

Manned Space Mission for Space Frontier

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Human space activities were started in 1957, as the first man-made satellite, Sputniks. Thereafter, as well known, the space development race has been deployed with the Cold War for the background and has possessed a political meaning as strife for superiority of their own technology and science power. Owing to huge amount of resources, manpower and budget, on each side, humankind accomplished manned space flight around the earth and soon a NASA astronaut, Neel Armstrong, put the first human footprint on the moon surface in 1969.

After several years of worldwide excitement, the Apollo project was terminated with Apollo 17 and U.S. and Soviet Union set sail to different directions. Soviet Union concentrated its resource on the long-time dwelling in space using Soyuz Spaceship and Mir station. On the other hand, U.S. rushed into development of reusable transportation system from the ground to space, the Space Shuttle, and later moved on to the permanent outpost in orbit as an international cooperation project.

In 1990s, political situation was drastically changed by the collapse of Soviet Union and the end of the Cold War that had urged both nations to promote the space development enthusiastically. Confronted with financial difficulty, Russia decided to join the International Space Station project to maintain their space development capability and the international partners welcomed Russia's participation because of its ample experience of human dwelling in space.

In 2003, a new strong player came up in the manned space development arena that had been monopolized by U.S. and Russia. China had already accomplished a fairly good success in unmanned space development field, commercial launching service for example and finally succeeded in launching and returning their astronauts to the ground safely twice so far. According to their long-term plan, they have strong intention to expand their manned activity to the moon and beyond.

In 2004, George Bush, President of the U.S., announced the U.S. New Space Policy that includes a series of ambitious projects, such as return to the moon, manned Mars exploration and further expansion of human activity in the entire solar system under strong leadership of the U.S.. It is summarized as follows,

STEP 1

By 2010, the International Space Station is to be completed and the Space Shuttle is to retire from operation,

STEP 2

Crew Exploration Vehicle (CEV), in place of the Space Shuttle, is to be developed by 2008 and to be operational by 2014,

STEP 3

Thereafter humankind is to return to the moon first and next to the Mars and beyond.

Other nations including Japan were compelled to respond to this U.S. policy and started discussion on their own long-term policy before and after the announcement. After six months discussion, JAXA issued JAXA's Vision2025 in 2005 which will be input to discussion on Japan's Long Term policy Space development in the Space Activities Commission of Japanese government. Currently JAXA is continuing in-house discussion on detailed implementation plan of their vision mentioned above.

My talk is intended to introduce the worldwide discussion around the U.S. New Space Policy focusing on JAXA's future plan and also newly emerging trend in the private space travel, represented by the well-known success of Spaceship One.