Record Nr. UNINA9910781073003321 Autore Quinn Helen R Titolo The mystery of the missing antimatter [[electronic resource] /] / Helen R. Quinn and Yossi Nir; illustrations by Ruru Modan Pubbl/distr/stampa Princeton, N.J.: Woodstock, Oxfordshire [England], : Princeton University Press, c2008 **ISBN** 1-282-53167-0 9786612531675 1-4008-3571-2 Edizione [Course Book] Descrizione fisica 1 online resource (293 p.) Collana Science essentials Altri autori (Persone) NirYosef <1954-> Disciplina 530 Soggetti Antimatter Particles (Nuclear physics) Cosmology Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Includes index. Note generali Constant physics in an evolving universe -- As the universe expands --Nota di contenuto What is antimatter? -- Enter neutrinos -- Mesons -- Through the looking glass -- Through the looking antiglass -- The survival of matter -- Enter quarks -- Energy rules -- Symmetry rules -- Standard model gauge symmetries -- A missing piece -- It still doesn't work! --Tools of the trade -- Searching for clues -- Speculations -- Neutrino surprises -- Following the new clue. Sommario/riassunto In the first fractions of a second after the Big Bang lingers a question at the heart of our very existence: why does the universe contain matter but almost no antimatter? The laws of physics tell us that equal amounts of matter and antimatter were produced in the early universebut then something odd happened. Matter won out over antimatter; had it not, the universe today would be dark and barren. But how and when did this occur? In The Mystery of the Missing Antimatter, Helen Quinn and Yossi Nir guide readers into the very heart of this mysteryand along the way offer an exhilarating grand tour of cutting-edge physics.