



Project Excelsior



The word excelsior means ever upward in English and is a Latin adjective for higher. In the late 1950's and early 1960's Capt. Joseph Kittinger epitomized those definitions. On August 16, 1960 he travelled into Earth's stratosphere and reached heights that few had been to.

Project Excelsior was a series of three high-altitude bailout experiments. After World War II the world entered the jet age and pilots were able to fly higher and the fantasy of travel in outer space was becoming a reality. Pilots attempting to bailout at the new altitudes we were able to achieve through technology faced two perils if they ejected: hypothermia and flat spin.

If a pilot in the upper atmosphere deployed their chute too soon, they could be exposed to low temperatures for an extended period of time causing hypothermia. If they free fell to a lower height to deploy their chute, they ran the risk of going into a flat spin. A flat spin is when a Para-jumper loses control of their free fall and spins out of control. During this spin the jumper's blood would rush to their head and feet which could be fatal. Project Excelsior, aimed at alleviating the problems of high altitude bailout by developing a multistage chute. The Beaupre

multi-stage parachute, had a small drogue chute which deployed to help stabilize the jumper.

On the first test at 76,400 feet, the drogue chute opened prematurely and wrapped around Kittinger's neck sending him into a flat spin. He blacked out and was jerked awake by his emergency chute at 10,000 ft. Kittinger believed in the chute so he decided to do a second jump at 74,700 ft. and the second jump was successful.

Finally, on August 16, 1960, Joseph Kittinger rode an open gondola balloon to a height of 102,800 ft. (roughly twenty miles) and jumped out. He free fell for more than four minutes until he opened his chute at a safe altitude. Almost fourteen minutes later he landed on the shores of Lake Lucero. By the time he had landed he had set four USAF records; highest ascent in a balloon, longest jump, longest free fall, and the fastest speed reached by a human in the atmosphere

unassisted. Almost all of the records held for more than 50 years until they were broken by Felix Baumgartner near Roswell, NM in 2012.

—Mark Garnes, Student-Intern



The Balloon