

BOOK REVIEWS | NOVEMBER 01 2015

## Nature's Third Cycle: A Story of Sunspots **FREE**

Nature's Third Cycle: A Story of Sunspots.. Arnab Rai Choudhuri 293 pp. Oxford U. P., New York, 2015. Price: \$39.95 (hardcover). ISBN 978-0-19-967475-6.

Ilya Usoskin



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Craig F. Bohren, *Editor*

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**Nature's Third Cycle: A Story of Sunspots.** Arnab Rai Choudhuri. 293 pp. Oxford U. P., New York, 2015. Price: \$39.95 (hardcover). ISBN 978-0-19-967475-6. (Ilya Usoskin, Reviewer.)

When I opened the parcel with the book and saw the title *Nature's Third Cycle*, my first thought was "Is this about the Moon?" "Wow! It's about the Sun!" was my second. Even though my scientific career has been spent working on sunspots and solar activity, this view of the 11-year solar cycle as the third most important natural cycle (after the diurnal and seasonal cycles) was not clear for me, and the book enlightens many details I was not aware of. The author presents an unusual interpretation of the topic and highlights many interesting details often left behind the scene.

Arnab Choudhuri has, in addition to a solid background and a deep knowledge of the field, sharp eyes and a swift mind; on top of that, he has good language skills and an excellent imagination. The author guides readers through the history of the discoveries and developments in the field of solar physics, through details of the observations and theoretical bases, to the Earth and human beings and even into the future. The book is easy to read but difficult to put away. Choudhuri manages to present very complicated things in a simple yet correct way—his explanations and plots are

intuitively understandable. For example, the Chapter on plasmas, "The Forth State of Matter," does not contain a single formula, only simple and instructive plots. He maintains an excellent balance between generalizations and details.

*Nature's Third Cycle* is not only about scientific data and theories but also (and perhaps even more so) about the history of science. The reader follows the path charted by the scientific community starting from the beginning of the 17th century, with bright personalia of the classical scientists. The presentation is not cold, as might be provided by a neutral historian. The author himself contributed significantly to the development of solar physics during the last decades, and he presents an insider's, sometimes humanly biased, view of the development of solar physics.

This book offers a very rare balanced composition of a scientific textbook, historical overview, and lively personalia of famous scientists under a single cover. It will be interesting to a broad range of readers—from high-school students and curious amateurs to serious scholars and top-level professionals. I can only warn readers to be prepared to dive deeply into the fascinating world of the ever-alive Sun.

*Ilya G. Usoskin is a professor of Space Physics at the University of Oulu, Finland. He is particularly interested in the long-term evolution of solar activity.*

## BOOKS RECEIVED

**Electricity and Magnetism.** P. F. Kelly. 418 pp. CRC Press, Boca Raton, FL, 2015. Price: \$79.95 (hardcover) ISBN 978-1-4822-0635-7.

**The Glass Cage: How Our Computers are Changing Us.** Nicholas Carr. 282 pp. W. W. Norton, New York, 2014. Price: \$15.95 (paper) ISBN 978-0-393-35163-7.

**Hands-on Introduction to LabView™ for Scientists and Engineers.** 3rd ed. John Essick. 686 pp. Oxford U.P.,

New York, 2016. Price: \$44.95 (paper) ISBN 978-0-19-021189-9.

**The MOS System.** Olof Engström. 366 pp. Cambridge U.P., New York, 2014. Price: \$110 (hardcover) ISBN 978-1-107-00593-8.

**Astrobiology: An Introduction.** Alan Longstaff. 454 pp. CRC Press, Boca Raton, FL, 2015. Price: \$89.95 (hardcover) ISBN 978-1-4398-7576-6.

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