

all aspects of modern research on astrophysical black holes. A short chapter on gravitational waves is a welcome and timely addition to the end of this section of the book, considering that the Advanced LIGO detectors are poised to begin their first observational campaign. The 10th and final chapter focuses on quantum and speculative aspects of black holes. Bailyn's discussion in that chapter of Hawking radiation and primordial black holes is valuable, but there are many popular, entertaining science books that discuss those and other issues in cosmology—predominant among them Stephen Hawking's own still-relevant classic *A Brief History of Time* (Bantam Books, 1988).

Unfortunately, the introductory theory section is relatively weak. That may not be too surprising, since it's unclear who the book's target audience is. The mathematics is kept at a basic undergraduate level, but the physical ideas are often complex. The book is too basic to serve as a topical review for researchers, and the author does not shy away from technical jargon (though he provides a helpful glossary). And some typographical errors early on may confuse the serious student attempting to follow the derivations.

What Does a Black Hole Look Like? would not serve well as a textbook. Although possibly useful as a resource for an undergraduate survey course, the book is too short and too complex to be a main text. Advanced students would be better served by reaching for Bradley Carroll and Dale Ostlie's *An Introduction to Modern Astrophysics* (2nd edition, Addison-Wesley, 2006). Bailyn's book does improve over Carroll and Ostlie's text by incorporating up-to-date observational results and discussing open problems.

The book's best audience would appear to be technically minded non-specialists who are intrigued by black holes. For them, the author provides a fascinating glimpse into how astronomers study those exotic objects and how the same data set can lead to a variety of interpretations. As an introduction for the growing population of scientifically passionate nonscientists, this brief work is a success.

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