

ZeroG-Naut and Mission Commander to support commercial space missions and customer activities inside cabin

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Abstract

The era of space travel, where anyone can go to space, is coming to life. As a result, the needs for spaceflights and zero-g flights are increasing, and what customers want to do in the cabin is also diversifying. It is important to have astronauts and zero-g astronauts who support the passengers and perform missions on behalf of the passengers inside the cabin. Here, we introduce the roles of zero-g astronauts and mission support astronauts.

ZeroG Mission Specialist “ZeroG-Naut”

Our International Space Service, Inc. and ASTRAX, Inc. have been providing zero gravity flight services for 7 years in Japan since 2012. We fly 3-5 times per year, and have provided zero-gravity flight experiences to about 120 passengers so far, six people per flight. In the early days, it was only to experience the feeling of weightlessness, but the needs of customers changed immediately, and the need to realize a dream (the world's first mission) in a weightless environment has increased. For example, some customers might want to have a zero-gravity wedding, photoshoots dressed up in costumes or even film videos. We have since created a job as a zero-gravity flight attendant who provides support for the mission in zero-gravity. This job is to achieve customers' needs while supporting customers during zero-gravity flights. In a zero-gravity environment, passengers actually can do almost nothing if they fly by themselves (which is usually their first zero-gravity experience). What is needed is an experienced mission support zero-gravity astronaut (zero g mission specialist) which we define as a “ZeroG-Naut”. The job is to make arrangements and adjustments with the customer in advance, prepare together, and board the aircraft together to support what the customer wants to do while flying.

Commercial Space Mission Specialist “Mission Commander”

When civilian spaceships begin to fly, the same needs as the zero-gravity flight services will be created to cater different customer needs. In other

words, the needs of space travellers are not just to see the Earth from space or to experience zero-gravity, but to realize their individual requests such as wanting to have a wedding in space, film movies and commercials, etc. Therefore, the mission support astronaut which we define as a “Mission Commander” will be an important role. This is not only an astronaut who controls the spaceship or experimental equipment, but also the same as our ASTRAX mission support zero-gravity astronauts, who travel together with the customer(s) on the cabin side to experience what they want to do in the spacecraft, since the trained support astronauts' job is to make the customer's dream come true in space. Pre-flight preparation and training are also required in the customer's country, especially in the cases where language barrier can potentially impact the mission outcome.

Conclusion

In this way, at ASTRAX, we provide total production service to our customers who have arranged a spaceflight contract through our company, from listening to their individual needs, selection of appropriate spacecraft, space flight contracting, preparation, and training until rehearsal and actual flight. As part of this, we have the ASTRAX Mission Support Control Center to support missions (not only scientific experiments but also various needs) performed by passengers in the spacecraft cabin, Mission Commander who flies into space with passengers and supports and moves behind the scenes and a spaceship simulator for training and rehearsals are available. ASTRAX operates a private space flight support educational institution called ASTRAX ACADEMY in addition to such facilities. We provide training for Mission Commanders to support space missions (focussing on what ordinary customers want to do in space), education and training for space both travellers (passengers) and operators who support space travellers.