

Gravitation and Inertia, by I. Ciufolini & J. A. Wheeler (Princeton University Press), 1995. Pp. 492, 24 × 16 cm. Price £32·50/\$49·50 (hardbound; ISBN 0 691 03323 4).

This is a very well written book on general relativity and cosmology. The observational facts are up-to-date, and the mathematics is presented with just the right amount of detail. In fact, the mathematical appendix summarizes about as much modern differential geometry as many relativists ever need, in a mere thirty pages!

The various forms of the equivalence principle and of the observational tests of general relativity, as well as gravitational waves and the proposed tests of them (*LIGO*, *MIGO*, *LISA*, *LAGEOS*, etc.), are there. In cosmology, we get not only the familiar Friedman-Robertson-Walker models but also the Bianchi universes and the strange non-physical Goedel world. There are many tables, diagrams, sketches, and even good black-and-white photographs, all of which make this a comparatively easy book to read. The text has a referencing system which is very detailed and scholarly — the strategic placing of the references is clearly intended to encourage the reader to track down any topic to its source. Ciufolini and Wheeler have made an excellent book which is also a bargain! — P. DOLAN.

Hubble Vision. Astronomy with the Hubble Space Telescope, by C. C. Petersen & J. C. Brandt (Cambridge University Press), 1995. Pp. 252, 28 × 24 cm. Price £24·95/\$39·95 (hardbound; ISBN 0 521 49643 8).

“That’s a book you had better get”, said my wife as we peered through the book-shop window at the multiplicity of magnificent images of NGC 6543 on the front covers of *Hubble Vision*, one cold Cambridge Sunday afternoon. Imagine my delight on getting a copy to review a few days later. My first reaction was to admire anyone prepared to write such a book, at a time when new and exciting images appear almost once a week, in the sure knowledge that when published, their book would already seem out of date. My second reaction was of slight disappointment. As I flipped through the pages I realised, that with few exceptions, the images were drawn from the many excellent slide sets and Internet releases already so familiar to those of us in the field. Two chances had been lost. The first, to reproduce these familiar and wonderful images at a resolution corresponding to the original data rather than the limited range of the Internet. Secondly, no attempt had been made to relate the *HST* images to more familiar ground-based pictures. This would have greatly added to our appreciation of the Orion nebula, Eta Carinae, and the Cygnus loop. For the latter not even the right bit of the large-scale nebula is shown for comparison.

The text, which is well written, is at its best when giving an overview of the funding, management, and history of the *Hubble* project. It is at its worst when trying to describe basic ideas in physics or astronomy. For example: “To form some idea of the duality of light, imagine going down to the beach on a warm summer’s day. As you sunbathe, photons of visible light hit your eyes and enable you to see your surroundings. You feel infrared wavelengths as warmth from the Sun, and some ultraviolet radiation burns, or tans, your skin.” A glossary makes up for some of these shortcomings.

The book, although well made, has been put together in a hurry from existing material. The light-path diagrams illustrating the various *HST* instruments