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HUMAN SPACE FLIGHT ACTIVITIES**Abstract**

Space commercialization has been accelerating. Commercial human space flight, especially space tourism is driving the creation of new space markets. The US space policy has been drastically changed to open the market for commercial companies to develop human space vehicles. Suborbital space vehicle development is also turning a corner. Virgin Galactic has conducted test flights and other companies are also in the race aiming to get into the market within a few years. Commercial spaceport development has been active all over the world to try to capture a share of these future markets.

According to the Futron / NASA space tourism market study, suborbital space tourism is expected to grow to a \$700M market within 5 years after the start of commercial operations. In addition, especially in suborbital, other new markets are also emerging such as microgravity experiments, earth observation, remote sensing, small satellite launching, and so on. These markets do not exist now. They are all brand new markets created by commercial human space flight.

Regarding commercial human space flight in Japan, recent activities include bookings for a good number of space tourism customers and a few suborbital space vehicle concepts. Also, early stage commercial spaceport development is very active in Japan. Though Japan is a small size country, there are 98 existing airports and there are several spaceport concepts based on the use of existing airports.

Now is the time Japan should consider its own safety standards and establish functions for commercial human space flight to get into these brand new markets. The Japanese government approved a New Space Basic Law in 2008 and New Space Basic Plan in 2009. According to this, space activities should be shifted from development to utilization and more commercial space activities are encouraged. In these circumstances, commercial human space flight activities are a good match for these new government policies. The new trend towards commercial utilization of space in general and in human spaceflight in particular presents a great opportunity for Japan to establish its role as the eastern Asian center of gravity for the NewSpace economy and for the up-coming point to point age of global spaceflight.

This paper will present the recent public policy actions, PPP activities and commercial space business developments to encourage the creation of domestic suborbital spaceflight capability in Japan along with international teaming and collaboration.