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Sommario/riassunto

From supernovae and gamma-ray bursts to the accelerating Universe, this is an exploration of the intellectual threads that lead to some of the most exciting ideas in modern astrophysics and cosmology. This fully updated second edition incorporates new material on binary stars, black holes, gamma-ray bursts, worm-holes, quantum gravity and string theory. It covers the origins of stars and their evolution, the mechanisms responsible for supernovae, and their progeny, neutron stars and black holes. It examines the theoretical ideas behind black

holes and their manifestation in observational astronomy and presents neutron stars in all their variety known today. This book also covers the physics of the twentieth century, discussing quantum theory and Einstein's gravity, how these two theories collide, and the prospects for their reconciliation in the twenty-first century. This will be essential reading for undergraduate students in astronomy and astrophysics, and an excellent, accessible introduction for a wider audience.