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Nota di contenuto	Introduction Lotfia El Nadi; Foreword Ahmed Zewail; Conference Photos; CONTENTS; OPENING HONORARY KEYNOTE PRESENTATION; The Variation of the Solar Diameter and Irradiance: Eclipse Observation of July 11, 2010 Serge Koutchmy, Cyril Bazin, Jean-Yves Prado, Philippe Lamy and Patrick Rocher; 1. Introduction; 1.1. Some historical background; 1.2. The global warming epoch; 1.3. About the solar forcing and the activity cycles; 2. Irradiance variations and heliometry; 2.1- About the possible variations of the solar diameter; 2.2- Different methods used to measure the solar diameter 2.3- Solar eclipses to measure the solar diameter3. The 2010 solar eclipse experiments and preliminary results; 3.1- Eclipse photometers to measure the solar diameter; 3.2- Eclipse observations and results from Hao; 3.3- Discussion of the main Eclipse observations; 4. Conclusion; Acknowledgments; References; I. ATOMIC, MOLECULAR AND CONDENSED MATTER PHYSICS; I-1 KEYNOTE AND PLENARY PAPERS; Photo-excitation and Photoionization for Plasma Opacities under the Iron Project Sultana N. Nahar; 1. Introduction; 1.1. The Opacity Project and the Iron Project; 2. Accurate Atomic Data Need 2.1. High Temperature Plasmas in Solar Corona and Abundances2.2. Low Temperature Plasmas and Nebular Abundances; 3. Photo-

excitation, Photoionization and Opacity; 4. Theoretical Approach; 4.1. Breit-Pauli R-matrix Method; 4.2. Atomic Quantities; 5. Results and Discussions; 5.1. Energy Levels and Oscillator Strengths; 5.2. Photoionization; 5.2.1. High Energy Photoionization; 5.2.2. Low Energy Photoionization; 6. Conclusion; 7. Acknowledgment; References;

Physics of the Corona and Present and Future Major Solar and Heliospheric Space Missions Luc Dame

Solar Activities and Space Weather Hazards Ahmed A. Hady1. Introduction; 2. Data analysis and discussion; 3. Historical occurrences; 4. Interactions with planetary processes; 5. Geomagnetic storm effects; 6. Conclusion; References;

Electron Beam Ion Trap and Its Applications Yaming Zou; Generation, Design and Applications of High Energy Electron Beam Sources - An Overview Munawar Iqbal, Gulib Ul Islam, Haris Rashid and Fazal-E-Aleem; 1. Introduction; 2. The SLAC Electron Gun; 3. The BEPC Electron Gun; 4. The KEK Electron Gun; 5. Line Source Electron Gun; NOTE; References

Fundamental Studies and Applications of Highly Charged Ions Reinhold Schuch Classification of Spectral Wavelengths in All Regions for Si XII A. I. Refaie; 1. Introduction; 2. Method of calculations; 2.1. Atomic Structure Theory; 2.2. The Relativistic Effects; 2.3. Electric Dipole Decay Rates; 3. Results and discussion; 4. Conclusion; References;

Some Historic and Current Aspects of Plasma Diagnostics Using Atomic Spectroscopy Roger Hutton

Novelty Preparation, Characterization and Enhancement of Magnetic Properties of Mn Nanoferrites Using Safety Binder (Egg White) M. A. Ahmed, N. Okasha and S. I. El-Dek

Sommario/riassunto

The objectives of the conference are to develop greater understanding of physics research and its applications to promote new industries; to innovate knowledge about recent breakthroughs in physics, both the fundamental and technological aspects; to implement of international cooperation in new trends in physics research and to improve the performance of the physics research facilities in Egypt. This proceedings highlights the latest results in the fields of astrophysics, atomic, molecular, condensed matter, lasers, nuclear and particle physics. The peer refereed papers collected in this volume
