

Scientists solve speed surprise in stratospheric stunt

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In this Oct. 14, 2012 file photo Felix Baumgartner of Austria gestures prior to speaking with the media after successfully jumping from a space capsule lifted by a helium balloon at a height of just over 128,000 feet above the Earth's surface in Roswell, N.M. Scientists say they've figured out why an Austrian who became the first skydiver to break the speed of sound fell faster than the drag of his body should have allowed. In a paper published Thursday, Dec. 14, 2017 by the journal PLOS One, researchers from Munich's Technical University said irregular shapes appear to reduce the aerodynamic drag that increases as objects near the sound barrier. (AP Photo/Ross D. Franklin, file)

Scientists say they've figured out why an Austrian who became the first skydiver to break the speed of sound fell faster than the drag of his body should have allowed.

Felix Baumgartner jumped from the stratosphere 39 kilometers (24 miles) above Earth on Oct. 14, 2012, and landed safely on the ground near Roswell, New Mexico, nine minutes later.

Baumgartner, whose protective suit and backpack gave him a very irregular shape, reached speeds of up to 1,357.6 kph (843.6 mph)—higher than scientists had expected even for smooth objects in freefall.

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More information: Markus Guerster et al, Aerodynamics of a highly irregular body at transonic speeds—Analysis of STRATOS flight data, *PLOS ONE* (2017). DOI: 10.1371/journal.pone.0187798 , doi.org/10.1371/journal.pone.0187798

Press release: [phys.org/wire-news/274725167/f ... lix-baumgartner.html](https://phys.org/wire-news/274725167/f...lix-baumgartner.html)

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