

1. Record Nr.	UNINA9910784990003321
Autore	Celnikier Ludwik Marian
Titolo	Find a hotter place! [[electronic resource] ] : a history of nuclear astrophysics // Ludwik Marian Celnikier
Pubbl/distr/stampa	Hackensack, NJ, : World Scientific, c2006
ISBN	1-281-91920-9 9786611919207 981-277-396-7
Descrizione fisica	1 online resource (210 p.)
Collana	World Scientific series in astronomy and astrophysics ; ; v. 11
Disciplina	523.01
Soggetti	Nuclear astrophysics - History Nuclear astrophysics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references (p. 181-183) and index.
Nota di contenuto	Preface; Contents; 1 The Vacuum the Universe and Things That Go "Pop" in the Night; 1.1 The discovery of the vacuum; 1.2 The rise and fall of the vacuum; 1.3 The vacuum reborn; 1.4 The transmutation of the vacuum; 1.5 The tribulations of a simple oscillator; 1.6 The aether nouveau regime; 1.7 The unbearable heaviness of the vacuum; 2 Eleven Quadrillion Six Hundred Thousand Billion Tonnes of Coal per Second; 2.1 The eternal triangle; 2.2 Cracks in the celestial sphere; 2.3 The rebirth of atoms; 3 Fin de Siecle Fin du Monde; 3.1 The atoms of chemistry; 3.2 The atoms of heat 3.3 Chemical analysis without chemistry 3.4 Temperature measurement without a thermometer; 3.5 A bagful of loose ends; 3.6 Thermodynamics: the 19th century astronomer's best friend; 3.7 The death of the Universe; 4 A Mystery Wrapped in an Enigma; 4.1 The mystery; 4.2 The enigma; 5 The Rise of the New Physics; 5.1 Almost but not quite the alchemist's dream; 5.2 Light magic; 5.3 To catch a beam of light; 5.4 A locked room mystery . . . solved; 5.5 Of what is the Universe made?; 6 The Chicken and the Egg; 6.1 Balancing acts; 6.2 Neutrons to the rescue?; 6.3 Cosmology to the rescue? 7 The Best of Times and the Worst of Times 7.1 Theories to end all theories; 7.2 Thermonuclear leggo; 7.3 And yet they shine; 7.4 The inflationary economy of stars; 7.5 To see the World in a grain of sand; 8

A Tale of Two Theories and One Dogma; 8.1 Fiat lux?; 8.2 Continuous creation?; 8.3 Cosmic cooking pots; 8.4 Death of a travelling dogma; 9 Relics of a Bygone Age; 9.1 One man's noise is another man's Nobel prize; 9.2 Clues about the distant past; 9.3 Genesis according to Gamow; 10 Cosmic Ash; 10.1 "The fault dear Enrico is not in our stars but in your neutrinos"  
10.2 Things that go bump in the night 10.3 "I come not to bury Caesar but to praise him"; 10.4 Most of our Universe is missing; Epilogue - the Mysterious Universe; A Personal Chronology of 20th Century Astrophysics; Bibliography; Index

---

Sommario/riassunto

Find a hotter place! is the insightful story of the tortured path that led to our current understanding of how the elements in the Universe came to be. This is a story which began in Greek Antiquity, with the first musings on the nature of matter and the void, and continues today with ever more refined analyses involving virtually every aspect of 20th century physics, astronomy, cosmology and information technology. Identifying the source of stellar energy, probing the earliest instants of the Universe, and discovering of how and where each element was made are some of the outstanding success

---