

when we are drinking. After all, there ain't no party like a Platonic party. (page 126).

While there is much else to explore in this tremendous book, I will conclude by looking at Plutarch's description of the Sun's movement in another text, the *Phocion*. He devotes half a page to a quote that "... has not received due attention." (page 127). It begins,

Now, the sun, as mathematicians tell us, has neither the same motion as the heavens, nor one that is directly opposite and contrary, but takes a slanting course with a slight inclination. (page 128).

Demulder is ready to admit that this "... would hardly have counted as cutting-edge mathematical astronomy in Plutarch's day." (page 130). Plutarch's knowledge of the cosmos, he writes "... was sufficient for him to know that the phenomena of the visible cosmos do not completely dovetail with Plato's cosmology." (page 130). Rather, Plutarch made a crucial point: "... the quantity of the measurement has eluded us." (page 130). This was his way of admitting that observational data was simply not precise enough to accurately plot heavenly movements. Moving beyond mere measurement, he identified something more important, so that

... he could regard the basic truths of Plato's cosmology as immune to post-Platonic developments in astronomy. What Plutarch really cares about is the connection between heavenly movement and the presence or absence of rationality. What he cares about ... is invisible soul rather than visible body. (page 131).

Based on texts written in the early decades of the Roman Empire, this brilliant analysis by Demulder is an essential text for anyone researching Greco-Roman cosmological thought.

There is a typo on page 33, where "absent form" should read "absent from"; and on page 166 "an because" should be "and because". While all lengthy quotations in Greek are translated, the author sprinkles the text with Greek as well. The readability of the book (a revised version of the author's PhD thesis) would have been enhanced if the author had consistently given translations of the first instance of these words as well. The book ends with a fine 46-page bibliography, and

both an Index locorum and a General index (29 pages).

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***Eclipse Chasers*, by Nick Lomb and Toner Stevenson. (Melbourne, CSIRO Publishing, 2023). Pp. xvi + 198. ISBN 9781486317073 (paperback), 150 x 233 mm, AU\$25:99.**

Total solar eclipses—and to a lesser extent annular eclipses—have mesmerized humans for millennia. I am lucky, having seen two total eclipses and one annular, with varying degrees of success.

In this very readable 214-page paperback book Australian astronomers Professor Nick Lomb and Dr Toner Stevenson, assisted by Uncle Ghillar Michael Anderson, Kirsten Banks, Associate Professor Duane Hamacher, Melissa Hulbert and Geoffrey Wyatt take us on a guided tour of Australian and near-Australian solar eclipses, past, present and future. So only the majority—but not all—of this entertaining book is about astronomical history.

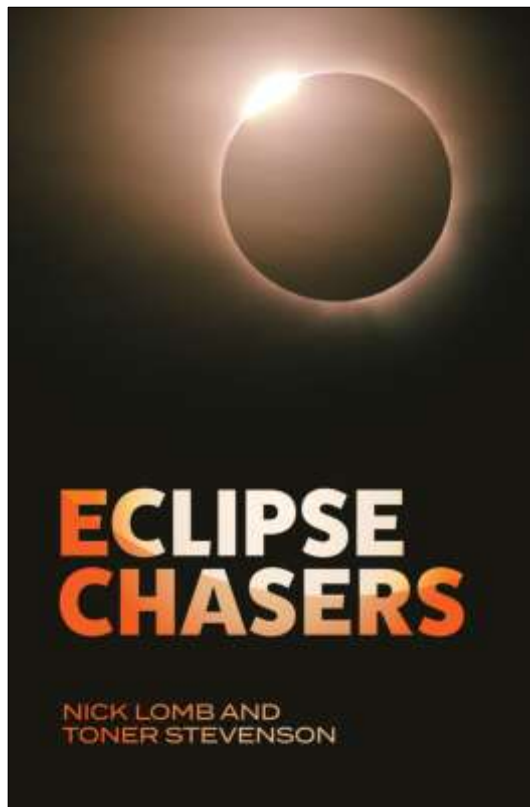
After an introductory chapter by Nick Lomb, Hamacher and Anderson introduce us to Australian eclipses seen from an indigenous perspective, in "Solar Eclipses in First Nation Traditions".

Then follow five successive chapters (three by Nick Lomb, one by Toner Stevenson, and one by Nick Lomb and Melissa Hulbert) on the various total solar eclipses visible, or potentially visible, from Australia, or near Australia, following initial European settlement of the island continent. The first of these occurred in 1857, with the path of totality crossing Sydney, but clouds blanketed the sky on the vital day. Yet this eclipse, more than anything else, brought the name of the nearby Windsor-based amateur astronomer John Tebbutt, before the public, effectively launching what would become an international reputation as a research astronomer. Indeed, by the end of the century Tebbutt was arguably Australia's foremost astronomer, amateur or professional (see [Orch-](#)

iston, 2017).

Our old friend ‘Murphy’ also conspired to prevent observations of the next Australian eclipse, in 1871. The path of totality passed across far northern Queensland, and the elaboratively planned and resourced expedition mounted mainly by Melbourne and Sydney Observatories is described on pages 37–53. As luck would have it, further west, observers sited along the path of totality in western Java (Dutch East Indies) had magnificent views of the eclipse (Mumpuni et al., 2017).

Chapter 4, “Tracking the Sun with Mirrors”, discusses two Australian eclipse expeditions to Pacific island in 1908 and 1911, and an eclipse across the island of Tasmania in 1910.



