session

Report of WG1: Structure Functions

Contribution ID: 33 Type: not specified

#### **Report of WG1: Structure Functions**

Wednesday, 13 October 2004 14:00 (40 minutes)

**Primary author:** S. MOCH, M. DITTMAR

**Presenter:** S. MOCH, M. DITTMAR

Session Classification: Plenary session

Contribution ID: 34 Type: not specified

#### **Report of WG2: Hadronic Final States**

Wednesday, 13 October 2004 14:40 (40 minutes)

Report of WG2: Hadronic Final S  $\,\cdots$ 

Primary author: N.TUNING

Presenter: N.TUNING

Session Classification: Plenary session

Contribution ID: 35 Type: not specified

#### Report of WG3: Heavy Flavours

Wednesday, 13 October 2004 15:20 (40 minutes)

Report of WG3: Heavy Flavours

Session Classification: Plenary session

HERA/LHC Wo · · · / Report of Contributions

Contribution ID: 36 Type: not specified

## Report of WG4: Diffraction

Wednesday, 13 October 2004 16:20 (40 minutes)

Report of WG4: Diffraction

Session Classification: Plenary session

Contribution ID: 37 Type: not specified

## **Report of WG5: MC Generators**

Wednesday, 13 October 2004 17:00 (40 minutes)

Report of WG5: MC Generators

**Primary author:** V. LENDERMANN

**Presenter:** V. LENDERMANN

Session Classification: Plenary session

Contribution ID: 38 Type: not specified

## Next Steps for the workshop

Wednesday, 13 October 2004 17:40 (20 minutes)

Session Classification: Plenary session

Contribution ID: 39 Type: not specified

#### Introduction: where do we stand?

Monday, 11 October 2004 09:00 (30 minutes)

Introduction: where do we stand?

**Primary author:** M. DITTMAR, S. FORTE, A. GLAZOV, S. MOCH

**Presenter:** M. DITTMAR, S. FORTE, A. GLAZOV, S. MOCH

**Session Classification:** WG1: Parton Density Functions

Contribution ID: 40 Type: not specified

#### **NNLO** differential distributions

Monday, 11 October 2004 09:30 (30 minutes)

**Primary author:** CHARALAMPOS ANASTASIOU

**Presenter:** CHARALAMPOS ANASTASIOU

**Session Classification:** WG1: Parton Density Functions

Contribution ID: 41 Type: not specified

## NNLO scheme invariant evolution of structure functions

Monday, 11 October 2004 12:30 (30 minutes)

**Primary author:** ALBERTO GUFFANTI

**Presenter:** ALBERTO GUFFANTI

**Session Classification:** WG1: Parton Density Functions

Contribution ID: 42 Type: not specified

# The role of bottom pdf in Higgs and vector boson production

Monday, 11 October 2004 14:20 (40 minutes)

**Primary author:** FABIO MALTONI

**Presenter:** FABIO MALTONI

**Session Classification:** WG1: Parton Density Functions

Contribution ID: 43 Type: not specified

### Preliminary study of Z+b production in ATLAS

Monday, 11 October 2004 15:00 (20 minutes)

Primary author: ALESSANDRA TONAZZO

Presenter: ALESSANDRA TONAZZO

Session Classification: WG1: Parton Density Functions

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

## Nonlinear corrections to the DGLAP equations in view of the HERA data

Monday, 11 October 2004 15:30 (30 minutes)

**Primary author:** V. KOLHINEN

**Presenter:** V. KOLHINEN

**Session Classification:** WG1: Parton Density Functions

Contribution ID: 45 Type: not specified

#### Small x resummation and structure functions

Monday, 11 October 2004 11:30 (30 minutes)

Primary author: GUIDO ALTARELLI

Presenter: GUIDO ALTARELLI

**Session Classification:** WG1: Parton Density Functions

Contribution ID: 46 Type: not specified

#### Common session with WG3:

Monday, 11 October 2004 14:15 (1h 45m)

**Session Classification:** WG1: Parton Density Functions

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

#### **Harmonic sums**

Monday, 11 October 2004 10:00 (30 minutes)

Primary author: JOHANNES BLUEMLEIN

**Presenter:** JOHANNES BLUEMLEIN

**Session Classification:** WG1: Parton Density Functions

Contribution ID: 48 Type: not specified

## **Higher Order Effects in Non Linear Evolution**

Monday, 11 October 2004 10:30 (30 minutes)

