HUMAN SPACE ENDEAVOURS SYMPOSIUM (B3)
ISS Utilisation (3)

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PROSPECTS AND CHALLENGES OF DEVELOPING COUNTRIES IN PARTICIPATING IN THE ISS

Abstract

The International Space Station (ISS) is the largest orbital platform for microgravity research. The space-based facility has stimulated human spaceflight, various researches, Earth Observation, climatic studies and space exploration. The major participants of the ISS are the USA, Canada, Japan, ESA and Russia. Some of the benefits that are derived from participation include national prestige, access to a platform for long-term microgravity research, science and technology development, innovations, educational benefits and socio-economic benefits. A few countries outside the developed bloc of nations have benefitted from the utilization of the ISS; this includes Brazil, Malaysia and South Korea.

In several fora, there have being discussions about giving opportunity to other countries to utilize the ISS. Particularly, the United Nations has initiated a program called the Human Space Technology Initiative. One of the aims of this initiative is to create awareness and opportunities for the utilization of the ISS by member nations of the UN, including developing countries. This paper discusses the prospects and challenges that developing countries face in participating in the ISS. The paper emphasizes policy issues (science, education and space policies), information dissemination, capacity building, institutional strengthening, regional cooperation and international support.

Presently, space-related researches are being conducted in some developing countries, especially in the area of development of smart materials for space exploration. Howbeit, human resources and infrastructure are still under-utilized. This paper also addresses how ground-based and space-based facilities can best be harnessed by developing countries.