

SPACE EDUCATION AND OUTREACH SYMPOSIUM (E1)
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CONSCIOUSNESS SURVEYS CONCERNING ASTEROID EXPLORER "HAYABUSA"

Abstract

Asteroids are thought to be celestial bodies that preserve information from the time of the solar system's formation. If we collect a sample from an asteroid and bring it back to earth to carry out precise research on it, we can gain some precious clues to understand the origin and evolution of the solar system. Bringing back a sample from a celestial body in the solar system is called sample return. Hayabusa is a probe to verify the practicality of acquired technology developed to archive future full-scale sample return missions. Hayabusa was launched aboard the M-V launch vehicle on May 9, 2003. It was accelerated by a swing-by of the earth in May 2004 and reached its target asteroid Itokawa on September 12, 2005, after traveling about 2 billion kilometers. In September and October that year, Hayabusa completed the most remote-sensing and measurement of the geometry of Itokawa and made two landings in November to collect a sample from Itakawa. On June 13th, 2010, Hayabusa returned to earth, delighting the people of Japan with the completion of its journey. Through scientific observations performed during Hayabusa's stay on Itokawa various knowledge was obtained including on its gravity and surface condition. The achievements of Hayabusa were featured in the scientific magazine, "Science". We carried out numerous consciousness surveys concerning Hayabusa and analyzed the resulting data to determine what is expected of space development and space science.