**Primary author:** GRIGORIOS CHACHAMIS

**Presenter:** GRIGORIOS CHACHAMIS

Session Classification: WG1: Parton Density Functions

Contribution ID: 49 Type: not specified

## LHC final states: experimental and theoretical accuracies

Monday, 11 October 2004 16:30 (1h 30m)

**Primary author:** MICHAEL DITTMAR

**Presenter:** MICHAEL DITTMAR

**Session Classification:** WG1: Parton Density Functions

General Discussion: Where are w  $\,\cdots$ 

Contribution ID: 50 Type: not specified

#### General Discussion: Where are we now?

Monday, 11 October 2004 09:00 (30 minutes)

Session Classification: WG2: Multi-jet Final States and Energy Flows

Contribution ID: 51 Type: not specified

#### Common sessions with WG4 and WG5

Monday, 11 October 2004 14:00 (1h 30m)

Session Classification: WG2: Multi-jet Final States and Energy Flows

Contribution ID: **52** Type: **not specified** 

## Rapidity gaps and survival probabilities (in common with WG4)

Monday, 11 October 2004 16:00 (2 hours)

Session Classification: WG2: Multi-jet Final States and Energy Flows

Contribution ID: 53 Type: not specified

# Minimum bias and underlying events (in common with WG5)

Monday, 11 October 2004 09:30 (1 hour)

Session Classification: WG2: Multi-jet Final States and Energy Flows

Contribution ID: 54 Type: not specified

# Minimum bias and underlying events (in common with WG5)

Monday, 11 October 2004 11:00 (1h 30m)

Session Classification: WG2: Multi-jet Final States and Energy Flows

Contribution ID: 55 Type: not specified

## Summary of previous meetings: Theory

Monday, 11 October 2004 10:00 (30 minutes)

**Primary author:** M. CACCIARI

**Presenter:** M. CACCIARI

**Session Classification:** WG3: Heavy Quarks

Contribution ID: 56 Type: not specified

# The role of bottom pdf in Higgs and vector boson production

Monday, 11 October 2004 14:20 (40 minutes)

**Primary author:** F. MALTONI

**Presenter:** F. MALTONI

Session Classification: WG3: Heavy Quarks

Contribution ID: 57 Type: not specified

### Preliminary study of Z+b production in ATLAS

Monday, 11 October 2004 15:00 (20 minutes)

Preliminary study of Z+b produc ···

**Primary author:** A. TONAZZO

**Presenter:** A. TONAZZO

Session Classification: WG3: Heavy Quarks

Contribution ID: 58 Type: not specified

### Q-Qbar correlations at HERA: measurements by H1

Monday, 11 October 2004 17:20 (20 minutes)

**Primary author:** O. BEHNKE

**Presenter:** O. BEHNKE

Session Classification: WG3: Heavy Quarks

Contribution ID: **59** Type: **not specified** 

## Measurement of b-bbar correlations at the LHC with ATLAS

Monday, 11 October 2004 17:40 (30 minutes)

Primary author: T. LAGOURI

**Presenter:** T. LAGOURI

Session Classification: WG3: Heavy Quarks

Contribution ID: 60 Type: not specified

#### **Common session with WG1:**

Monday, 11 October 2004 14:15 (1h 45m)

Session Classification: WG3: Heavy Quarks

Contribution ID: 61 Type: not specified

### Summary of previous meetings: Phenomenology

Monday, 11 October 2004 10:30 (30 minutes)

**Primary author:** M. CORRADI

**Presenter:** M. CORRADI

**Session Classification:** WG3: Heavy Quarks

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

# Threshold resummation for differential heavy quark structure functions

Monday, 11 October 2004 11:30 (30 minutes)

**Primary author:** E. LAENEN

**Presenter:** E. LAENEN

Session Classification: WG3: Heavy Quarks

Contribution ID: 63 Type: not specified

### QCD analysis of b cross section data at 1.96 TeV

Monday, 11 October 2004 12:00 (30 minutes)

**Primary author:** M. CACCIARI

**Presenter:** M. CACCIARI

Session Classification: WG3: Heavy Quarks

Contribution ID: 64 Type: not specified

## Nonlinear corrections to the DGLAP equations in view of the HERA data

Monday, 11 October 2004 15:30 (30 minutes)

**Primary author:** V. KOLHINEN

**Presenter:** V. KOLHINEN

Session Classification: WG3: Heavy Quarks

Contribution ID: 65 Type: not specified

## Charm enhancement at the LHC due to nonlinear gluon evolution

Monday, 11 October 2004 16:30 (20 minutes)

