

- [1] Rovelli C. Quantum Gravity[M]. Cambridge: Cambridge University Press, 2004.
- [2] Oriti D. Approaches to Quantum Gravity: Toward a New Understanding of Space, Time and Matter[M]. Cambridge: Cambridge University Press, 2009.
- [3] Einstein A. The foundation of the general theory of relativity[J]. Ann Phys, 1916, 49: 769-822.
- [4] Dirac P A M. The principles of quantum mechanics[M]. 4th ed. Oxford: Oxford University Press, 1958.
- [5] Feynman R P, Hibbs A R. Quantum mechanics and path integrals[M]. New York: McGraw-Hill, 1965.
- [6] Trimble V. Existence and nature of dark matter in the universe[J]. Annu Rev Astron Astrophys, 1987, 25: 425-472.
- [7] Peebles P J E, Ratra B. The cosmological constant and dark energy[J]. Rev Mod Phys, 2003, 75: 559-606.
- [8] Rubin V C, Ford W K Jr. Rotation of the Andromeda nebula from a spectroscopic survey of emission regions[J]. Astrophys J, 1970, 159: 379-403.
- [9] Akerib D S, Alsum S, Araújo H M, et al. Results from a search for dark matter in the complete LUX exposure[J]. Phys Rev Lett, 2017, 118: 021303.
- [10] Aprile E, Aalbers J, Agostini F, et al. Dark matter search results from a one ton-year exposure of XENON1T[J]. Phys Rev Lett, 2018, 121: 111302.
- [11] Ackermann M, Ajello M, Albert A, et al. Searching for dark matter annihilation from Milky Way dwarf spheroidal galaxies with six years of Fermi Large Area Telescope data[J]. Phys Rev Lett, 2015, 115: 231301.
- [12] Sirunyan A M, Tumasyan A, Adam W, et al. Search for dark matter produced in association with a Higgs boson decaying to a pair of bottom quarks in proton–proton collisions at  $\sqrt{s} = 13$  TeV[J]. Eur Phys J C, 2019, 79: 280.
- [13] Riess A G, Filippenko A V, Challis P, et al. Observational evidence from supernovae for an accelerating universe and a cosmological constant[J]. Astron J, 1998, 116: 1009-1038.
- [14] Planck Collaboration. Planck 2018 results. VI. Cosmological parameters[J]. Astron Astrophys, 2020, 641: A6.
- [15] Weinberg S. The cosmological constant problem[J]. Rev Mod Phys, 1989, 61: 1-23.
- [16] Chalmers D J. The Conscious Mind: In Search of a Fundamental Theory[M]. New York: Oxford University Press, 1996.
- [17] Churchland P S. Neurophilosophy: Toward a Unified Science of the Mind-Brain[M]. Cambridge, MA: MIT Press, 1986.
- [18] Zurek W H. Decoherence, einselection, and the quantum origins of the classical[J]. Rev Mod Phys, 2003, 75: 715-775.
- [19] Green M B, Schwarz J H, Witten E. Superstring Theory. Vol. 1: Introduction[M]. Cambridge: Cambridge University Press, 1987.
- [20] Polchinski J. String Theory. Vol. 1: An Introduction to the Bosonic String[M]. Cambridge: Cambridge University Press, 1998.
- [21] Ashtekar A. New variables for classical and quantum gravity[J]. Phys Rev Lett, 1986, 57: 2244-2247.

- [22] Rovelli C, Smolin L. Discreteness of area and volume in quantum gravity[J]. Nucl Phys B, 1995, 442: 593-622.
- [23] Cui X, Abdukerim A, Chen W, et al. Dark matter results from 54-ton-day exposure of PandaX-II experiment[J]. Phys Rev Lett, 2017, 119: 181302.
- [24] Aguilar M, Alberti G, Alpat B, et al. First result from the Alpha Magnetic Spectrometer on the International Space Station: precision measurement of the positron fraction in primary cosmic rays of 0.5–350 GeV[J]. Phys Rev Lett, 2013, 110: 141102.
- [25] Popper K R. The Logic of Scientific Discovery[M]. London: Hutchinson, 1959.
- [26] Ryu S, Takayanagi T. Holographic derivation of entanglement entropy from the anti-de Sitter space/conformal field theory correspondence[J]. Phys Rev Lett, 2006, 96: 181602.
- [27] Bekenstein J D. Black holes and entropy[J]. Phys Rev D, 1973, 7: 2333-2346.
- [28] Milgrom M. A modification of the Newtonian dynamics as a possible alternative to the hidden mass hypothesis[J]. Astrophys J, 1983, 270: 365-370.
- [29] Bell J S. On the Einstein-Podolsky-Rosen paradox[J]. Physics, 1964, 1: 195-200.