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Volcanic Ash to Curtail Air Traffic Into Midday Friday

By **NICOLA CLARK** and **LIZ ROBBINS**

PARIS — A dark and spectacular volcanic cloud shrouded much of northern Europe on Thursday, forcing airlines to cancel thousands of flights as it drifted at high altitude south and east from an erupting volcano in [Iceland](#). The shutdown of airspace was one of the most sweeping ever ordered in peacetime, amid fears that travel could continue to be delayed days after the cloud dissipates.

The cloud, made up of minute particles of silicate that can severely damage jet engines, left airplanes stranded on the tarmac at some of the world's busiest airports as it spread over Britain and toward continental Europe.

The volcano erupted Wednesday for the second time in a month, forcing evacuations and causing flooding about 75 miles east of Reykjavik, Iceland's capital. Matthew Watson, a specialist at Bristol University in England in the study of volcanic ash clouds, said the plume was "likely to end up over Belgium, Germany, the Lowlands — a good portion over Europe," and was unlikely to dissipate for 24 hours or more.

Even then, any resumption of flights would not be immediate, said John Lampl, a British Airways spokesman in New York. "For several days you'll have crews and airplanes in the wrong places," he said. "It will take a few days to sort it out."

British aviation officials extended the closing of British airspace at least through 1 p.m. local time on Friday, meaning that only authorized emergency flights would be permitted. About 6,000 scheduled flights use British airspace in an average day, aviation experts said.

Deborah Seymour, a spokeswoman for Britain's National Air Traffic Service, said the closing of the country's airspace was the most extensive in recent memory. "It's an extremely rare occurrence," she said.

Eurocontrol, the agency in Brussels that is responsible for coordinating air traffic management across the region, said disruptions to air traffic could last an additional 48 hours, depending on weather conditions, and could extend deeper into continental Europe.

The ash from the volcano, Eyjafjallajokull (pronounced EYE-a-fyat-la-jo-kutl), was reported to be drifting at 18,000 to 33,000 feet above the earth. At those altitudes, the cloud is directly in the way of commercial airliners but not an immediate health threat to people on the ground, the [International Volcanic Health Hazard Network](#), based in Britain, said on its Web site.

According to the [Volcanic Ash Advisory Center](#), during the early afternoon in London there was still “significant eruption continuing,” with the plume reaching 15,000 feet, but “occasionally” as high as 33,000 feet.

On Thursday, 5,000 to 6,000 of the 28,000 daily flights across Europe were canceled as a result of the ash plume, said Lucia Pasquini, a Eurocontrol spokeswoman.

The closing of British airspace disrupted the great majority of trans-Atlantic flights, including those on the New York-London route, the second busiest international route in the world after the Hong Kong to Taipei, Taiwan, route, according to the International Air Transport Association. Eurocontrol said roughly half of the 600 daily flights between North America and Europe would probably face cancellations or delays on Friday.

“It is a significant disruption,” said Steve Lott, a spokesman for the air transport association. “What presents more of a challenge is that we don’t know the end date.” He added, “If this closed airspace continues to grow larger, the airlines will have fewer route options.”

As the cloud made its way high across the English Channel, French aviation officials decided to close the main Paris airports, [Charles de Gaulle](#) and Orly, late in the evening. About 20 other French airports shut down earlier. The Paris airports will remain closed until at least 2 p.m. Friday.

Major American carriers that fly to Britain were allowing their passengers to rebook flights without penalty on Thursday. Eurocontrol said areas of airspace in northern Germany and Poland closed late Thursday. Ute Otterbein, a spokeswoman for Germany’s civil aviation authority, said airports in Hamburg, Bremen and Hanover were closed until at least 8 a.m. Friday, and Berlin’s airports — Schönefeld and Tegel — were also closed. Airports in Frankfurt and Munich were still open, however, and were able to accept diverted flights from other European airports, Ms. Otterbein said.

The potential economic effect of the closings is “virtually impossible” to determine at this stage, said Peter Morris, chief economist at Ascend, an aviation consultancy in London.

“A ballpark estimate would be that half a million to a million people’s travel will be disrupted in the U.K. over a couple of days, assuming things start to clear up soon,” he said. “For the long-haul players, especially those headed to the other side of the world, it’s a nightmare.”

Inside Terminal 4 at Heathrow, where flights leave London for Houston, New York and Paris, among many other destinations, all check-in counters were closed. Arrival and departure boards listed all flights as canceled. Some of the travelers seemed stoic about their fate.

Jai Purohit, a manager from Leicester, England, who had planned fly to the United States to join his wife on vacation in Florida, said: “It’s very sad. I bought some nice presents for my wife and was looking forward to spending some time with her. She’s naturally upset, but there’s nothing we can do.”

An American traveler, Anne Evans, who had arrived in London from San Francisco, said she had been on her way to take up a teacher training position in Sri Lanka when she learned that her connecting flight was canceled.

“There’s nothing you can do,” she said. “You can either smile or cry, and I decided to smile.”

Although volcanic ash clouds sometimes limit pilots’ visibility, their most serious safety threat is the harm they can cause to engines in flight. In recent decades, more than 90 aircraft have suffered damage from volcanic plumes, according to the [International Civil Aviation Authority](#), an arm of the [United Nations](#).

Volcanic ash is primarily made of silicates, or glass fibers, which, once ingested into a jet engine, can melt, causing the engine to flame out and stall.

It was impossible to predict how long the delays might last or the extent of the flight cancellations, since the volcano was still erupting, said Ms. Seymour of the National Air Traffic Service.

The perils of volcanic ash are well known to pilots and airline operators. After the 1982 eruption of the Galunggung volcano in Indonesia, for example, a Boeing 747 flying to Australia from Malaysia lost power in all four engines because of ash and descended to 12,500 feet from 36,000 feet before pilots could restart the engines and make an emergency landing in Indonesia.

In Iceland, hundreds of people fled their homes to avoid flooding after the eruption early on Wednesday melted the Eyjafjallajokull glacier. But Icelandic airports remained open because they are west of the volcano and wind was blowing the ash away to the south and east.

Nicola Clark reported from Paris, and Liz Robbins from New York. Reporting was contributed by John F. Burns and Julia Werdigier from London, and Alan Cowell and David Jolly from Paris.