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NEAR-SPACE FLIGHTS FOR PRIVATE TRAVELERS USING HIGH-ALTITUDE BALLOONS

Abstract

10 years ago, the same author presented a paper at the 53rd IAC in Houston under the title “The role of balloons in the future development of space tourism”. It is time for an update on what has happened since then. The potential company described in this paper has been founded in 2009 and has been in operations for 3 years. Near-space flight opportunities for travelers will soon be a reality.

High-altitude ballooning has historically been the first means for humans to view the Earth from Space, meaning to view the Earth’s atmosphere from above as a thin blue line, the stars and the Sun shining at the same time and the curvature of the Earth clearly visible. It was back in the thirties and forties that these first flights took place in the USA and in France, before the rocket-based space race began.

High-altitude ballooning with crew has since then been abandoned completely but is about to be revived. There are many advantages to balloons for the human experience, as compared to planes or rockets. A balloon ride is smooth and leisurely, and has therefore very few limitations concerning age, health or fitness. The cruise time at maximal altitude (foreseen to be around 36km) will be of at least 2 hours, providing ample time to enjoy the view. The pod itself will be equipped with panoramic windows for optimal viewing of the Earth’s curvature. Since microgravity is not a matter of altitude or speed but a matter of falling, a few seconds of microgravity can also be created during a balloon flight at the time of descent, for the experience of the travelers but without the side effect of motion sickness. The descent will also be smooth, the balloon separating from the pod which will land with a parachute, not unlike most space capsules, except that the landing will be padded thanks to airbags.

The whole experience is therefore fulfilling the expectations of many potential travelers: adventure and spaceflight set in a luxurious atmosphere, providing an elevating and life-changing experience, as well as being entirely customizable. Several unmanned test flights have been conducted and the first manned flight should take place by 2013. The presentation will give a comprehensive overview of high-altitude balloon capabilities for human space travel.