

## Book Review

by Nalayini Davies, 29 November 2016

### The New Cosmos

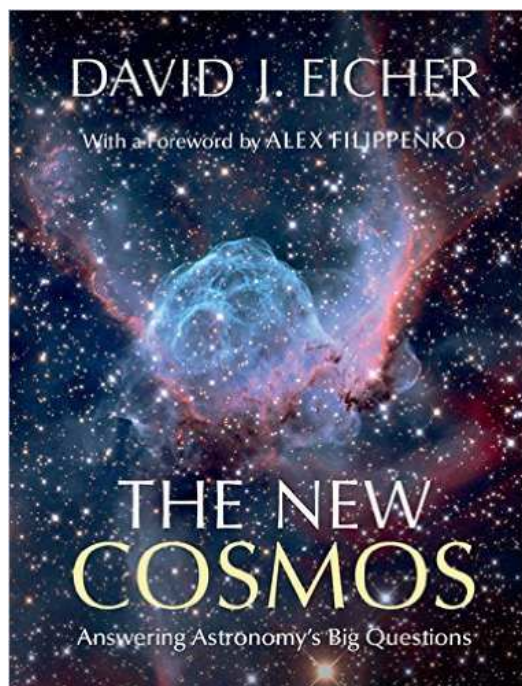
David J. Eicher

2015 1st Edition

Cambridge University Press, Cambridge, United Kingdom

Hardback: 238 pages; ISBN -13: 978-1107068858; US\$20.81-25.93 from Amazon

Reviewed on Kindle Edition: US\$11.51



After a 34-year career as a science communicator in the field of astronomy, author (and editor-in-chief of *Astronomy* magazine) David Eicher admits to being strongly inspired and influenced by his friendship with Carl Sagan. Eicher's *The New Cosmos* is intended to cover new, updated and revised knowledge of the universe in the 35 years since Sagan's *Cosmos* ("we live in a place redefined by our fresh knowledge – a new cosmos" as the author puts it) and covers 16 'hot' topics in astronomy, cosmology and planetary science. The topics cover the spectrum and include Big Bang theory, dark matter, dark energy, how the sun will die, the merger of the Milky Way with Andromeda (Milkomeda) fate of the universe, life on Earth and in the universe and presents up-to-date discoveries and knowledge in keeping with its extended title "*Answering Astronomy's Big Questions*".

The book is an easy to read with factual recounting of recent discoveries and directions being taken by research. It is aimed at readers already familiar with the basics and the topics covered in Sagan's *Cosmos*. Eicher has a comprehensive and up-to-date knowledge of all these topics and imparts that knowledge filtered to make complex concepts easy to understand and presents them in a balanced manner. The writing is supplemented by illustrations in the form of images and diagrams and the book includes an additional 41 pages devoted to a glossary, bibliography and index.

For those readers who enjoyed Sagan, *The New Cosmos* complements his book and takes the reader on an equally fascinating journey exploring the cosmos just like Sagan did 35 years before. The writing styles of the two authors differ – Eicher is more descriptive and factual (but sometime repetitive) compared with Sagan's evocative and lyrical style.

Eicher is an avid observer of celestial objects who was honoured by IAU with the naming of a minor planet, 3617 Eicher. Throughout *The New Cosmos* there are facts and descriptions on generally popular observing target making it a handy user-friendly reference book that will be appreciated by back yard observers.

*The New Cosmos* is very accessible and some of the topics were new to me and consequently fascinating (e.g. how large is the Universe), some provided a clear concise overview (e.g. Big Bang theory) or added detail (e.g. Milkomeda) to that which I already knew whilst one or two were less interesting than expected (e.g. Venus turning inside out). However, each of the 16 topics can be enjoyed on a standalone basis if the reader chooses to select or bypass topics to suit their personal interest.

Overall I found the book long on 'what' and 'how' and short on 'why'. I was surprised to find it barely mentioned gravitational waves but then I found it was published in 2015. On the whole, this book is a good read that brings the reader quickly up the curve on the rapidly changing facts, figures and theories relating to our universe.