



Gravity, Black Holes, and the Very Early Universe: An Introduction to General Relativity and Cosmology

By Chow, Tai L.

Springer, 2007. Book Condition: New. Brand New, Unread Copy in Perfect Condition. A+ Customer Service! Summary: PrefaceChapter 1 Basic Ideas of General Relativity1.1 Inadequacy of special relativity and Mach"s principle 1.2 Einstein's principle of equivalence1.3 Immediate consequences of the principle of equivalenceThe bending of a light beamGravitational shift of spectral lines1.4 The curved spacetime concept1.5 The principle of general covariance1.6 Distance and time intervalsReferencesProblemsChapter 2 Curvilinear Coordinates and General Tensors2.1 Curvilinear coordinates 2.2 Parallel displacement and covariant differentiation2.3 Symmetry properties of the Christoffel symbols 2.4 Christoffel symbols and the metric tensor 2.5 The Geodesics2.6 The stationary property of geodesics2.7 The curvature tensor2.8 Geodesic deviation2.9 Laws of physics in curved space2.10 The metric tensor and the classical gravitational potential2.11 Some useful calculation aidsReferencesProblemsChapter 3 Einstein"s Law of Gravitation3-1 Introduction (summary of general principles)3-2 A heuristic derivation of Einstein's equations3-3 Energymomentum tensorReferencesProblemsChapter 4 The Schwarzschild Solution4-1 The Schwarzschild metric4-2 The Schwarzschild solution of the vacuum field equationsThe gravitational redshift4-3 Isotropic coordinates4-4 Schwarzschild geodesic4-5 First integrals of the Schwarzschild solutions4-6 Quasiuniform gravitational fieldReferencesProblemsChapter 5

Reviews

This publication is great. I have study and that i am sure that i will planning to read once more again in the foreseeable future. You will like how the article writer write this publication.

-- Dr. Uriel Kovacek

This created ebook is great. it was writtern very properly and useful. Its been printed in an exceedingly easy way in fact it is just right after i finished reading this pdf where basically modified me, alter the way i think.

-- Aglae Becker