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Sommario/riassunto

This book is an introduction to “multi-messenger” astrophysics. It covers the many different aspects connecting particle physics with astrophysics and cosmology and introduces astrophysics using numerous experimental findings recently obtained through the study of high-energy particles. Taking a systematic approach, it comprehensively presents experimental aspects from the most advanced laboratories and detectors, as well as the theoretical background. The book is aimed at graduate students and post-graduate researchers with a basic understanding of particle and nuclear physics. It will also be of interest to particle physicists working in accelerator/collider physics who are keen to understand the mechanisms of the largest accelerators in the Universe. The book draws on the extensive lecturing experience of Professor Maurizio Spurio from the University of Bologna.