Asian Beneficial Collaboration through Kibo utilization (Kibo-ABC)

Concept Note

1. Scope and Objectives

Kibo-ABC is a collaborative program established by the Space Environment Utilization Working Group (SEUWG) of the APRSAF that aims to promote utilization of the Japan Experiment Module (JEM)—also called “Kibo”, which means “hope” in Japanese—in the Asia-Pacific region. Kibo is a human space facility that enhances the unique research capabilities of the International Space Station. The Kibo-ABC accumulates and shares experience among participating space agencies, researchers and engineers in Asia, and enhances cooperation projects in Kibo utilization between the member countries and Japan.

2. Activities and Discussion Points

■Kibo-ABC Workshop
  - Discussions and considerations for creating and conducting Kibo utilization projects
  - Development of multilevel cooperative relationships among the participating countries in the field of space science

■Asian Try Zero-G (2011–Present)
  With the goal of promoting manned space experiments aboard Kibo, Japanese astronauts have been conducting selected small experiments covering the themes proposed by youth in this region. The Asian Try Zero-G 2016 mission will soon be performed by the Japanese astronaut Takuya Onishi; five out of 120 proposals were selected by the Kibo-ABC member agencies. The mission status and activities in participating countries will be reported.

■Space Experiment for Asian Future Program: SSAF/Space Seeds for the Asian Future (2010–Present)
  The third mission of this program, “Asian Herb in Space (AHiS)”, was presented by Malaysia’s ANGKASA at the APRSAF-21. Feasibility studies and ground experiments have been conducted from both scientific and technical perspectives with the aim of conducting the plant growth experiment as part of our Kibo-ABC initiative. The preparatory activities, flight experiment plan, and post-flight activities of each country will be discussed.

■Other topics
  - Kibo-ABC Monthly Web Meeting:
    Discussion for improvement
  - Ground experiment opportunities for microgravity science:
    Introduction of parabolic flight and drop tower (simple freefall experiment)