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IAF SPACE TRANSPORTATION SOLUTIONS AND INNOVATIONS SYMPOSIUM (D2)
Interactive Presentations - IAF SPACE TRANSPORTATION SOLUTIONS AND INNOVATIONS SYMPOSIUM (IP)

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SPACE TRAFFIC MANAGEMENT; IMPROVEMENTS AND PROPOSALS FOR THE SUSTAINABILITY OF SPACE TOURISM FLIGHTS.

Abstract

The exponential growth of new space technologies, specifically in space tourism flights (manned flights), and the placement of cosmic devices in different orbits is causing that in future missions, there will be a greater risk of impact between satellites and thus a greater amount of space debris will be generated. To achieve a future where human civilization begins a new way of life outside this planet, it is necessary to implement new methods for space activities.

The research purposes differ in promoting the development of space operations in governments and companies, mitigating space debris, and establishing a system for space tourism and satellite structures for commercial purposes.

The current management seeks to include future operations projected by government and businesses that involve greater participation of the entire population. For example, new activities such as commercial trips, hotels, planetary explorations, elaboration and putting into orbit the research equipment, these activities will need internal and external control so that there will be a good development and thus being sustainable to favor technology, the environment, and economy. The creation of a space traffic management plan will require the support and collaboration of governments and companies around the world, in order to share the necessary data from all operating agencies to avoid collisions, radio frequency interference, among others.

To achieve this, the creation of a public space information system is foreseen to achieve flight control, satellite orbiting, space tourism, a new impartial agency to control operations and business services to prioritize research and technology development, a redesign of the orbital structure for all satellites according to their needs and importance, and new arrangements for departures and entries to earth, so to avoid encroachment in air traffic and safety.

Space traffic in the future will become a common activity for mankind, new forms of transportation, technologies, education, economy, and health are coming with proper management of missions, manned flights, etc. With all this, it is intended that humanity achieve the next leap towards the exploration of new horizons.