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April 15, 2010

Eruption Wasn't That Powerful, but Effects May Linger

By [HENRY FOUNTAIN](#)

The volcanic eruption in Iceland that disrupted air travel in Europe on Thursday was not a particularly powerful one, experts said, but they cautioned that its effects — both on travel and on the regional climate — might linger.

Bill Burton, associate director of the [United States Geological Survey's volcano hazards program](#), said the current eruption under the Eyjafjallajokull glacier bore similarities to the last eruption there, in 1821. "We seem to be reprising that episode again," he said.

That eruption continued, on and off, until 1823. While no one can predict how long this one may last, Dr. Burton said, in volcanology, "The past is the key to the present."

He added, "So if the other eruption lasted for two years, this one might as well."

While an on-again, off-again eruption might not have much effect on air travel over the long term, it could affect the weather in northern Europe, said Richard Wunderman, a volcanologist with the [Smithsonian Institution's Global Volcanism Program](#). The volcanic plume contains a lot of sulfur, he said, "that can become an aerosol up there that hangs around a long time reflecting sunlight."

"It's not enough that it's probably going to be cooling the whole climate," he added. On a regional basis, it could also create what is called volcano weather, with smoglike conditions. That is what happened during the eruption of another volcano in Iceland in 1783, which spewed sulfur dioxide and other compounds and created a persistent haze. ([Benjamin Franklin](#), who experienced the haze in Paris during negotiations on the treaty that ended the Revolutionary War, was among the first to draw the link between eruptions and climate.)

Unlike huge volcanic blasts including the one at [Mount Pinatubo in the Philippines in 1991](#), the eruption in southern Iceland began slowly about a month ago, with a series of fissures on the

eastern side of the volcano and what volcanologists call fire fountaining, the spewing of hot magma through vents. Dr. Burton said that it was only when the magma found a new route through the volcano earlier this week — shifting to the summit, directly under the glacial ice — that the ash-rich eruption began.

That eruption late Wednesday created a plume of ash that spread out across northern Europe at high altitudes, **forcing aviation authorities to ground flights** and close airports because of the risk of damage to aircraft, particularly the engines, from abrasive silicate particles.

Dr. Burton said that when the eruption shifted to the summit, there were indications that the silica content of the ash increased. “Theoretically, the more silica-rich the ash, the more risky or greater threat there is,” he said. But any volcanic plume is dangerous. “The plane is effectively sandblasted,” he said. “Even the windows can become frosted.”

Dr. Burton said the eruption ranked low on a measure of power called the volcanic explosivity index, nowhere near Pinatubo, which rated a 6 on the 1 to 8 scale.