

Ground-Based Preparatory Activities (11)
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A GLIMPSE ON EVOLUTION OF ASTRONAUT TRAINING OVER THE YEARS

Abstract

Astronaut training has developed extensively with time back since the beginning of the space race, but it requires more attention from the world as training an astronaut is difficult as well as time-consuming. Proper methods are required to train our future astronauts so as to have a training program in which we can save time and resources. After the successful launch of SpaceX Falcon 9, future space missions will apparently require less time, so astronauts should be trained to be prepared for those missions in less time. Impacts of the same on astronauts including physical, biological, and psychological behaviour exhibit, hence, is very important to study and analyse. However, it still remains a challenge for space agencies to attain perfection in terrestrial astronaut training and to study actual impacts exhibited in various aspects on the astronaut in an extra-terrestrial environment. This paper highlights the evolution of astronaut training over the years including training centres for extreme environment, analogous training sites (Lunar/Martian), indoor training centres, and the change in training methodologies with the helping hand of modern technology like artificial intelligence and virtual reality. This study brings out the physical, biological and psychological aspects affecting the astronaut body subjected to microgravity for longer durations. It is due to these developments in the training of astronauts that we are able to send the next man and the first woman to land on the moon and hoping to send humans to the red planet next.

Keywords: Astronaut training, artificial intelligence, SpaceX, virtual reality.