Paper ID: 9448
oral
student

41st STUDENT CONFERENCE (E2)
Student Conference – Part 1 (1)

Author: Ms. Crystal Forrester
Space Generation Advisory Council (SGAC), Australia

PATHS FOR PROGRESS: SPACE AND THE SOUTHERN HEMISPHERE

Abstract

The Southern Hemisphere States, while possessing certain competitive advantages, also suffer from severe socio-economic drawbacks. We have identified current and future needs in the Southern Hemisphere from a political, geographical, and social perspective, with particular reference to the United Nations Millennium Development Goals. For the purposes of this paper, the Southern Hemisphere is defined to include all States with territory below the Tropic of Cancer, so that equatorial States which are politically or geographically aligned with the Southern Hemisphere are included. We have highlighted the competitive advantages of the Southern Hemisphere nations, such as strategic geographic location, low population density, vast expanses of vacant land, and cooperation with regional partners. We have proposed recommendations to develop these advantages into valuable contributions to their collective space capability. These recommendations revolve around using space technology in a national and international context and optimizing the existing capabilities to further fields of space research and applications. From the unique perspective of the Southern hemisphere, we have attempted to review three goals that would address the socio-economic requirements followed by implementations for each goal, the technology involved, legal and policy implications, financial aspects, and the indirect benefits have been elaborated. First, with a view to realize the distinctive Southern Hemisphere geographical assets for space activities and applications, we have established that the international recognition of specific advancements and specialty information within Southern Hemisphere States is an imperative. We have also suggested development of a Regional Space Industry Association to coordinate awareness of space related needs and advancements of the Southern Hemisphere. Second, we have addressed the issue of space-based applications for disaster warning and mitigation, and food and water security by proposing a collaborative approach for the processing and dissemination of earth observation (EO) data, coupled with the development of expertise and infrastructure to ensure optimal use of available EO and GIS solutions. Finally, space telecommunication capabilities with a particular reference to the UN Millennium Development Goals have also been addressed through the delivery of tele-health and tele-education to rural areas using satellite technology.