The following chapter reports on 21 September 1922 and undoubtedly the most important solar eclipse to grace Australian skies. This offered an excellent opportunity to test Einstein’s General Theory of Relativity (Treschman, 2014), with the path of totality running the full width of the Australian continent. Near the west coast was an expedition from Lick Observatory, joined also by astronomers from Canada, New Zealand and India. Pride of place among their instruments was majestic Schaeberle Camera, designed to

take large-scale images of the Sun and reveal details of the corona (Pearson and Orchiston, 2008). The optics for a second Schaeberle Camera were loaned to Adelaide Observatory astronomers, who set up their observing station at inhospitable Cordillo Downs in the barren centre of the continent. Meanwhile, astronomers from Melbourne and Sydney Observatories, and a party of amateur astronomers from Sydney, decided to observe from near the border of the states of New South Wales and Queensland, close to the east coast of the continent. This chapter is full of entertainment, but in the lead-up to the 1922 eclipse I was very surprised to see no mention of the 18 August 1868 eclipse, surely a watershed event in solar physics given its association with the all-important discovery of helium by Norman Pogson (Nath, 2013) and also his detection of the green coronium line (see Nath and Orchiston, 2021). Toner Stevenson follows others and wrongly identifies the latter discovery with Professor C.A. Young in 1869.

The penultimate historical chapter, by Nick Lomb, looks at the eclipses of 1974 and 1976, which were visible from land and air. On page 120 there is a delightful photograph of Naomi and the late Jay Pasachoff, reminding us all of Jay’s passion to not only research eclipses but also to use them as educational tools to promote astronomy. When he died in November 2022, Jay had probably seen more solar eclipses than any other astronomer. This chapter also includes a photograph (page 129) of a small radio telescope that two scientists from Sydney used to make observations of the radio Sun. This reminded me that Victoria’s very first romance with radio astronomy also involved a solar eclipse, way back in 1948 (see Orchiston, 2004) in the very early days of Australian radio astronomy.

Chapter 7, the final historical chapter, deals with the eclipses of 2002 and 2012. How well I remember 2012: the thousands of Australian and international eclipse chasers who crowded the beach at Palm Cove in northern Queensland, and the cheers of jubilation (and maybe amazement) that filled the air when totality finally arrived—albeit accompanied by passing clouds. This was the second of my two total eclipses (in 1976 I was in Melbourne and viewed totality from mid-street outside my apartment!).

This brings us to Chapter 8, “Planning and Eclipse Adventure”, written by Kirsten Banks,

Melissa Hulbert and Geoffrey Wyatt. They explain what a solar eclipse is, provide very helpful information that will allow you to plan and prepare for a successful eclipse expedition, and overview future eclipses that will undoubtedly draw further eclipse chasers to Australia and also New Zealand. Indeed, this has already happened since this book was published: thousands of astronomers made their way to Barrow Island and the isolated town of Exmouth of the coast of Western Australia to view the 20 April 2023 eclipse. But for me, as a 'Kiwi', the maps showing totality paths across New Zealand in 2028, 2037 and 2038 have special appeal. I hope to live long enough to travel to Dunedin (my father's city of birth) and see the 2028 event. Something that I never contemplated in my younger years was that once you reach 80 (I arrive at this milestone in July), you begin to measure 'your' future in terms of individual years, rather than decades. So, I doubt that I will still be around to see the eclipses of 2037 and 2038. But you never know ...

Rounding out this book are a 4-page Glossary and a 6-page Index. Clear eclipse maps and historical photographs pepper the pages of the book, and a notable feature of many of the latter is that they have been 'colourised'. I was already familiar with many of the black-and-white originals, but to see them in colour adds, I think, an important dimension to the book. So, what more can I say? This is an attractive and an attractively-priced thoroughly readable book, and will be enjoyed by *all* eclipse chasers—not just those addicted to observing totality from Australia (or New Zealand). As for 2028, while I suspect that most international astronomers will view from Sydney, if instead you do decide to opt for Queenstown or Dunedin in New Zealand maybe I'll see you there!

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***Kant & the Naturalistic Turn of 18<sup>th</sup> Century Philosophy*, by Catherine Wilson. (Oxford, Oxford University Press, 2022). Pp. viii + 300. ISBN 978-0-19-284792-8 (hardback), 160 × 240 mm, US\$85.**

In this book, Catherine Wilson (BA in Philosophy at Yale), writes about what she identifies as two claims at the central core of Immanuel Kant's own philosophy. These two claims, she writes, "... for human exceptionalism and a glorious destiny, are not among those found most appealing and worthy of development by contemporary Kantians." (page 2). It is sometimes the case that when one digs deep in an abandoned mineshaft, valuable deposits may be found. Such is the case here.

Of Kant, she writes,

His extractive project of removing the human being as an individual agent from nature while at the same time presenting the species as swept forward by a scientifically inexplicable developmental force is staggering. (page 22).

It is a study of that project that animates this fascinating book.

"It is unsurprising," writes Wilson, "that most twentieth and twenty-first century commentary pays little attention to Kant's own account of his project." (page 14). While most scholarly focus is on Kant's *Critique of Pure Reason*, Wilson looks at his lectures and shorter essays, including *What does it Mean to Orient oneself in Thinking?* In it, Kant compares the condition of a reader

... faced with the new criticism of the Bible and the progress of the empirical