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Early indications of Soviet intentions Scientists gather to review IGY progress; A memorable cocktail party: The announcement; Closing the conference; Continuing reactions; Chapter 7: The U.S. Satellite Competition; Competing launch vehicle proposals; The Stewart Committee and the Vanguard decision; Keeping the Orbiter dream alive; Chapter 8: Go! Jupiter C, Juno, and Deal I; Obtaining the approvals; Preparations at Huntsville and Pasadena; A call from the Jet Propulsion Laboratory; A hurried move to California; Building the Deal I satellite; Instrument calibration
The corona discharge problem, again Environmental testing; Chapter 9: The Birth of Explorer I; The first countdown attempts; The Deal I launch: Explorer I in orbit!; Public jubilation; Returning from the Cape; Chapter 10: Deal II and Explorers II and III; Building the Deal II instruments; To Cape Canaveral for the Deal II launch; A heartbreaking failed launch attempt; The crash effort for a second try; The Vanguard I launch; A successful Explorer III launch!; Chapter 11: Operations and Data Handling; Explorer I operation; Explorer I data acquisition; Explorer III operation
Explorer III data acquisition Data flow; The ground network; Data tape logistics; Making the data intelligible; Reading and tabulating the information; Chapter 12: Discovery of the Trapped Radiation; Iowa's cosmic ray experiment; Early hints of the high-intensity radiation; Examining the Explorer I data; From perplexity to understanding with Explorer III; My hurried move back to Iowa City; The announcement; The Soviets missed the discovery; Chapter 13: Argus and Explorers IV and V; Nuclear weaponry and the cold war; The Argus effect and project; NOTSNIK; The Iowa cosmic ray group and Argus Explorer IV and V preparation and launch

Sommario/riassunto

Published by the American Geophysical Union as part of the Special Publications Series. *Opening Space Research: Dreams, Technology, and Scientific Discovery* is George Ludwig's account of the early development of space-based electromagnetic physics, with a focus on the first U.S. space launches and the discovery of the Van Allen radiation belts. Narrated by the person who developed many of the instruments for the early Explorer spacecraft during the 1950's and participated directly in the scientific research, it draws heavily upon the author's voluminous collection of labor
