

HUMAN SPACEFLIGHT SYMPOSIUM (B3) Commercial Human Spaceflight Programs (2)

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COMMERCIAL FLIGHTS TO SPACE

Abstract

More than five hundred persons from 35 countries of the world flew to space after the first space flight made by Yuri Gagarin in 1961. The majority of them were professional cosmonauts and astronauts. Only seven persons paid themselves for the ticket to space, Ch. Simonyi did that twice. Only these eight missions may be considered commercial. Approximately one flight per year was performed from 2001 till 2009. Presently we have started working on another commercial flight to be implemented in September 2015. RSC Energia is responsible for the technical implementation of commercial flights, Space Adventures and Orbital Technologies do marketing.

All commercial flights were made aboard Soyuz vehicle and each space flight participant stayed at the International Space Station for about one week. During the mission space flight participant realized traditional program including scientific experiments, Earth observation, television space bridges, education programs, etc. Space flight participants must comply with rather stringent requirements, both medical and personal. The candidates are approved with the account of the recommendations made by International expert group on the ISS crew selection and training.

Crew training takes from half a year to one year.

Experience gives understanding of the future tasks. It is necessary to facilitate access to space for commercial clients by creating flight opportunities and alleviating medical requirements. Limitation of the mission price is of great importance. Besides we need to increase the appeal of the program by introducing unique elements such as EVA, Lunar flyby, etc. Clients want to do something new, something nobody did before them in commercial flights.

Presently new vehicles (Advanced transportation vehicle new generation, RSC Energia, Russia; Dragon, SpaceX, USA; STS-100, Boeing, USA; Dream Chaser, SNC, USA) planned to be used for the commercial are under development. These vehicles will allow to considerably improve consumer quality of the commercial flights including safety, comfort level, cost, etc. It may help to increase the number of clients by order of magnitude.