

Participating Support Activity for Astronaut Soichi Noguchi on Space Shuttle STS-114

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Photos from upper left to bottom right: Space Shuttle on the launch pad 39B, Vehicle Assembly Building (VAB), JEM at KSC, First Lady Mrs. Bush, Shuttle launch (courtesy of Mr. Akutsu, JAXA), Return ceremony (from left: NASA Administrator Griffin, Space Shuttle Commander Collins, Pilot Kelly, Mission Specialists Noguchi and Robinson)

After an accident of the Space Shuttle "Columbia" in January 2002, STS-114 of the Space Shuttle "Discovery" which had been prepared for the Return-To-Flight was launched successfully on July 26, 2005 and returned to the ground safely on August 9, 2005. A Japanese Astronaut Noguchi performed three times of extravehicular activity (EVA) successfully during the shuttle mission. I stayed as one of JAXA support group members from its launching to the return in the U.S., and had a very valuable experience through this activity. At first I would like to thank people concerned particularly.

The STS-114 was going to be launched at first on July 12, 2005. Ceremony of launching begun by a solo of "America the Beautiful" was taken place at the IMAX theater of Kennedy Space Center (KSC), but unfortunately the launching postponement was announced by malfunction of a liquid hydrogen

engine cutoff (ECO) sensor just after the ceremony. Then NASA investigated the cause energetically, but a clear cause could not be specified. However, it was to be launched on July 26 after various counter measures including making the electric grounding tight.

The day of the STS-114 launch was very hot but splendidly fine weather. The Space Shuttle Discovery was succeeded in launching with a flash of light and a roaring sound while the first lady Laura Bush watched it. Just after launching, the shuttle control was moved from KSC to Johnson Space Center (JSC) in Houston, then I moved to Huston. The shuttle docked into the International Space Station (ISS), and Astronauts Noguchi and Robinson performed the first EVA on the third day. At this EVA, a thermal protection tile repair experiment, GPS antenna exchange of ISS were performed. The second EVA is performed on the fifth day, and exchange work of inertial momentum gyro (CMG) was conducted. The third EVA was performed on the ninth day, and exchange of Materials ISS Experiment (MISSE), thermal protection tile repair were performed. All of EVAs conducted for around 7 hours, but both astronauts achieved the EVA activities extremely smoothly. A VIP call to contact with Prime Minister Koizumi was performed on the tenth day. And undocking for the return was finally performed. The planned return to KSC was tried for two days, but it was finally performed to Edward Air Force base in California due to bad weather in KSC. The shuttle has returned safely.

We JAXA staff held a meeting for JAXA crew security confirmation every day during we stayed in the U.S. Further TV-teleconferencing were held with Tokyo, if necessary, for checking security. When it returned safely, it was true that we were really relieved. This launch was not usual flight but particular Return To Flight. The situation of thermal protection tiles of the shuttle was inspected by every method using around 100 cameras which were installed on the ground, a camera installed on the Orbiter Boom and Sensor System (OBSS) and a high definition video camera on the shuttle. As a result, some damages of the thermal protection tiles were found, and the damages were examined thoroughly technically whether they were no problem for its safety of the return. As you know, two tile gap fillers were pulled out by EVA at last.

Finally I would like to give you a Haiku that I made:

On the moment of the shuttle launch,

Daytime in Mid-Summer
Flash of Light Went Over It
It was Impressive Extremely

That's all.