

Peak, Fort Worth and Dallas, while Virginia City, Separation Point, Creston, Rawlins, Central City, Cherry Creek, Idaho Springs, Las Animas and La Junta were (almost) unheard of in the East. Denver was by far the largest and best-known population centre positioned in the path of totality, and the town was inundated:

The visiting hordes included prominent citizens—newspapermen, financiers, judges, U.S. senators—and with them came a less desirable lot: at least thirty assorted pick-pockets, till tappers, and other petty thieves ... But the most notable visitors were the astronomers, who grew as “thick as blackberries” in Colorado. (p. 121).

The actual eclipse itself is covered in two separate chapters (15: First Contact and 16: Totality). Clear weather prevailed, and so Baron is able to discuss the successful observations made by each of the ‘official’ eclipse parties. Meanwhile, Chapter 17 deals with the reactions to the eclipse in the month following the eclipse: Professor Watson claimed to have found Vulcan during the eclipse; for Maria Mitchell and her all-female eclipse team, the event produced no important scientific discoveries; but gave her further opportunities to promote women’s rights; while for Thomas Edison the eclipse was a great success, even if his tasimeter did not perform exactly as planned and measure the heat generated by the corona.

Chapter 18 deals with the period September 1878 to December 1880 and is mainly about the on-going careers and ideas of Cleveland Abbe, Maria Mitchell and James Craig Watson, although the U.S. Naval Observatory was able to claim some glory, and

... preened over what its efforts had produced: an abundance of new photographs, drawings, spectroscopic data, and other observations for scientists to ponder in the years ahead. (p. 209).

Professor Watson and Dr Peters continued to spar over Watson’s reported discovery of Vulcan. Most astronomers were happy to side with Peters, but this sorry saga took an unexpected turn in November 1889 when Watson died suddenly. So, too, did the Vulcan concept.

The final chapter of this book is reserved for our champion inventor, Thomas Edison, who is followed by 8 pages of fine-quality historical photographs that complement the many maps, sketches and woodcuts that are sprinkled liberally throughout the earlier pages of this interesting book.

American Eclipse is a wonder read. It is a mix of science and adventure, and above all it is entertaining. It shows the talents of a master science journal at the peak of his profession, and—I am sad to admit—is in sharp contrast to

the far less entertaining books that we astronomers tend to write. Buy it and read it—you will enjoy it!

References

- Bakich, M.E., 2016. *Your Guide to the 2017 Total Solar Eclipse*. Springer.
Littman, M., and Espenak, F., 2017. *Totality: The Great American Eclipses of 2017 and 2024*. Oxford University Press.

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Imagining Other Worlds: Explorations in Astronomy and Culture, edited by Nicholas Campion and Chris Impey (Ceredigion, Sophia Centre Press, 2018). Pp. 351. ISBN 9781907767111 (softcover), 155 × 235 mm, £29 (Studies in Cultural Astronomy and Astrology, Volume 9).

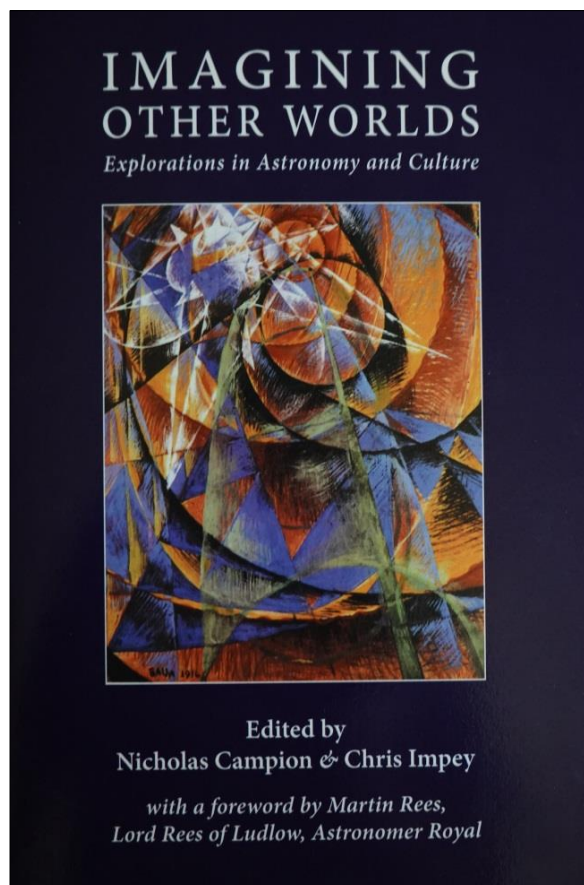
The book presents 23 papers given in 2015 at the Ninth Conference on the Inspiration of Astronomical Phenomena, held in London’s Gresham College. In a book of this nature there are papers of varying worth. I read one chapter which did not pass peer review in a professional journal because it was too speculative, but overall the chapters are well written and informative across a broad range of disciplines, the most prominent being art and architecture.

