

BOOK REVIEW

Black Holes In Space

Patrick Moore and Ian Nicolson, W.W. Norton and Company, New York, New York, 1974 (First American edition 1976), 126pp., \$7.95.

Black Holes in Space is a neat little book for the nonscientist. In ten chapters, it discusses many aspects of black holes in an easy-to-read style. In the entire book there is only one equation and that is in the Appendix. There are also very few figures and no photographs (but who can photograph a black hole anyway?). Most readers will have no trouble reading this book in a single evening.

The first four chapters of the book introduce the subject of black holes and provide needed astronomical background for the nonscientist. Among the subjects discussed are the solar system, our galaxy, stellar evolution, and pulsars. The authors cover a tremendous amount of material in a few pages. However, the method of presentation is extremely clear.

Chapters 5 through 7 deal directly with black holes. Relativistic effects, Schwarzschild radius, and the event horizon are introduced in Chapter 5. The creation of black holes is explored in Chapter 6. Primary emphasis of this chapter centers on collapsing stars as a source of black holes. In addition, the authors explain what happens to matter entering a black hole and introduce the concept of a singularity. Chapter 7 describes the efforts being made to find black holes. Among the possible candidates discussed is the x-ray source Cygnus X-1.

Chapters 8 and 9 describe the possible implications of black holes. Could our universe be a black hole? Could mini-black holes exist? Could a black hole exist in the center of our galaxy? Could a white hole exist? These are some of the fascinating questions discussed in Chapter 8. If Chapter 8 deals with speculation, then Chapter 9 deals with the ridiculous. Subjects include making a weapon out of a black hole. The authors would have been better off excluding Chapter 9 from their book.

Chapter 10 represents a short summary of the important aspects covered in the book. In addition, the authors have included an Appendix explaining the Schwarzschild radius.

There are two major problems with this book. First, the authors have failed to provide a list of suggested further reading. This is a very elementary book. Where does the reader go from here? The second problem will be more apparent to the more advanced reader. The authors give a lot of facts and numbers concerning suspected black holes and research on black holes. None of this information is referenced. Where did the authors get these facts and numbers? The reviewer has found a couple of numbers in this book which look suspect. Unfortunately, there is no way of checking them out. The reader is asked to accept the information given in this book on faith. The more advanced reader will find this difficult in some cases.

Despite the problems listed above, Black Holes in Space is recommended, particularly for the nonscientist. More advanced readers, unfamiliar with black holes, will find this book of interest as an introduction to the subject.

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