

but shallower capsule summaries of entire fields.) They could also be led astray by statements such as that dark energy causes the Universe to expand, or an unfortunate typo (resulting in an essentially opposite statement) in the otherwise good discussion of why the net electric charge in a spatially closed universe must be zero. Most readers of this *Magazine* will probably be more familiar with the first three chapters than the last two and might very well learn more from them, but by the same token it would be difficult to appreciate Krauss's description of the known unknowns if they don't know the known knowns.

There are no figures and neither footnotes nor endnotes. The seventeen-page index is quite thorough for a book such as this one, though unusually not set in a smaller font than the main text. Despite my qualms, this is not a bad book by any means, but one of those which the potential reader should browse personally first (as indeed I had done before I bought it) in order to decide whether it is worth reading. — PHILLIP HELBIG.

Amazing Worlds of Science Fiction and Science Fact, by Keith Cooper (Reaktion), 2025. Pp. 248, 21.5 × 14 cm. Price £15 (hardbound; ISBN 978 1 78914 994 4).

Planetary science and Science Fiction (SF) were always closely related. Well before *Sputnik* in 1957, some of SF's earliest writers (*e.g.*, Verne and Wells) and indeed hugely influential, 1950s-based ones (*e.g.*, Asimov, Clarke, and Heinlein) often looked up at the (mainly) night sky and postulated. Here, Keith Cooper (*Astronomy Now*'s editor) brings these two areas back into focus. Within SF, barren, dry Tatooine (*Star Wars*), spice-laden Arrakis (*Dune*), and icy Gethen (*Left Hand of Darkness*) are themselves spectacular but there are real, strange exoplanets out there (*e.g.*, the Trappist-1 system, Proxima b, Kepler 16b, and LHS 1140b).

Earlier SF lacked much of the data we now have but many current writers use up-to-date information in formulating their scenarios. This is not only due to the marvellous 2.4-m *Hubble* but also because of its more recent and powerful 6.5-m upstart — the *JWST* (both outside our protective atmosphere). The book's appendix lists a number of SF scribes consulted and also has a column (nice!) of major SF novels, films, and TV (all referenced therein).

The cover and book title 'nods' to *Amazing Stories* — a US-based 1950s 'pulp', comic-like paperback publication. Carrying many now classic SF short stories, it was often taken to the UK (as ship's ballast). Cooper also deals herein with the Earth Similarity Index — our own planet being of course 1.00. The nearest to us in said Index — Teegarden's Star — has 0.95, though that exoplanet is not at all like ours in many ways. And so far, we appear to be alone.

Cooper also deals with biosignatures (phosphine and dimethyl sulphide) — strong signatories of possible life elsewhere. And our own Solar System has prime candidates: not only Jupiter's Ganymede, Callisto, and (*vide* Clarke's 2010 novel/movie) Europa, but also Saturn's Enceladus. And all amino acids linked to life are left-handed whereas sugars are right-handed. The text here ranges over many other scientific items (including Roche limits, magnetic pulsars, exorotations, ecumenopolises, and Dyson spheres).

Cooper's book contains a lot of data but no mathematical formulae. And it is nice when he uses such terms as 'astronomical unit' or 'parsec' and then defines them. This tome appears to be targeted at SF readers and those (non-professional astronomers) who enjoy popular science. However, many in the astronomy field will also enjoy this. I certainly did. Recommended. — DAVID LALLY.