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Author: Mr. Nathanial Long
The Ohio State University, United States

Ms. Rania Khamees
The Ohio State University, United States
Dr. Elizabeth Newton
The Ohio State University, United States
Dr. John M. Horack
The Ohio State University College of Engineering, United States

APPLYING MULTIPLE STREAMS POLICY ANALYSIS TO HISTORIC AND CURRENT NUCLEAR THERMAL PROPULSION

Abstract

Political barriers to Nuclear Thermal Propulsion (NTP) adoption must be overcome today if current NTP research and technology development is to have an impact on future space missions. NTP is an enabling technology for human and advanced robotic exploration of Mars and the outer solar system. The United States developed NTP capability between 1955 and 1973, but the technology was not adopted into the national technology portfolio to be used on future missions due to political barriers. One method of policy analysis is the multiple streams methodology. This methodology suggests that policy is adopted when problems, policy solutions, and politics converge. By analyzing NTP through this framework, political and communication strategies can be suggested to help converge the politics stream with the problem and policy streams. In the 1960s, only the policy solution of the multiple streams methodology (development of NTP technology) was developed enough to warrant serious consideration. Today, the problem stream is much more defined with both government agencies and private companies considering missions to Mars and beyond. Work still needs to be done to develop the politics stream so that NTP technology is available and widely used for both exploration and commercial exploitation of space. This paper suggests strategies for building popular, industry, and political support for NTP as well as justifications for committing financial and personnel resources to the goal of building political support.