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**SCIENCE & TECHNOLOGY** 

Astronautics & Astronomy

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The following review appeared in the May 2012 issue of CHOICE:

49-5033 **OB15** 2011-30500 MARC The Astronomy revolution: 400 years of exploring the cosmos, ed. by Donald G. York, Owen Gingerich, and Shuang-Nan Zhang. Taylor & Francis, 2012. 426p bibl index afp ISBN 9781439836002, \$79.95

The Astronomy Revolution contains expanded, updated papers derived from a conference held in 2008 that broadly examined the state of astronomical knowledge. The volume begins with three prominent scientists' personal reflections as presented to a public audience. This is followed by an exploration of the impact of technology on current understanding in major fields of astrophysics and on the instrumentation required for attacking some unresolved problems. Much interest centered on the question of dark energy, but active areas of research such as black holes, the structure of the universe, and exoplanets received their due in the papers. These contributions represent an excellent summary of the frontiers of astronomy and astrophysics, and will surely be required reading for graduate students. Especially good examples are the chapters on supernovae, by Alexei Filippenko, and on dark energy, by Mark Sullivan. Each chapter is characterized by its comprehensiveness and elegance of presentation. The final part of the volume explores the relationship between astronomy and society in general, and includes discussions of exoplanets and extraterrestrial life, multiple universes, and the significance and meaning of the laws of nature. Readers will find this venture into metaphysics and ontology in this section both challenging and rewarding. Summing Up: Highly recommended. Upper-division undergraduates and above. -- D. E. Hogg, emeritus, National

Radio Astronomy Observatory