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Nota di contenuto	1. Nuclear physics and applied nuclear physics. On the need for comprehensive studies of heavy-ion reactions / E. Gadioli ... [et al.] -- New vistas of fission and neutron rich nuclei / J. Hamilton ... [et al.] -- The synthesis of superheavy elements - the state of the art / D. Ackermann -- Chiral symmetry restoration in nuclei / P. Kienle -- Pre-equilibrium reactions / P. Hodgson -- Meson production in hadronic reactions / S. Krewald ... [et al.] -- Meson production in p+d reactions / H. Machner ... [et al.] -- Semi-empirical effective interactions for inelastic scattering derived from the Reid potential / J. O. Fiase ... [et al.] -- 2. Atomic physics and applied atomic physics. Channeling revisited / J. U. Andersen -- Radiation physics with diamonds / A. Richter -- Channeling of charged particles through periodically bent crystals: On the possibility of a gamma laser / A. V. Solov'yov ... [et al.] -- Novel interferometer in the X-ray region / H. Backe ... [et al.] -- Scientific opportunities at third- and fourth-generation X-ray sources / A. Freund -- Wave packet molecular dynamics simulations of the equation of state of hydrogen and deuterium under extreme conditions

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Sommario/riassunto

This volume is a compilation of significant papers by leading scientists exploring exciting frontiers of physics. It presents the latest results in well-defined fields as well as fields represented by the interfaces between mainstream sciences. G 't Hooft is the 1999 Nobel Laureate in Physics and A Richter is the Stern-Gerlach prize recipient of 2000.