

KIRKUS REVIEWS

TITLE INFORMATION

BEYOND THE SAGA OF ROCKET SCIENCE

In Space to Stay

Walter Sierra

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BOOK REVIEW

The third installment of a rocket scientist's odyssey through the history of space exploration.

In this series entry, Sierra traces an arc that leads from the United States government sparing almost no expense to beat the Soviet Union to landing men on the moon in the 1960s to the virtual mothballing of NASA amid "the harsh realities of public apathy, shifting priorities, and a turbulent political environment." Today, he laments, the U.S. space program "seems to have lost the luster it had during the space pioneering days of the 1960s when the nation was in a space race with the Soviet Union." Sierra's phenomenally researched and lavishly illustrated book captures the excitement of that halcyon period, spanning everything from the Apollo missions and the *Challenger* space shuttle disaster to the International Space Station. Space-program aficionados could hardly ask for more detail, and the technically inclined can plumb the intricacies of "density specific impulse" and combustion dynamics. The author has a talent for making the science accessible even for the layman, noting, for example, as when discussing the concept of Lagrange points: "Like a ball balanced at the peak of a steep hill, any slight perturbation will push the satellite out of equilibrium and roll it down the hill." Details range from the mundane—after the first space shuttle flight in 1981, for instance, pilot Robert Crippen reported that the toilet suffered from an annoying "low urinal flow and a feces separation problem"—to the awe-inspiring; the shuttle, Sierra says, was "the most complex machine ever built," with more than 2.5 million parts, including almost 230 miles of wiring. Particularly memorable is the portrait of the German-born Wernher von Braun, who led NASA's development of the Saturn V rocket that took Apollo 11 to the moon. The book was published before the successful maiden voyage of Elon Musk's spacecraft, but Sierra is hopeful that private enterprise can help keep the space dream alive: "In the coming decades human expansion will take place across the solar system," he predicts.

A work that provides enough detail to satisfy laypeople and exacting space buffs.