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

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## THE DAWN OF SPACE TOURISM BUSINESSES AND THE DEVELOPMENT STRATEGY IN REFERENCE TO AIR TOURISM BUSINESSES

## Abstract

At present, type of space tourism are proposed and discussed as follows, (1) suborbital flight (2) orbital flight (3)Moon travel (4)Mars travel. In the near future, the type of (1) will be developed and start-up as Virgin Galactic's SpaceShipTwo, Blue Origin's New Shepard.

The passenger space travel will be able to become to above the Satellite business for the utilization of space in present, also its impact on economic effects to the world economy. Space tourism business becomes similar in current passenger flight business. Moreover, the business environment for space tourism business is the same situation of the dawn of the aviation service for passenger, by starting to use for civilian use of rocket, launch site, and space relative facilities.

The aviation service had started with developing process in follows, "Barnstormers" flight show in the USA, short sightseeing fright at various places, airmail post service in the UK since 1911, passenger flight service for the business person in Germany from 1919. And therefore, the development of a space tourism business is able to accept the same process and strategy of past aviation business. Also, space tourism business is able to come under the category in the below, (1) Production of rocket and spaceship (Boeing Corporation, SpaceX) (2) Operation of spaceship and spaceport (Virgin Galactic, Spaceport America) (3) Offering business for tourists (Space Adventures, Ltd, HIS in Japan) Space tourism businesses have already started (1) to (3) in the USA, therefore It is only (3) in Japan at present. From the view of the history of commercial passenger flight, Japanese companies should aim to (2) at least, and (1) if it is possible.

This paper describes the present business status and problems of space tourism players, and compare with the viewpoints of air tourism business and passenger aviation in history, solving plans for these issues.