

Cockpit audio: Listen as volcanic ash plume causes 1989 engine failure of KLM flight 867

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(PhysOrg.com) -- Floating ash plumes from Iceland's Eyjafjallajokull volcano have caused massive disruption to the world's air traffic, highlighting the danger that volcanic ash plumes pose to aircraft.

The threat from volcanoes has become more severe as the world's air traffic has increased, and as more people settle closer to volcanoes, says SMU volcanologist James Quick, a professor in the Southern Methodist University Huffington Department of Earth Sciences.

Quick previously served as program coordinator for the USGS [Volcano Hazards Program](#).

One of the most infamous encounters between a commercial jetliner and a volcano [ash plume](#) took place in 1989.

KLM Flight 867, carrying 231 passengers in a Boeing 747, flew into an ash plume after the eruption of [Redoubt volcano](#) in Alaska. According to [USGS reports](#), the volcano spewed enormous clouds of ash thousands of miles into the air and nearly caused the airliner to crash.

Captured on audio was the frantic conversation between KLM's pilot and the Anchorage control tower as the aircraft's engines began flameout. Hear the cockpit audio in this video, as well as Quick's comments on the danger.

Volcanic ash plumes can rise to cruise altitudes in a matter of minutes

after an eruption, Quick says. Winds carry plumes thousands of miles from the volcanoes and then the plumes are difficult or impossible to distinguish from normal atmospheric clouds.

Worldwide from 1970 to 2000 more than 90 commercial jets have flown into clouds of volcanic ash, [causing damage](#) to those aircraft, most notably engine failure, according to airplane maker Boeing.

Volcano monitoring by remote sensing allows USGS scientists to alert the International Civil Aviation Organization's nine Volcanic Ash Advisory Centers as part of ICAO's International Airways Volcano Watch program. The centers then can issue early warnings of [volcanic ash](#) clouds to pilots.

Quick and other scientists from Southern Methodist University and the U.S. Geological Survey are pioneering technology designed to detect nuclear explosions and enforce the world's nuclear test-ban treaty to monitor active volcanoes in the Northern Mariana Islands.

The islands are near Guam, which soon will be the primary base for forward deployment of U.S. military forces in the Western Pacific.

The two-year, \$250,000 project will use infrasound — in addition to more conventional seismic monitoring — to "listen" for signs a volcano is about to blow.

The plan is to beef up monitoring of lava and ash hazards in the Northern Mariana Islands, a U.S. commonwealth.

More information: Read more about the project - blog.smu.edu/research/2010/02/...sound_pilot_pro.html

Provided by Southern Methodist University

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