

# **QCD at Cosmic Energies**

## **Report of Contributions**

Contribution ID: 1

Type: **not specified**

## Big Bang and Heavy Particles

*Monday, 30 August 2004 09:30 (1 hour)*

**Author:** DOLGOV, A

**Presenter:** DOLGOV, A

**Session Classification:** Plenary 1

Contribution ID: 2

Type: **not specified**

## **Current models of cosmic ray propagation in atmosphere**

*Monday, 30 August 2004 10:30 (1 hour)*

**Author:** ENGEL, R.

**Presenter:** ENGEL, R.

**Session Classification:** Plenary 1

Contribution ID: 3

Type: **not specified**

## **QCD MC modeling at super-high energies**

*Monday, 30 August 2004 12:00 (1 hour)*

**Author:** MARCHESINI, G.

**Presenter:** MARCHESINI, G.

**Session Classification:** Plenary 1

Contribution ID: 4

Type: **not specified**

## AGASA results

*Monday, 30 August 2004 13:00 (1 hour)*

**Author:** SHINOZAKI, K.

**Presenter:** SHINOZAKI, K.

**Session Classification:** Plenary 1

Contribution ID: 5

Type: **not specified**

## Auger project

*Tuesday, 31 August 2004 09:30 (1 hour)*

**Author:** BEATTY, J. AND ALBROW, M.

**Presenter:** BEATTY, J. AND ALBROW, M.

**Session Classification:** Plenary 2

Contribution ID: 6

Type: **not specified**

## **Low-x QCD: the (improved) perturbative picture**

*Tuesday, 31 August 2004 10:30 (1 hour)*

**Author:** CIAFALONI, M.

**Presenter:** CIAFALONI, M.

**Session Classification:** Plenary 2

Contribution ID: 7

Type: **not specified**

## Color coherence phenomena in QCD

*Tuesday, 31 August 2004 12:00 (1 hour)*

**Author:** FRANKFURT, L.

**Presenter:** FRANKFURT, L.

**Session Classification:** Plenary 2

Contribution ID: **8**

Type: **not specified**

## Origin of high-energy cosmic rays

*Tuesday, 31 August 2004 13:00 (1 hour)*

**Author:** KACHELRIESS, M.

**Presenter:** KACHELRIESS, M.

**Session Classification:** Plenary 2

Contribution ID: 9

Type: **not specified**

## **TOTEM forward physics at LHC**

*Thursday, 2 September 2004 09:30 (1 hour)*

**Author:** EGGERT, K.

**Presenter:** EGGERT, K.

**Session Classification:** Plenary 3

Contribution ID: **10**

Type: **not specified**

## **AMANDA results and Ice Cube project**

*Thursday, 2 September 2004 10:30 (1 hour)*

**Author:** HALZEN, F.

**Presenter:** HALZEN, F.

**Session Classification:** Plenary 3

Contribution ID: 11

Type: **not specified**

## Partonic saturation at very high energies

*Thursday, 2 September 2004 12:00 (1 hour)*

**Author:** MUELLER, A.

**Presenter:** MUELLER, A.

**Session Classification:** Plenary 3

Contribution ID: 12

Type: **not specified**

## Perspectives of the QCD physics at FNAL

*Friday, 3 September 2004 09:00 (1 hour)*

**Author:** ALBROW, M.

**Presenter:** ALBROW, M.

**Session Classification:** Plenary 4

Contribution ID: 13

Type: **not specified**

## **The ANTARES project: past, present and future**

*Friday, 3 September 2004 10:00 (1 hour)*

**Author:** SOKALSKI, I.

**Presenter:** SOKALSKI, I.

**Session Classification:** Plenary 4

Contribution ID: 14

Type: **not specified**

## Color Glass Condensates

*Friday, 3 September 2004 11:30 (1 hour)*

**Author:** VENUGOPALAN, R.

**Presenter:** VENUGOPALAN, R.

**Session Classification:** Plenary 4

Contribution ID: 15

Type: **not specified**

## Introduction

*Monday, 30 August 2004 16:00 (30 minutes)*

**Author:** GAISSER, T.

**Presenter:** GAISSER, T.

**Session Classification:** Discussion: Theoretical challenges in modeling high-energy cosmic rays

Contribution ID: **16**

Type: **not specified**