**Primary author:** A. DAINESE

**Presenter:** A. DAINESE

Session Classification: WG3: Heavy Quarks

Contribution ID: 66 Type: not specified

### Nonlinear evolution and heavy quarks

Monday, 11 October 2004 16:50 (30 minutes)

**Primary author:** K. KUTAK

**Presenter:** K. KUTAK

Session Classification: WG3: Heavy Quarks

Contribution ID: 67 Type: not specified

#### From HERA LPS diffractive PDFs to the Tevatron

Monday, 11 October 2004 11:00 (25 minutes)

**Primary author:** A.PROSKURYAKOV/M.ARNEODO

**Presenter:** A.PROSKURYAKOV/M.ARNEODO

Session Classification: WG4: Diffraction

Contribution ID: 68 Type: not specified

# D-LHAPDF / D-PDFLIB: Towards a library for diffractive pdf's

Monday, 11 October 2004 11:25 (20 minutes)

**Primary author:** F.-P. SCHILLING

**Presenter:** F.-P. SCHILLING

Session Classification: WG4: Diffraction

Contribution ID: 69 Type: not specified

# Forward Proton Tagging as a means to discover new physics at the LHC

Monday, 11 October 2004 14:00 (40 minutes)

**Primary author:** B. COX

Presenter: B. COX

Session Classification: WG4: Diffraction

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

## The ExHume Monte Carlo for central exclusive production

Monday, 11 October 2004 14:40 (20 minutes)

**Primary author:** J. MONK

Presenter: J. MONK

Session Classification: WG4: Diffraction

Contribution ID: 71 Type: not specified

## Diffractive dijets at the LHC

Monday, 11 October 2004 15:00 (30 minutes)

**Primary author:** A. SOBOL

Presenter: A. SOBOL

Session Classification: WG4: Diffraction

Contribution ID: 72 Type: not specified

#### **PYTHIA 7 / ThePEG**

Monday, 11 October 2004 14:00 (15 minutes)

**Primary author:** LEIF LONNBLAD

**Presenter:** LEIF LONNBLAD

Session Classification: WG5: MC-Tools

Contribution ID: 73 Type: not specified

## Discussion: summary and proceedings of WG5

Monday, 11 October 2004 16:45 (30 minutes)

**Session Classification:** WG5: MC-Tools

NLOLIB

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

#### **NLOLIB**

Monday, 11 October 2004 16:30 (15 minutes)

**Primary author:** VICTOR LENDERMANN FOR THOMAS SCHOERNER

**Presenter:** VICTOR LENDERMANN FOR THOMAS SCHOERNER

**Session Classification:** WG5: MC-Tools

Contribution ID: 75 Type: not specified

#### **HERWIG++**

Monday, 11 October 2004 14:15 (15 minutes)

**Primary author:** STEFAN GIESEKE

**Presenter:** STEFAN GIESEKE

**Session Classification:** WG5: MC-Tools

**SHERPA** 

Contribution ID: 76 Type: not specified

#### **SHERPA**

Monday, 11 October 2004 14:30 (15 minutes)

**Primary author:** STEFFEN SCHUMANN

**Presenter:** STEFFEN SCHUMANN

**Session Classification:** WG5: MC-Tools

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

#### Particle data interface for ThePEG

Monday, 11 October 2004 14:45 (15 minutes)

**Primary author:** PETER RICHARDSON (VRVS)

**Presenter:** PETER RICHARDSON (VRVS)

**Session Classification:** WG5: MC-Tools

Discussion: particle data exchange

Contribution ID: 78 Type: not specified

## Discussion: particle data exchange

Monday, 11 October 2004 15:00 (30 minutes)

Session Classification: WG5: MC-Tools

Contribution ID: 79 Type: not specified

## **LHAPDF** version 3

Monday, 11 October 2004 16:00 (15 minutes)

**Primary author:** MIKE WHALLEY

**Presenter:** MIKE WHALLEY

**Session Classification:** WG5: MC-Tools

Contribution ID: **80** Type: **not specified** 

## RunMC v3.1. C++ object-oriented framework for Monte Carlo models

Monday, 11 October 2004 16:15 (15 minutes)

Primary author: , Sergei Chekanov (VRVS) (ANL)

Presenter: , Sergei Chekanov (VRVS) (ANL)

**Session Classification:** WG5: MC-Tools