

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

Author: Dr. Oleg Saprykin  
TSNIIMASH, Russian Federation, oleg.sapr@gmail.com

Dr. Sergey Krikalev  
Yu.A. Gagarin Research and Test Cosmonaut Training Center, Russian Federation, skrikalev@gctc.ru

MANNED LUNAR INFRASTRUCTURE AND COMMERCIALIZATION OF FLIGHTS TO THE  
MOON

**Abstract**

The paper will be presented several scenarios for the construction of a manned lunar infrastructure. The authors analyze the proposed scenario, both in terms of solving the problems of Moon exploration (the pioneering human missions), and from the point of view of the possibility of commercialization fly to the Moon.

The authors show the advantages and disadvantages of scenarios. It is shown that the efficiency of development of the moon logically and technically linked with the efficiency of commercial space flights to the moon. Rational decisions dictated by studying the moon, can be seen as rational from the point of view of the commercialization of flights (to engage in research of non-state funds). In turn, decisions, rational only from the point of view of the commercialization of space flight, scientific research, are not always optimal for the decision of problems of development of the moon. The consequence of this is the conclusion that the motivation for the development and subsequent use of the moon shall include both of the considered aspect - the aspect of scientific research of the moon man and the aspect of commercialization.

In addition, the authors show specific examples, it is possible to consider means of manned Moon exploration, was created as a government or international projects, as the first prototypes of commercial manned vehicles. Pioneering government manned lunar exploration program may include a significant commercial component, given the deep potential market commercialization of lunar missions.