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Stardust Comes Home

By Jonathan McDowell



NASA's Stardust sample return capsule touched down at the US Air Force Utah Test and Training Range at 5:10 a.m. Eastern time on January 15th. Scientists quickly retrieved the craft in order to examine the cometary and interstellar dust grains it contains inside. *Courtesy NASA.*

January 16, 2006 | The [Stardust](#) probe landed successfully on Sunday, January 15th in the highest velocity spacecraft reentry ever. Its safe landing marked the end of the probe's 7-year trek around the solar system.

The Sample Return Capsule started feeling the Earth's atmosphere as it descended toward 100 km (62 miles); in four minutes it was quickly slowed from 46,000 kilometers per hour (28,580 miles per hour) to just a few hundred kph. Thirteen minutes after entry began, it parachuted down onto the Utah Test and Training Range.

Stardust launched in February 1999 and a year later deployed its sticky aerogel collectors to soak up interplanetary and interstellar particles. Dust collection continued through the November 2002 flyby of asteroid (5535) Annefrank. In January 2004

Stardust reached its prime target, comet 81P/Wild 2, and collected cometary particles on the backside of the aerogel samplers.

Stardust isn't the first vehicle to return to Earth from deep space, however. In 1968 the Soviet L-1 spacecraft Zond-5 and Zond-6 and the Apollo 8 spaceship each flew beyond the Moon before they came back home. The only other return from beyond lunar orbit was [Genesis](#) in 2004, which crash-landed at the Utah range. Fortunately, this time the capsule parachutes deployed perfectly and Stardust didn't repeat Genesis's hard landing.

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