plausible source of frequency and bandwidth, it's about one. That was indeed the faint end of the radio-source counts in the early days of Big Bang *versus* steady state, Ryle *versus* Hoyle, and so forth, and the very brightest radio sources ranging up to maybe a kilo-Jy. How much is a jansky? It is 10^{-26} watts per square metre per hertz. (Remember that the limiting sensitivity of human hearing is somewhere around 10^{-12} watts per square metre over some frequency range, maybe 300–6000 Hz.)

Why did the book arrive on my desk? It was a present from PARI founder, Don Cline (a friend of long standing) and the author Craig Gralley, each of whom autographed an early page. It has 125 informative footnotes, a short index, some historical black-and-white photos, and some perfectly lovely colour ones, including the PARI campus at night, illustrating how to illuminate grounds and buildings, while sending very little light upward to undarken the dark night skies of rural North Carolina. The *AAATS-3* satellite that took the first colour photograph of the whole earth in 1967 and the first *Earth Resources Technology Satellite* (*ERTS*) were both commanded from the PARI site, when it was called NASA's Rosman Station. The *ERTS* image provided shows New Jersey and was taken on 1972 November 10.

Cline himself is a meteoriticist, and one of the colour photos shows him holding up a piece of chondrite close to three young female students. Two of them look frightened. Perhaps they are remembering the DoD days? Had it ever occurred to you that radomes not only keep the rain off, they keep cameras that pass overhead (on the Other Guy's satellites) from seeing where your spying dishes are pointed. There are lots more photographs and many more unexpected pieces of information. Many thanks Don and Craig! — Virginia Trimble.

General Relativity: The Theoretical Minimum, by Leonard Susskind & André Cabannes (Penguin), 2023. Pp. 387, 20 × 13 cm. Price £10·99 (paperback; ISBN 978 0 141 99986 9).

Leonard Susskind has been a professor of theoretical physics at Stanford for almost five decades. He is best known for his technical work on string theory and various applications of quantum theory. This book is one of many*, with various co-authors, based on his lecture series *The Theoretical Minimum*; the lectures themselves are available as videos on the internet. This is the first book in the series which I have read. Books on General Relativity can be divided into physics-first or maths-first and of course also differ with regard to breadth, depth, and level of (mathematical) detail. This book is rather different in that it is neither strictly maths-first nor physics-first, although it does follow the common pattern of an introductory physics chapter, then a few chapters on maths, before moving on to discuss applications. However, rather than deliver essentially all of the maths first, Susskind presents the basics of tensors, curvature, geodesics, and metrics before three chapters on black holes, but in those chapters brings in more maths (*e.g.*, various types of coordinates) as needed. The Einstein field equations don't appear until the ninth chapter, before the final one on gravitational waves.

It also differs from most other books in that the basic concepts are presented in enough detail actually to learn them relatively easily. However, the details are conceptual, not necessarily mathematical. The emphasis is on understanding,

*So far, there are also books on classical mechanics, quantum mechanics, and classical field theory and Special Relativity. The next volume will be on cosmology, followed by one on statistical mechanics.

not on mechanical calculation. Common topics such as the difference between contravariant and covariant tensors and Christoffel symbols are *explained* rather than just presented. Although one learns only 'the theoretical minimum', this book is probably the best I have read so far for those who actually want to learn General Relativity. The book reads like a series of good lectures, on which of course it is based. (It "is adapted from a course...at Stanford in the Continuing Studies program to an audience of adults"; I'm not sure what Susskind wants to imply about normal students at Stanford.)

By now even Susskind should know that Wheeler didn't coin the term 'black hole', though he did popularize it. Other than that, I noticed no mistakes in the book. Somewhat unorthodox is the fact that equations are not punctuated, and equations, theorems, *etc.*, named after people are usually with neither the definite article nor the possessive form (*e.g.*, "given by Pythagoras theorem", "solving Einstein field equations"). I found it somewhat strange to discuss comparing the observations of someone falling into a black hole with those of someone watching that from afar without mentioning redshift, though the description is, of course, correct. Susskind is also somewhat dismissive of videos (by professional relativists) which purport to show what one would actually see if falling into a black hole and so on, though he doesn't say why. Those minor points don't distract from the main narrative, but might be interesting to follow up for those interested in Susskind's perspective.

There are several black-and-white diagrams scattered throughout the book, and of course, equations, though not a huge number of the latter. There are a few footnotes but neither endnotes nor references; apart from the chapters ('lectures') there is only a short preface by both authors and a six-page small-print index. The book is well written and I will probably read the others in the series, and hopefully review the upcoming one on cosmology in these pages. — Phillip Helbig.

Cultural Astronomy in Latin America, edited by Steven R. Gullberg & César Augusto zen Vasconcellos (World Scientific), 2024. Pp. 398, 23·5 × 16 cm. Price £135 (hardbound; ISBN 978 981 12 8192 1).

Cultural Astronomy in Latin America is a book by and for experts. Its 14 chapters address (mostly) archaeological sites and artifacts associated with the Inca culture and Mayan written records. At the edges, as it were, are (*i*) Mark Raney looking at the star lore of the Hopi and Zuni Indians of the American Southwest and comparing it with the views of the Aztecs of what is now Mexico; (*ii*) Armando Madrid on how astronomy brought by European immigrants to southern Argentina has blended with and survived alongside the myths of the local indigenes, and (*iii*) Walmir Thomazi Cardosa with a "long 20th century" look at a grab-bag of entities from the Brazilian northwest Amazon, including light beams, asterisms, and snake myths. The chapters are not ordered North to South (or South to North) nor early to late, nor even alphabetically by author. Perhaps the chapters are in the order the texts reached the editors. Many of the authors have affiliations in the countries that host(ed) the cultures they have written about. You won't be surprised to hear that these (mostly) pre-Columbian groups of people were interested strongly in what the Sun does (rising, setting, and in between), a bit less strongly in what the Moon does (and trying to fit the two sorts of cycles together), and often also in patterns of stars in the sky and perhaps the motions of Venus among them. These were also the interest of early (and contemporary!) peoples of the Old World. The specific myths are different, though water makes a frequent appearance, as from time to time do pyramids and various circles. And the hope of forecasting rain from the phases of the