

# Study justifies closing airports in volcano event

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The disruptive closing of some European airports after last year's volcanic eruption in Iceland was the right thing to do and may have saved lives, a new study concludes.

The hard, sharp particles of [volcanic ash](#) blasted high into the air could have caused [jet engines](#) to fail and sandblasted airplane windows to the point where it would be impossible to see out, according to a study led by Sigurdur Gislason of the University of Iceland.

"We showed that the airport closures were justified," said co-author Susan Stipp of the University of Copenhagen, Denmark. Their research was being published Tuesday in the [Proceedings of the National Academy of Sciences](#).

The eruptions began April 14, 2010, with an explosive blast at Eyjafjallajokull (ay-yah-FYAH-lah-yer-kuhl) volcano, and ash continued to spew for weeks. The event forced most countries in northern Europe to shut their airspace between April 15-20, grounding more than 100,000 flights and an estimated 10 million travelers worldwide. The shutdown cost airlines more than \$2 billion.

If the [ash particles](#) were sucked into jet engines they could have melted onto the whirling blades, causing the engine to fail, the report said. And there was a high risk of scouring the surface of the plane, according to the researchers who conducted tests on samples of the ash.

Even two weeks of vigorous stirring of the ash failed to round off the edges of the particles, leaving them sharp and hard enough to turn an airplane window opaque if encountered at high speed, the study said.

The report recalled the case of a British Airways 747 that flew into an [ash cloud](#) over Indonesia in 1982, in which all four engines failed and the pilot reported the windows were sandblasted. In that case the pilot was able to restart some of the engines and managed to make an [emergency landing](#) by peering out through a 2-inch clear area in a side window.

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