## **QCD for HEP**

*Monday, 30 August 2004 16:30 (30 minutes)*

**Author:** SARYCHEVA, L.

**Presenter:** SARYCHEVA, L.

**Session Classification:** Discussion: Theoretical challenges in modeling high-energy cosmic rays

Contribution ID: 17

Type: **not specified**

## **Charm contribution to the CR muon and neutrino flux**

*Monday, 30 August 2004 17:00 (30 minutes)*

**Author:** HALZEN, F.

**Presenter:** HALZEN, F.

**Session Classification:** Discussion: Theoretical challenges in modeling high-energy cosmic rays

Contribution ID: **18**

Type: **not specified**

## **Black body limit in cosmic ray air showers**

*Monday, 30 August 2004 17:30 (30 minutes)*

**Author:** DRESCHER, H.

**Presenter:** DRESCHER, H.

**Session Classification:** Discussion: Theoretical challenges in modeling high-energy cosmic rays

Contribution ID: 19

Type: **not specified**

## **Model predictions and their impact on air-shower observables**

*Monday, 30 August 2004 18:00 (30 minutes)*

**Author:** ENGEL, R.

**Presenter:** ENGEL, R.

**Session Classification:** Discussion: Theoretical challenges in modeling high-energy cosmic rays

Contribution ID: **20**

Type: **not specified**

## Atmospheric Cascades with FLUKA

*Monday, 30 August 2004 18:30 (30 minutes)*

**Author:** BATTISTONI, G

**Presenter:** BATTISTONI, G

**Session Classification:** Discussion: Theoretical challenges in modeling high-energy cosmic rays

Contribution ID: 21

Type: **not specified**

## Acceptance of CMS/TOTEM and trigger possibilities

*Tuesday, 31 August 2004 16:30 (30 minutes)*

**Author:** EGGERT, K.

**Presenter:** EGGERT, K.

**Session Classification:** Discussion: Forward physics at colliders: experimental tasks and tools

Contribution ID: 22

Type: **not specified**

## Introduction

*Tuesday, 31 August 2004 16:00 (30 minutes)*

**Author:** STRIKMAN, M.

**Presenter:** STRIKMAN, M.

**Session Classification:** Discussion: Forward physics at colliders: experimental tasks and tools

Contribution ID: 23

Type: **not specified**

## **Exotics in cosmic rays and LHC possibilities**

*Tuesday, 31 August 2004 17:00 (30 minutes)*

**Author:** SARYCHEVA, L.

**Presenter:** SARYCHEVA, L.

**Session Classification:** Discussion: Forward physics at colliders: experimental tasks and tools

Contribution ID: 24

Type: **not specified**

## Forward physics at CMS with CASTOR

*Tuesday, 31 August 2004 17:30 (30 minutes)*

**Author:** PANAGIOTOU, A.

**Presenter:** PANAGIOTOU, A.

**Session Classification:** Discussion: Forward physics at colliders: experimental tasks and tools

Contribution ID: 25

Type: **not specified**

## **Radiation hard avalanche photodiodes for very forward physics detectors**

*Tuesday, 31 August 2004 18:00 (30 minutes)*

**Author:** SWAIN, J.

**Presenter:** SWAIN, J.

**Session Classification:** Discussion: Forward physics at colliders: experimental tasks and tools

Contribution ID: 26

Type: **not specified**

## **Cosmic-ray interaction model predictions for LHC**

*Tuesday, 31 August 2004 18:30 (30 minutes)*

**Author:** ENGEL, R.

**Presenter:** ENGEL, R.

**Session Classification:** Discussion: Forward physics at colliders: experimental tasks and tools

Contribution ID: 27

Type: **not specified**

## Introduction

*Thursday, 2 September 2004 16:00 (30 minutes)*

**Author:** KLEIN, S.

**Presenter:** KLEIN, S.

**Session Classification:** Discussion: EW interactions at super-high energies and CRs; exotics

Contribution ID: **28**

Type: **not specified**

