

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

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A SMALL SCALE COMMERCIAL SUBORBITAL TOURISM VEHICLE

**Abstract**

Along with the quickly development of aerospace technology and global economy, aerospace activities such as satellite launch, space flight and microgravity becoming not very secret any more. More and more common persons are interested in the experience of space flight, and a list of commercial company for space tourism based on the attractive market returns. With the exception of traditional projects such as high altitude parachute or special jump, zero-g training and parabolic flight by special effect aircraft, the affordable space flight taste for common persons is becoming more and more popular all over the world. After introduction of the famous space tourism flight plan from Virgin Galactic and XCOR, the suborbital space flight plane based on a 10 tons rocket-powered vehicle is put forward, and the market return and the potential commercial return is evaluated according to the ticket price in china and abroad. This suborbital vehicle is operated by vertical takeoff horizontal landing mode and can carry 5 to 6 persons for suborbital space tourism during every flight. The flight altitude can arrive 80 to 130 km above the ground and the velocity can arrive 5 to 6 Mach number. The whole flight time is about 10 to 20 minutes every time, and the vehicle can perform any custom-built maneuver during the flight to realize special space flight experience. The suborbital flight project is very attractive and concerned very much in china so far, many bosses and businessman are attracted and considering investment arrange.