An especially important paper in this regard is about Galileo’s Memorial Tomb, by Liana De Girolami Cheney. While several scholars have written about the edifice (done in 1737), Cheney states “... none have [*sic*] thoroughly addressed the symbolism of the tomb.” (p. 102). She believes the designer, Vincenzo Foggini, employed sculptural elements from Bernini’s tomb of Pope Urban VIII, thus vindicating “Galileo with a sculptural pun by appropriating papal alleged virtues of charity and justice to represent Galileo’s scientific accomplishments.” (p. 106). Galileo is also considered in a chapter (by David L. Morgan) about the modern operas of Philip Glass.

Sir Christopher Wren’s design for St. Paul’s Cathedral, by Valerie Shrimplin, is explained in astronomical terms. The South West Tower was meant to be the site of a telescope, perhaps to study stellar parallax, and “... pendulum experiments were also said to have been carried out.” (p. 272). More importantly, she explains why the cathedral was “... rotated to lie circa 6 degrees north of due east ...” with respect to the cathedral it replaced that was oriented directly on an east-west axis (p. 268).

It was, she writes, to align the building with the vernal equinox according to the old Julian calendar, "... implying perhaps an opposition to the new calendar." (p. 272).

A chapter by Gary Wells on the transit of Mercury paintings by Giacomo Balla, inspired by his view of the 1914 transit, is a fine example of art historical analysis (and one of the paintings is on the book's cover). Wells puts these works "... at the end of his initial Futurist exploration of movement and dynamic forces." (p. 319). Since Mercury is just a very tiny black dot in Balla's paintings and drawings (which are held by Philadelphia, Yale, New York's Museum of Modern Art and the Guggenheim in Venice), the Sun takes prominence. Here it is shown as



... the modernist sun, and it represents a set of ideas and observations about nature and humanity infused by the enthusiasms of the early twentieth century. (p. 326).

Artistic inspiration of another sort inspired the depiction of Orion and Ursa Major on a 2D glass sphere held in the hand of Christ, part of a mosaic in Saint Isaac's Cathedral in St Petersburg, Russia. Authors Michael Mendillo and Ethan Pollock compare this large depiction of the Salvator Mundi motif with various paintings, showing that the Cathedral version (likely late nineteenth century) is unique in depicting actual constellations, the others just being dotted with random star images.

In the non-artistic realm, editor Nicholas Campion gives a 17-page chapter on how astronomy can provide a foundation for human rights and sustainability, and his co-editor Chris Impey pens an essay ranging from the Copernican Revolution to the exoplanet era we live in. Clive Davenhall shows us that spiritualism in the late nineteenth and early twentieth centuries co-opted the planet Mars into its mystical embrace. In a specific séance held in 1894, messages from the spirit world were being delivered by two people "... explicitly located as resident on Mars." This conveniently took place just five days after the opposition of Mars!

There is a fascinating chapter by Duane Hamacher and co-authors about the link between astronomy and music in the Torres Strait of northeastern Australia, complete with illustrations of an eclipse mask and astronomical dance machines. The astronomical paintings of a contemporary native American artist are examined in a chapter by Annette S. Lee that focuses on the time-sensitive effort aimed at "... reclaiming the native star knowledge." (p. 204).

There are a few minor typos in the book. For example, on page 148, the word 'with' is missing: "... sea rights (with) the Australian government." Generally the Index is excellent, although the entry for monarchs is a little confusing: the entry King Charles II is duplicated, and King Friedrich Wilhelm IV of Prussia is listed under both King and Wilhelm. A few names are missing from the index, such as Farie Mac-George and Sir William Peck, both on page 118.

Imagining Other Worlds has the imprimatur of the Astronomer Royal, Lord Rees of Ludlow, whose public lecture (ranging from alien life to cosmology) and subsequent panel discussion opens the volume. This is a valuable book in its own right, but combined with the proceedings of previous conferences extending back to 1994 (with only the 2nd conference, in 1999, unpublished) the series represents a significant source of information on historical and cultural astronomy.

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The Great Canoes in the Sky: Starlore and Astronomy of the South Pacific, by Stephen Robert Chadwick and Martin Paviour-Smith (Cham (Switzerland), Springer, 2017). Pp. xviii + 233. ISBN 978-3-319-22622-4 (hardcover), 220 × 286 mm, €32:99.

As someone who was born and bred in the South Pacific and with an innate curiosity about the indigenous cultures and astronomical syst-