## **The White-Pomeron, sextet quarks & cosmic rays**

*Thursday, 2 September 2004 16:30 (30 minutes)*

**Author:** ALBROW, M.

**Presenter:** ALBROW, M.

**Session Classification:** Discussion: EW interactions at super-high energies and CRs; exotics

Contribution ID: 29

Type: **not specified**

## **Unified explanation of dark matter and baryon asymmetry**

*Thursday, 2 September 2004 17:00 (30 minutes)*

**Author:** FARRAR, G.

**Presenter:** FARRAR, G.

**Session Classification:** Discussion: EW interactions at super-high energies and CRs; exotics

Contribution ID: **30**

Type: **not specified**

## **Searching for CR exotics at the LHC**

*Thursday, 2 September 2004 17:30 (30 minutes)*

**Author:** PANAGIOTOU, A.

**Presenter:** PANAGIOTOU, A.

**Session Classification:** Discussion: EW interactions at super-high energies and CRs; exotics

Contribution ID: 31

Type: **not specified**

## Introduction

*Thursday, 2 September 2004 18:00 (30 minutes)*

**Author:** KAIDALOV, A.

**Presenter:** KAIDALOV, A.

**Session Classification:** Discussion: Small-x soft and hard physics, strong interactions modeling (1)

Contribution ID: 32

Type: **not specified**

## **Evolution of the gluon saturation scale and CR airshowers**

*Thursday, 2 September 2004 18:30 (30 minutes)*

**Author:** DUMITRU, A.

**Presenter:** DUMITRU, A.

**Session Classification:** Discussion: Small-x soft and hard physics, strong interactions modeling (1)

Contribution ID: 33

Type: **not specified**

## **Non-linear effects in high-energy hadronic interactions**

*Friday, 3 September 2004 16:00 (30 minutes)*

**Author:** OSTAPCHENKO, S.

**Presenter:** OSTAPCHENKO, S.

**Session Classification:** Discussion: Small-x soft and hard physics, strong interactions modeling (2)

Contribution ID: 34

Type: **not specified**

## Heavy-quark production in pA collisions at the LHC

*Friday, 3 September 2004 16:30 (30 minutes)*

**Author:** TRELEANI, D.

**Presenter:** TRELEANI, D.

**Session Classification:** Discussion: Small-x soft and hard physics, strong interactions modeling (2)

Contribution ID: 35

Type: **not specified**

## **Assorted NLL small-x comments (with emphasis on preasymptotics)**

*Friday, 3 September 2004 17:00 (30 minutes)*

**Author:** SALAM, G.

**Presenter:** SALAM, G.

**Session Classification:** Discussion: Small-x soft and hard physics, strong interactions modeling (2)

Contribution ID: 36

Type: **not specified**

## **Ultrahigh energy neutrino-nucleon cross sections and gluon saturation**

*Friday, 3 September 2004 17:30 (30 minutes)*

**Author:** JALILIAN-MARIAN, J.

**Presenter:** JALILIAN-MARIAN, J.

**Session Classification:** Discussion: Small-x soft and hard physics, strong interactions modeling (2)

Contribution ID: 37

Type: **not specified**

## **Cross sections behaviour in the exceedingly high energy limit**

*Friday, 3 September 2004 18:00 (30 minutes)*

**Author:** MAOR, U.

**Presenter:** MAOR, U.

**Session Classification:** Discussion: Small-x soft and hard physics, strong interactions modeling (2)

Contribution ID: 38

Type: **not specified**

## Energy flow correlations

*Friday, 3 September 2004 18:30 (30 minutes)*

**Author:** STERMAN, G.

**Presenter:** STERMAN, G.

**Session Classification:** Discussion: Small-x soft and hard physics, strong interactions modeling (2)

Contribution ID: 39

Type: **not specified**

## **Closing remarks and questions**

*Saturday, 4 September 2004 10:30 (30 minutes)*

**Author:** KLEIN, S.

**Presenter:** KLEIN, S.

**Session Classification:** Closing