

Building for Momentum

The true space spectaculars projected in the early years of the decade required years of developmental steps. After the third Transit carrying a SNAP-9A was aborted in April 1964, it was five years before another RTG flew on a successful space mission. As preparations proceeded for using isotopic power on NASA missions, experience dictated that safety continue to receive major attention. Indeed, major changes in safety were an important part of the story of the RTGs in the last half of the decade. One reason for the changes in safety concepts and procedures was the great increase in the amount of radioactive fuel being flown. The SNAP-3 units used on the Transit launches at the start of the decade bore just 1800 curies of Pu-238 on unmanned missions; while the SNAP -27s that accompanied Apollo 12 on its manned lunar landing mission in 1969 bore 45,000 curies of Pu-238³

During the latter part of the 1960's, the organizational changes implemented at the mid-point of the decade had two significant impacts: commitment to higher powered NASA missions, which progressively increased the magnitude of the RTG effort and the amount of radioactive fuel in the devices; and mobilization and decentralization of technical and administrative support so as to bring into play more of the far-flung laboratories and other facilities of both the AEC and NASA.

In describing the new organizational arrangements for the nuclear space program of AEC and NASA, Finger noted that the changes brought together all of the AEC work on space nuclear systems into the agency's new Space Nuclear Systems Division. It also brought together all of the AEC and NASA work on space nuclear systems so that the program could be conducted in a collaborative way. The new arrangements allowed program review and discussion to occur among all the responsible AEC and NASA people, including the personnel at the laboratories of these agencies, and those at headquarters.⁴ Under the new arrangement, when a specific nuclear power system was to be used on a particular mission, AEC personnel were assigned to the responsible Mission Center. Finger explained the rationale for this policy:

The subsystems that must go into a spacecraft to make its operation fully successful must be so closely interrelated, their operating characteristics so closely integrated, that changes to any one of them may