

66th International Astronautical Congress 2015

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

Author: Dr. Alexander G. Derechin

S.P. Korolev Rocket and Space Corporation Energia, Russian Federation, alexander.derechin@rsce.ru

Mr. Igor Verkhovskii

Korolev RSC Energia, Russian Federation, soyuz732@rambler.ru

TRENDS OF THE COMMERCIAL FLIGHTS TO SPACE

Abstract

There was only one spaceflight participant in each crew of the "Soyuz" spacecraft commercial missions. Existing spacecraft design capabilities, as well as spacecraft operation requirements, do not allow expanding the number of spaceflight participants.

After putting the commercial manned spacecraft Dragon V2 and CST-100 into continuous operation it could be possible to add two or more spaceflight participants to the crew, which will expand this segment of the market and possibly lower price per seat.

Increase in supply on the commercial manned spaceflights after PTK NP, Dream Chaser, and perhaps, Shenzhou spacecraft market entry will boost work on commercial orbital stations. Currently there are a lot of space technology experiments and researches carried out in low Earth orbit. If the needs for new materials and drugs obtained by the space production are determined within 10 years, the conditions for the commercialization of manned missions in low Earth orbit will be created along with commercial spaceflights. The commercial manned spaceflights market volume can be up to \$1 billion in 2020-2024.