

nity would be better served by publishing a result that might point to important new physics. Passages such as those exemplify the difficulty of balancing the scientific interest in avoiding error with the desire to facilitate discovery. Eventually, CDF did publish the 13 anomalous events, but without any discussion of them in terms of new physics. A subsequent run with a much larger data set did not yield a similar effect.

Scholars will be shocked to learn that Dorigo's book does not include a single citation of any published work or source. He acknowledges a long list of colleagues and other interlocutors who helped him piece together his narrative, but he provides no means for determining the basis for any particular claim. Dorigo's defense of that peculiarity is that he aims "to teach some physics in an entertaining way" rather than "to contribute to the history of science." However, to my knowledge, the only comparable monograph on CDF's history and the top quark's discovery is my own book, *The Evidence for the Top Quark: Objectivity and Bias in Collaborative Experimentation* (2004), which pursues a different agenda and emphasizes different aspects. Dorigo's book is thus almost certainly going to be an important source for anyone interested in the history of CDF, whether or not that was his intent.

Scholars who manage to set aside their usual reading habits, and readers who do not care about scholarly documentation, will be rewarded. *Anomaly!* is a personal yet highly informative story of discovery and almost-discovery from the perspective of someone who saw the events firsthand.

Kent Staley
Saint Louis University
Saint Louis, Missouri

Astrophysics for People in a Hurry

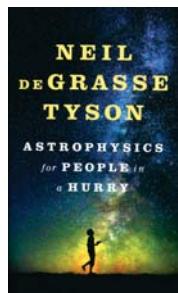
Neil deGrasse Tyson

W. W. Norton, 2017. \$18.95 (224 pp.).
ISBN 978-0-393-60939-4

If anyone has the knowledge to popularize science, it's Neil deGrasse Tyson. The Harvard- and Columbia-educated astrophysicist has published more than 10 books, hosted the TV series *Cosmos: A Spacetime Odyssey* in 2014, and continues

to host *StarTalk*. The latest addition to his outreach career is his new book, *Astrophysics for People in a Hurry*.

As its title suggests, this small hardcover book offers curious laypeople a quick, easy-to-read overview of the world of astrophysics. Tyson keeps the reader engaged by combining scientific facts with historical anecdotes, etymological discussions, and stories of his own experiences in science, such as



when he learned of an asteroid being named in his honor. He also offers some of his own opinions as an astrophysicist and demonstrates his wit with a suggestion that aliens from Jupiter's moon Europa might be called Europeans.

Astrophysics for People in a Hurry covers a broad selection of topics: from the largest scales of the universe and its main components, such as dark matter, to the smaller scales of the

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BOOKS

solar system and Earth. He discusses subjects that are currently puzzling scientists like me, such as dark energy, and those that are well understood by the physics community, such as the round shape of planets and the electromagnetic spectrum. The book's material was drawn from the essays Tyson wrote for his Universe column in *Natural History* magazine between 1995 and 2005. As a result, *Astrophysics for People in a Hurry* sometimes feels like a collection of short stories. That may well be appropriate for people in a hurry, but it also leads to a feeling that the book's chapters are disconnected and lack a flowing train of thought.

Surprisingly, Tyson includes only a single paragraph on gravitational waves, whose discovery was announced in 2016 and widely reported in the mass media. A chapter on gravitational waves would have added cutting-edge material to the book, and it would have allowed readers to familiarize themselves with one of the biggest scientific breakthroughs of this decade.

The first chapter describes the evolution of the universe from the first instants after its birth to billions of years later. It may seem ideal to start an accessible book on astrophysics with a summary of the cosmic history of the universe. In my opinion, though, the chapter would be a bit overwhelming for someone with no knowledge in physics.

The rest of the book, however, is very easy and pleasant to read. I particularly enjoyed chapters 11 and 12. Chapter 11, "Exoplanet Earth," describes our planet from the perspective of interstellar observers. Tyson's playful twist manages to teach readers about terrestrial features such as chemical elements, electromagnetic radiation, and life while simultaneously discussing the rationale and scientific methodology behind the search for life on other planets.

Chapter 12, "Reflections on the Cosmic Perspective," provides an unexpected yet welcome meditation on how knowledge and awareness of our incredibly vast universe can lead to a more tolerant and empathic society. Readers may or may not be willing to embrace Tyson's cosmic perspective. But in a time when scientific evidence is disregarded by some of the world's most influential people, the ideas presented in that concluding chapter invite relevant and necessary

discussion on topics such as inequality and climate change.

Overall, *Astrophysics for People in a Hurry* goes beyond familiarizing busy readers with different topics of astrophysics. It offers entertaining insights into broader challenges in science, some of the unknown frontiers that scientists face at present, and the implications of understanding our surroundings and the almost unfathomable vastness of the universe.

Macarena Lagos
University of Chicago
Chicago, Illinois

NEW BOOKS

Plasmas and fusion

Magnetic Confinement Fusion Driven Thermonuclear Energy. B. Zohuri. Springer, 2017. \$99.00 (185 pp.). ISBN 978-3-319-51176-4

Plasma Remediation Technology for Environmental Protection. C. Du, J. Yan. Zhejiang U. Press and Springer, 2017. \$99.00 (79 pp.). ISBN 978-981-10-3655-2

Popularizations

Anomaly! Collider Physics and the Quest for New Phenomena at Fermilab. T. Dorigo. World Scientific, 2017. \$48.00 *paper* (285 pp.). ISBN 978-1-78634-111-2

Astrophysics for People in a Hurry. N. D. Tyson. W. W. Norton, 2017. \$18.95 (222 pp.). ISBN 978-0-393-60939-4

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