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Altri autori (Persone) KodamaTakeshi

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Firework?; Hard Thermal Loops and QCD Thermodynamics

Optimized Perturbation Theory: Finite Temperature

ApplicationsPotential Gravitational Wave Sources and Laser Beam Interferometers; Event-by-Event Analysis of Ultra-Relativistic Heavy-Ion Collisions in Smoothed Particle Hydrodynamics; Hadronic Form Factors from QCD Sum Rules; Quarkonium Production in High Energy Heavy Ion Collisions; Charmonium-Hadron Cross Section in Nonperturbative QCD Models; Remark on the Second Principle of

Thermodynamics; Light Front Nuclear Theory and the HERMES Effect; Nuclear Scattering at Very High Energies; Current Status of Quark Gluon

Plasma Signals

The Stange Quark-Gluon PlasmaScreening Effects in the Q2 Logarithmic Slope of F2; Charm Meson Interactions in Hadronic Matter; Contributed Papers: Dependence of the Forward Neutral Energy En on Transverse Energy ET in Relativistic Heavy Ions Collisions; Effective Nucleon-Nucleon Interaction in the RPA; B and D Meson Coupling Constant and Form Factor Calculations from QCD Sum Rules: Quantum Contributions for the Temporal Evolution of Nonhomogeneous Configurations of the AO4 Model; QCD Sum Rules for Heavy A Semileptonic Decays; Nonperturbative Quantum Field Methods in Bose Einstein ondensates Asymmetries in Heavy Meson Production in the Meson Cloud Model ScenarioCrossing Symmetry Violation in Unitarity Corrected ChPT Pion-Pion Amplitude; Nuclear Matter Properties Determined by Relativistic Mean Field Model with o-w Coupling; The Relativistic Quasi-Particle Random Phase Approximation; A Comparison between the Relativistic BCS and Hartree-Bogoliubov Approximations in Nuclear Ground States: Chiral Phase Transition in a Covariant Nonlocal NJL Model; High Density Effects in eA Processes; Quasi-Deuteron Pairing and Isospin Asymmetry; Einstein Equations and Fermion Degrees of Freedom Hadronic Model Independence of the Hadron-QGP Phase Transition at Very Low DensityQuark Degrees of Freedom in Compact Stars; Finite Temperature Nucleon Mass in QMC Model; The Fuzzy Bag Model Revisited: Neutron Star Properties in the Relativistic Mean Field Theory: Relativistic Description of Asymmetric Nuclear Matter in a o-w-s-p Model; Simplifying Relativistic Density Limits for Nuclear Surface Properties in Walecka Model: Hyperons and Heavy Baryons Decays in the Light-Front Model; Neutron Stars in Nonlinear Coupling Models; Four-Wedge Product for Relativistic Treatment in Quantum Mechanics Multiplicity of Pions from a Heated Interacting Gas

Sommario/riassunto

This volume deals mainly with physics related to the RHIC. It contains one of the first reports on the results of RHIC experiments. Contents: First Physics Results from STAR (J Harris); The Origin of the Highest Energy Cosmic Rays (A V Olinto); Ultra-High Energy Cosmic Rays: Current Data and Propagation Scenarios (G M Tanco); Are High Energy Heavy Ion Collisions Similar to a Little Bang, or Just a Very Nice Firework? (E V Shuryak); Event-by-Event Analysis of Ultra-Relativistic Heavy-Ion Collisions in Smoothed Particle Hydrodynamics (T Osada et al.); Hadronic Form Factors from QCD Sum Rules (M