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Nota di contenuto	1. Introduction (Vera Matarese, Siska De Baerdemaeker, and Nora Mills Boyd) -- Part I: Theory, Observation, and the Relation Between Them. 2. Laboratory Astrophysics: Lessons for Epistemology of Astrophysics (Nora Mills Boyd) -- 3. A Crack in the Track of the Hubble Constant (Marie Gueguen) -- 4. Theory Testing in Gravitational-Wave Astrophysics (Jamee Elder) -- 5. Hybrid Enrichment of Theory and Observation in Next-Generation Stellar Population Synthesis (Lydia Patton) -- 6. Doing More with Less: Dark Matter & Modified Gravity (Niels C. M. Martens and Martin King) -- Part II: Models and Simulations. 7. Stellar Structure Models Revisited: Evidence and Data in Asteroseismology (Mauricio Suárez) -- 8. Idealizations in Astrophysical Computer Simulations (Melissa Jacquart and Regy-Null R. Arcadia) -- 9.

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Sommario/riassunto

This is an open access book. This book, the first edited collection of its kind, explores the recent emergence of philosophical research in astrophysics. It assembles a variety of original essays from scholars who are currently shaping this field, and it combines insightful overviews of the current state of play with novel, significant contributions. It therefore provides an ideal source for understanding the current debates in philosophy of astrophysics, and it offers new ideas for future cutting-edge research. The selection of essays offered in this book addresses methodological and metaphysical questions that target a wide range of topics, including dark matter, black holes, astrophysical observations and modelling. The book serves as the first standard resource in philosophy of astrophysics for all scholars who work in the field and want to expand or deepen their knowledge, but it also provides an accessible guide for all those philosophers and scientists who are interested in getting a first, basic understanding of the main issues in philosophy of astrophysics.