

Summary of Japanese Mars mission Nozomi

Hajime Hayakawa[1]; Hayakawa Hajime [2]

[1] ISAS/JAXA; [2] -

Nozomi is the Japan's first planetary mission to Mars. It was launched on July 4th, 1998 from Uchinoura Space Center (USC) by M-V-3 launcher. Originally Mars orbit insertion (MOI) was designed on October 1999. However due to an accident at the time of departure from Earth on December 20, 1998, orbital design has to be changed and MOI is postponed to December 2003. On April 2002, Nozomi suffered another trouble which is recognised as a short mode failure of an instrument. Due to this failure, Nozomi was not able to send telemetry data and to perform attitude/orbit maneuver. Extensive efforts to investigate/recover the cause enables us to perform attitude and small orbital maneuvers since early September 2002. With several attitude and/or small orbital maneuvers, Nozomi succeeded Earth swing-bys on December 2002 and June 2003 and entered the trans Mars orbit. After the swing-by on June 2003, recovery operation was started from early July. However the recovery operation was not succeeded and MOI was abandoned on December 9, 2003. Nozomi did Mars fly-by on December 14, 2003 and became the artificial planet with the orbit which is close to the orbit of Mars.

Summary of the Nozomi mission will be presented.