

First Test Flight of Microgravity Experiment System Using Free-fall Capsule Released from High Altitude Balloon

Yuko INATOMI¹, Takehiko ISHIKAWA², Tatsuaki HASHIMOTO¹, Shujiro SAWAI¹, Yoshitaka SAITO¹, Tetsuo YOSHIMITSU¹, Shin-ichiro SAKAI¹, Hiroaki KOBAYASHI¹, Kazuo FUJITA¹, Nobutaka BANDO¹, Masayuki GOTO², Itaru JIMBO³, and Hiroshi YAMAKAWA¹

¹ Japan Aerospace Exploration Agency, Sagamihara, Kanagawa, Japan, inatomi@isas.jaxa.jp

² Japan Aerospace Exploration Agency, Tsukuba, Ibaraki, Japan, ishikawa.takeihko@jaxa.jp

³ Tokai University, Kanagawa, Japan, jimbo@keyaki.cc.u-tokai.ac.jp

Abstract

The first microgravity experiment using a new free-fall capsule released from 40 km altitude was performed on May, 2006 based on a drag-free technique. The fundamental data for analyzing the drag-free control, the flight sequence, and the wireless communication between the capsule and a control room were successfully obtained in the flight.