

No Shadow of a Doubt: The 1919 Eclipse That Confirmed Einstein's Theory of Relativity

By Daniel Kennefick

PRINCETON UNIVERSITY PRESS: 2019. 344PP. £24.00

The measurement of the deflection of light from background stars by the Sun during the 1919 total eclipse is seen as one of the key tests (together with the precession of Mercury's perihelion) that provided early support to Einstein's theory of general relativity (GR). From the proposal of the test, to the planning of the expedition to observe the eclipse, to the acquisition of data, their analysis and the eventual confirmation of GR's prediction, this book recounts one of the most exciting stories of scientific discovery framed by the end of World War I and the politics of science.



The Universe Speaks in Numbers: How Modern Maths Reveals Nature's Deepest Secrets

By Graham Farmelo

BASIC BOOKS: 2019. 256PP. £20.00

It is often said that mathematics is the language of physics. However, this saying implies an uneven relationship between the two, the former being employed in the service of the latter. Graham Farmelo shows how abstract mathematics time and again has shone the way forward for theoretical physics, from Newton and Laplace, to Maxwell, Einstein, Dirac and beyond. String theory being perhaps the culmination of the conjoined nature of the two disciplines, the book argues for the importance of fundamental mathematics in understanding the cosmos.



Moon Rush: The New Space Race

By Leonard David

NATIONAL GEOGRAPHIC: 2019. 224PP. \$26.00

Next month will be the 50th anniversary of the first crewed landing on the Moon, which ushered in a new era of space exploration. While the presence of humans in deep space has all but disappeared, the Moon remains the most inviting target for a rekindled, in part private-industry fuelled, interest in spacefaring. This book by Leonard David puts the Moon front and centre, giving a rundown of the history of lunar exploration and science, as well as an outlook of what may come next. NASA's Lunar Gateway and ESA's Moon Village are only two of several exciting prospects of bringing humans back to the Moon and kickstarting a second era of human space exploration.

Published online: 7 June 2019

https://doi.org/10.1038/s41550-019-0811-2