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ASTRONAUTS WITH DISABILITIES: A DREAM BECOMING REALITY FOR A BIGGER PART OF HUMANITY

Abstract

Since 1961 with Yuri Gagarin's first flight, humanity has seen around 600 astronauts leaving the Earth for orbital adventures of short or long duration. While at the time it was considered as the most dangerous and inaccessible place, today it is the playground of more and more private and public agencies. This is well illustrated by the recent growing space tourism activity, and the new opportunities it opens thanks to the more frequent flights and the financial difference of a crewed launch compared to a few years in the past. Diversity has increased a lot recently, in terms of gender, culture, age, nationalities and even disabilities. This later is the aspect this study is focusing on.

After ESA's parastronaut feasibility project and Inspiration 4 crew launch with SpaceX, a brand new image of astronauts was born, allowing a wider part of humanity to participate to the Space adventure too. But how, after 60 years of human spaceflights, do scientists and engineers make it possible to launch people with disabilities in space? What are the necessary adaptations? What are the "acceptable" disabilities for a safe mission? How does society impact that revolution and also what will this giant leap have on society itself?

This research project was made in the frame of the DIVersity IN Astronaut Selection (DIVINAS) project which is part of the Diversity and Gender Equality Project Group from the Space Generation Advisory Council (SGAC). The team, composed of 4 space enthusiasts from different backgrounds, wanted to discover more about the possibility of sending people with disabilities to space, which might sound out of this world at first glance. After 8 months of research, and thanks to the insights of subject matter experts from private and public space agencies, this paper aims to explain in more detail the topic of astronauts with disabilities. Through the comments and feedback of parastronaut candidates, this study will highlight the challenges the industries, agencies and any other institution involved in this ambitious project must face to improve diversity in human space flights. It will show how important and necessary it is in today's society to work on the inclusion of people with disabilities, and why making the astronaut dream possible for everyone is a game changer in the era we are living in.