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Nota di contenuto	1. Introduction and background -- 1.1 The theory -- 2. Observational support for the CHDM theory -- 2.1 MW observations and halo mass calculations -- 2.2 Cosmic Dawn observations of the redshifted H I line -- 2.3 McGaugh's argument for a 'purely baryonic universe' -- 2.4 A cosmic Dawn H I mechanism (the Wouthuysen-Field effect) -- 2.5 The hydrogen snow cloud model -- 2.6 The new galactic pin scintillation method for observing otherwise dark baryonic matter -- 3. Discussion -- 3.1 Improved methodologies for detecting baryonic dark matter -- 3.2 Tightening constraints on dark matter -- 3.3 Computer simulations of CHDM -- 3.4 No exotic non-baryonic dark matter -- 4. Summary and conclusions -- References.
Sommario/riassunto	The novel 'Cold Hydrogen Dark Matter' (CHDM) theory is summarized in this chapter. Special attention is paid to the fact that current technology prevents us from directly observing extremely cold ground state atomic hydrogen when it is of sufficiently low density in deep space locations. A number of very recent observations in support of this theory are summarized, including cosmic dawn constraints on dark matter. The importance of the Wouthuysen-Field effect as a probable mechanism for CMB decoupling of hydrogen at cosmic dawn is also stressed. This mechanism does not require a non-baryonic dark matter intermediary. Several predictions for this theory are made for the coming decade of observations and simulations.