

Book Review - Space: What Now?

Tom Hill, Forward by Buzz Aldrin. Baltimore: Publish America; 2005. 310 p.

Review by J. Paul Douglas

The breadth of coverage in this book surpasses any written heretofore on the industry and exploration of space and is a must-read for everyone who hopes to possess a fundamental knowledge of these subjects with which to form rational and well-founded opinions.

Hill begins with a discussion of the current state of affairs in the space programs of the US, Russia, Europe, Japan, China, and India, with emphasis on the US. Lending to the feel of an up-to-the-minute report, he covers the emerging role of private enterprise and space prizes such as that of Mojave Aerospace Ventures spurred on by the much-publicized X Prize of 2004. It is this area of private entrepreneurship that promises the most rapid advances towards permanent, human settlements in space, and Hill's recognition of the fact firmly establishes him as a genuine space visionary with an eye for the big picture.

The book then takes a step back to the origins of rocketry and walks the reader through its evolution into the propulsion system of modern space programs. From there, we're segued to Space and Popular Culture, the Columbia Tragedy, even Space Activism - all inseparable terms in the equation of human space affairs. Along the way, Hill examines a few of what he calls, "modern-day myths." One of these is "If space were important it would pay for itself." What many fail to recognize, and something Hill illuminates in this section, is the natural squeamishness that corporations and investors feel towards the uncertain markets in which new technologies may or may not flourish. But Hill also considers another significant hurdle that continues to hinder permanent, prosperous industry and settlements in space: infrastructure. History has shown that the necessary precursor to any viable settlement is the establishment of an infrastructure. He proposes a series of orbiting depots that would not only provide on-orbit supplies, thereby reducing the expense a company or organization spends in getting to, and staying in, orbit but could also serve as safe havens in the event of an emergency during ascent/flight.

Subsequent chapters deal with the president's new space initiatives and the various ways in which those goals might be realized. It has been suggested that Hill dealt with the material in these chapters with a bias towards the Mars direct approach, as opposed to the moon first. However, no such bias was detected by this reviewer. Indeed, Hill effectively explains the pros and cons of each approach without undo emphasis to one in particular.

The book ends with a chapter on the technical aspects of space flight, including discussions on the mechanics of rockets, orbits, reusability, launch windows and nuclear power in space, the latter being one area where it is fair to say he shows bias. Still, it does not necessarily follow that because one is biased he is therefore wrong. Hill offers a strong, rational argument for nuclear power in space.

From front to back, the book is a complete work and will appeal to both the layperson and the experienced aerospace.