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JAPANESE SPACE ACTIVITIES AND THE U.S. SPACE SHUTTLE PROGRAM: POLICY
ACHIEVEMENTS AND LESSONS

Abstract

Japanese space activities had been supported by the U.S. Space Shuttle program until the program finished the 135th and last mission on board “Atlantis” in July 2011. Japan had sent its astronauts to the Space Shuttle flights twelve times since September 1992. At the same time, Japan has also participated from the beginning in the International Space Station (ISS) program, originally called the U.S. Space Station program. As Japan has never had its own human spaceflight program, its human spaceflights have been basically limited to the Space Shuttle and ISS programs.

The origin of this course of Japanese human spaceflights could be traced back to the Japan-U.S. space relations during the 1970s. Around 1970, the United States announced its “post-Apollo” space program and invited western countries, including Japan, to participate in the program. The post-Apollo program consisted of two main proposals, the “Space Shuttle” and the “Space Station.” Although the United States decided to develop the Space Shuttle basically by its own efforts in January 1972, Europe and Canada did participate in the development of its components. But, Japan decided not to participate directly in the international cooperation in September 1974. In other words, Japan decided to participate in the Space Shuttle program in the field of utilization. The Japanese Space Experiments with Plasma (later Particle) Accelerators (SEPAC) were conducted on board the “Spacelab” of the Space Shuttle in November 1983 and March 1992. The cooperation in the space science experiments led to Japanese human spaceflights. Japanese astronaut Mamoru Mohri conducted the first Japanese human spaceflight on board the Space Shuttle in September 1992. Thus, the history of the U.S. Space Shuttle program was also that of Japanese main space activities.

This paper reexamines the relationship between Japanese space activities and the U.S. Space Shuttle program from the beginning to the end, from the perspective of Japan-U.S. diplomatic history. In particular, it analyzes why and how Japan couldn’t participate directly in the program at the beginning, but afterward could participate in its utilization, such as space science experiments and human spaceflights, by making the most of the important related documents and previous studies in both countries. Finally, this paper would summarize policy achievements and lessons of the U.S. Space Shuttle program for Japanese space activities, and give some suggestions for the future Japanese human spaceflight program.