James Van Allen: The First Eight Billion Miles

Roger D. Launius

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approach specific subjects, how the community and church are involved in selecting texts, and what students read and study.

Fittingly, the book is appropriate for Amish people who are careful about what they read. Instead of photos of Amish schools, students, and parents, the only illustrations are line drawings of Amish school buildings. In keeping with the Amish desire to avoid personal attention, Dewalt does not identify the Amish individuals who provided information and access to the Amish schoolhouses. The book reflects who the Amish are and what they believe.

Dewalt has done extensive research, and the data he presents is impressive. He is obviously a sympathetic observer of the Amish and their schools, and his accounts and descriptions are generally quite positive. But he does not romanticize the Amish and he does not overlook the challenges they face. His work leaves us with the lingering question that dogs much research on the Amish: Are the Amish relevant to wider society or are they simply a curious group of iconoclasts living on the fringes?


In 2007 each of the three principals involved in launching the first U.S. satellite into orbit—Wernher von Braun, William H. Pickering, and James A. Van Allen—had biographies published about their lives. That was entirely appropriate at the time of the 50th anniversary of the beginning of the space age. All three deserve well-researched and well-written biographies that seek not so much to glorify but to analyze and understand this trio and their efforts in creating spaceflight. Of these new biographies, all are creditable, but unfortunately only one is definitive. Unfortunately, it is the Wernher von Braun biography, not the biography of Van Allen under review here.

Abigail Foerstner’s James Van Allen: The First Eight Billion Miles is satisfactory in many respects—and it is certainly engagingly written. It will serve as a useful basic text on the life of a vital actor in the first half-century of the space age, but it is unsuccessful in offering the insightful, critical analysis that Van Allen deserves. Of course, Van Allen
was a pathbreaking astrophysicist best known for his work in magneto-spheric physics, the scientist who built the instruments on *Explorer 1*, launched on January 31, 1958, and analyzed data about the radiation belts encircling Earth. Van Allen became a celebrity because of the success of that mission, and he pursued other important space science projects thereafter. The radiation belts he discovered now bear his name, and the discipline of magnetospherics became important in part because of his initial work. In one way or another Van Allen was involved in the first four Explorer probes, the Pioneers to the outer planets, several Mariner space probes, and the orbiting geophysical observatory. Thereafter, he continued to provide significant scientific analyses throughout his long career, retiring in 1985 but still working until his death in 2006 just shy of his 92nd birthday.

Author Abigail Foerstner had unparalleled access to Van Allen, his papers, his family, and many friends and colleagues, but the result is somewhat less than the sum of its parts. She does well in describing the amiable Van Allen and his career at the University of Iowa, the Applied Physics Laboratory, and in space science. But Foerstner never succeeds in bringing a broader understanding to her subject. Van Allen was at the center of a scientific debate about the origins of the solar system, the nature of the relationship between the earth and the sun, and larger space policy issues relating to the purpose of space exploration that have vexed the space community since the 1950s. Those issues were vital to Van Allen’s life and to understanding him and his significance, but too often they are given short shrift, inadequate explanation, or erroneous explication. As only one example, Foerstner offers an inadequate and misleading account of the proposals and political limitations that led to the creation of NASA in 1958, reciting a simplistic assessment that concludes that “the administration and [Lyndon B.] Johnson never expected to really give up military control of the space program and pushed the controllable NACA [National Advisory Committee for Aeronautics] model” (165). It is difficult to see what the author intended by this statement. The NACA model was anything but military, and had proven “uncontrollable” from its creation by Congress in 1915. Regardless, the statement is both too inaccurate and incomplete to be acceptable.

Errors of fact are also far too present in this volume to trust it implicitly. For instance, Foerstner recounts a meeting between American officials and Nazi rocketeers under Wernher von Braun “a few weeks prior to the fall of the Reich and offered asylum to the rocket specialists” (82). That presumably started the process of von Braun and his rocket team’s surrender to the United States at the end of the war. The
only problem with this story is that it never happened. I am sympathetic to authors who occasionally print incorrect information here or there. It happens to everyone, but I worry about accounts such as this for which there is no evidence. Foerstner uses references, not notes but short snippets from the text with a source following it. There is no page reference for these snippets, so readers must search the references section for the text in question. Too often I failed to find the source, as was the case for this story.

Overall, *James Van Allen: The First Eight Billion Miles* is an acceptable biography that will be of interest to many but certainly will not be as useful to specialists in the field as had been anticipated. I had harbored hopes that this would be the seminal work that all would have to refer to in considering this scion of space science, but there is still much more about James Van Allen that eludes us. Perhaps a future biographer will explore more fully his scientific discoveries, his role in space policy, and the contributions he made to solar-terrestrial magnetospherics.


Regionalism is a word most people use without reflection. It evokes conventional wisdom about a place or the rube-like antithesis of cosmopolitanism. Powell argues for deeper understanding. Whereas other conceptualizations of place (such as home, city, and state) refer to specific sites, he notes that regions always are relational terms. To say that the American West is a frontier culture, for example, is to compare it to the nation as a whole. This means that regions are dynamic entities, products of competing definitions. As such, they can be windows into the complex relationships between people and places, a perspective sorely needed in this dehumanizing time of globalization.

In recent decades, students have learned to leaven their generalizations about American culture with considerations of race, gender, and social class. Powell wants to add region to this list as a way to understand tensions such as local-global, periphery-core, interior-exterior, and domestic-foreign. It is an important argument. Thoroughly grounded views from Iowa farmers or West Virginia miners,