large surveys are based on statistical analysis of target sample, but the criteria by which they were chosen do not always correspond to well-grounded physical assumptions. In this light we implement a comparative analysis and review on this topic.

Hardware for the PANDA Detector at the FAIR Facility

Kai-Thomas Brinkmann
II. Physikalisches Institut, JLU Gießen (Germany, Gießen)

The PANDA detector will be one of the central experimental installations at the FAIR facility. The setup of PANDA will be presented and the status of all components planned to be installed will be discussed. Selected details of test experiments and custom developments will be presented.

GRB 140402A and Subclass of S-GRBs: The collaboration of Lithuania and CERN

Juozas Vaitkus
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The report will review the collaboration of Lithuanian teams and CERN: the interests and the results.

Manifestation of Quark-Hadron Duality in Electron-Positron Annihilation

Olga Solovtsova
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From the point of view of the quark-hadron duality, we consider a description of physical quantities and functions that are defined through the function R(s), the normalized cross-section for the process e+e- annihilation into hadrons, and connected with the Adler D-function. This function defined in the spacelike region is a smooth function without traces of the resonance structure and one can expect reflects more

precisely the quark-hadron duality. We find a good agreement between our results and the corresponding experimental data down to the lowest energy scale that is not calculable within the standard perturbative QCD. We investigate the reason of such good agreement and, as a result, we formulate a criterion which we call the R-D self-duality.

Radiative corrections for Drell-Yan processes at LHC

Vladimir Zykunov
Joint Institute for Nuclear Research (Russia, Dubna)

NLO order electroweak and QCD radiative corrections to the Drell-Yan process with high dimuon masses for experiments CMS LHC at CERN have been studied in fully differential form. The FORTRAN code READY for numerical analysis of Drell-Yan observables has been presented.

Belarus science and engineering in JINR: current status

Sergey Maksimenko
Institute for Nuclear Problems, Belarusian State University (Belarus, Minsk)

Current status of the activity of Belarusian research an engineering organisations in is considered.

Constituent quark masses in Poincare-invariant quantum mechanics

Viktor Andreev
Francisk Skorina Gomel State University (Belarus, Gomel)

The masses of the quarks in the Poincare-invariant quantum mechanics are the constituent masses. Even in this framework it is possible to obtain an estimate of the constituent quark masses from the Ward identity for the axial current and the current quark masses.