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A PRELIMINARY STUDY ON THE PRICE MODEL FROM AVIATION TO SUBORBITAL TO ORBITAL SPACE TOURISM

Abstract

In order to keep sustaining and continuous operations for a tourism business market, a reasonable and practical price model is one of the key issues. Furthermore, a tourism industry can only be sustainable after it is popularized to the general public. As of today, aviation tourism is a sustainable business, and a few thousands USD could afford a decent trip for tourism or leisure purpose. Look ahead to the suborbital space tourism (SST), although there is still no commercial operations, the tentative market price is a few hundreds thousands USD. In other words, the current market price is two-order of magnitude higher, or say 100 times of aviation tourism. Then for the orbital space tourism (OST), 7 millionaires already travelled to the International Space Station 8 times, and the SpaceX announced on 27 February 2017 it planned to launch two paying passengers on a tourist trip around the moon in 2018. According to the media report, the price is as high as several tens of millions USD, or say more than 100 times of SST. As a consequence, the current price ratios from aviation to suborbital to orbital space tourism are 1:100:10000. Through tourism market research, this paper proposed that the ratios must be reduced to 1:10:100 for the SST and OST markets to really become tourism industries. Recently, on 26 October 2017, the Public Investment Fund (PIF) of Saudi Arabia and Virgin Group have signed a non-binding Memorandum of Understanding for a partnership under which PIF intends to invest approximately USD 1 billion into Virgin Galactic. And on 18 December 2017, the Virgin Galactic and Italian Space Agency (ASI) announced that they had signed a Letter of Intent under which ASI would secure a full suborbital flight on Virgin Galactic's SpaceShipTwo for scientific research in 2019 at Spaceport America in New Mexico. Then on 12 December 2017, Blue Origin's New Shepard flew again for the seventh time from its West Texas Launch Site with 12 commercial, research and education payloads onboard, featured the next-generation booster and the first flight of Crew Capsule 2.0. Therefore, the commercial SST could be right at the corner, although OST could still be pretty far away. It is urgent to study proper price ranges and ratios from aviation tourism to SST and to OST.