

SYMPOSIUM ON COMMERCIAL SPACEFLIGHT SAFETY ISSUES (D6)
Commercial Space Flight Safety and Emerging Issues (1)

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FROM AVIATION TOURISM TO SUBORBITAL SPACE TOURISM: THE INSURANCE ISSUE

Abstract

Major purposes of this paper are to investigate the current development status of insurance issue for suborbital space tourism (SST) and to discuss the completeness as well as the insufficiency. There are many issues for the enhancement from aviation tourism to SST: consumer attitude, screening and training of tourists, space port facilities, suborbital reusable launch vehicles (SRLV), pilots, laws and regulations, marketing, insurance, operations, etc. In the insurance issue regarding SST, one of the major difficulties is how to properly regulate this specific new activity in which the three distinct regimes of space flight, aviation flight and high-risk adventure tourism must be drawn together to determine the solution. For insurance in aviation flight, the first-ever aviation insurance policy was written by Lloyd's of London in 1911, no more than 8 years after Wright Brothers invented aircraft in 1903. Then in 1929 the Warsaw convention was signed, just 2 years after Charles Lindbergh completed his unprecedented historical nonstop trans-Atlantic flight. Nowadays, it is the time to establish the insurance policy system for SST. Although the original planned SST schedule of 2008 proposed by the Virgin Galactic was already long overdue, but its second SpaceShipTwo rolled out in February 2016. On the other hand, XCOR's Lynx Mark I is close to the flight test phase. The establishment of SST insurance policy has its urgency. In a master thesis published by the International Space University (ISU), the author analysed some of the possibilities of new premiums, capacities, and policies under aviation or space insurance rules, as well as the new insurance products related to vehicles, passengers and third party liability. However, there are still no sufficient test flights to assess the risk statistically so far. The maiden flight is considered to be uninsurable among operators, brokers and insurance markets. After that, the insurance premium could be very high. Only when the maturity has been reached with accumulated reliability approaches the levels of aviation sector, the insurance premium could be reduced to reasonable and proper level. At least, 10 to 15 or even more accumulated flights without incident would be required. In anticipation of the inevitable growth in space tourism and commercial space flight, the Alliance Group Associates (AGA) and International Space Transport Association (ISTA) had signed a unique partnership agreement on 14 November 2011 to provide a travel insurance package for SST participants. There are many updated developments since then.