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Titolo	Physics and speculative philosophy : potentiality in modern science // edited by Timothy E. Eastman, Michael Epperson, and David Ray Griffin
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Descrizione fisica	1 online resource (282 p.)
Collana	Process Thought, , 2198-2287 ; ; Volume 27
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Soggetti	Physics - Philosophy
Lingua di pubblicazione	Inglese
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Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
Nota di contenuto	Frontmatter -- Contents -- Physics And Speculative Philosophy -- Potentiality In Natural Philosophy -- Res Potentia And Res Extensa Linked, Hence United, By Quantum Measurement -- Bridging Necessity And Contingency In Quantum Mechanics -- Boolean Localization Of Quantum Events -- A Logical Analysis Of Relational Realism -- On The Foundations Of Process Physics -- Process Physics: Self-Referential Information And Experiential Reality -- On "Process Physics" -- Limitations, Approximations And Reality -- Whiteheadian Physics: Its Implications For Time, Consciousness, And Freedom -- Index
Sommario/riassunto	Through both an historical and philosophical analysis of the concept of possibility, we show how including both potentiality and actuality as part of the real is both compatible with experience and contributes to solving key problems of fundamental process and emergence. The book is organized into four main sections that incorporate our routes to potentiality: (1) potentiality in modern science [history and philosophy; quantum physics and complexity]; (2) Relational Realism [ontological interpretation of quantum physics; philosophy and logic]; (3) Process Physics [ontological interpretation of relativity theory; physics and philosophy]; (4) on speculative philosophy and physics [limitations and approximations; process philosophy]. We conclude that certain fundamental problems in modern physics require

complementary analyses of certain philosophical and metaphysical issues, and that such scholarship reveals intrinsic features and limits of determinism, potentiality and emergence that enable, among others, important progress on the quantum theory of measurement problem and new understandings of emergence.

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