

BOOK REVIEWS --- "Roads to Space"

Anyone who has ever struggled for hours on Christmas Eve with a gift labeled "Some Assembly Required" can appreciate the difficulties and the rewards offered by "Roads to Space". The contributions are almost randomly scattered through the long, wide flow of Russian space history, with some topics overlooked and others triple-teamed by often grossly conflicting versions. But for the space history buff with the endurance to wade through these richly textured and highly personalized fragments, the random threads do indeed eventually wind up woven into a magnificent tapestry of absolutely unprecedented crispness and color.

Based on a collection of memoirs published in Russia a few years ago, the book is a raw collection of 34 independent accounts of the dawn of the Russian space program. Few if any of these writers are "household names", even in Russia -- but they were key players in the space and missile industry, and they were devoted "space nuts", fully aware and immensely proud of their roles in opening the Space Age.

As the editors warn, this book is not for reference, since it is full of misremembered dates, incomplete chronologies, plus the typical collection of rationalizations, excuses, and gossip typical of oral history. Nor is it for beginners: having a good overall grasp of the Russian space program history helps immensely.

Editing was attempted by the American publishers, but without success. Names are often unreliable ("Patsayev" is spelled three different ways on two pages, and Alexander Nosov and Sasha Nosov are separately indexed as if they were two different people). Key topics are unreliably indexed (the Plesetsk Cosmodrome has only one entry even though it is mentioned half a dozen times, and I noticed similar oversights with highly interesting topics such as the 'Vulcan' super rocket and important figures such as Mikhail Ryazanskiy). Nor are obscure references bolstered by "best guess" associations (e.g., the reason for the 1969 Soyuz-6/7/9 rendezvous failure was explicitly given except that the actual mission name was not mentioned).

Yet the material is a treasure. Countless individual incidents are recounted in vivid detail, with different accounts providing unintentionally supportive and deeply humanized images. Three different writers describe their most hated pests (all different) at the Kapustin Yar missile range in the late 1940s. The image of the joyously leaping dogs back from the first animal rocket flight is unforgettable. A detailed list of rocket accidents and the precise mistakes that led to them covers page after page of another engineer's memoir.

Historically fascinating and never-before-published facts abound. The biomedical telemetry from the dying Soyuz-11 cosmonauts is described, along with the results of their autopsies. The engineering judgment and organizational virtuosity of Sergey Korolyov is illustrated by dozens of specific examples. New details -- some conflicting -- come out about the firing of live nuclear warheads on rockets in the late 1950s.

Altogether these items are glistening jewels on the Christmas Tree under which the "assembly required" gift, after all the effort, awaits the intended recipient. It's well worth the concentration required.
