

# Pop goes the weasel as Hadron Collider shuts down (Update)

30 April 2016



A May 31, 2007 file photo shows a view of the Large Hadron Collider in its tunnel at the European Particle Physics Laboratory, CERN, near Geneva, Switzerland. It's one of the physics world's most complex machines, and it has been immobilized—temporarily—by a weasel. Spokesman Arnaud Marsollier says the world's largest atom smasher, the LHC, at CERN, has suspended operations because a weasel invaded a transformer that helps power the machine and set off an electrical outage on Thursday night, April 28, 2016. (Martial Trezzini/Keystone via AP, File)

A weasel shut down the world's most powerful particle smasher when it wandered onto a 66,000-volt transformer and caused a short circuit, Europe's physics lab CERN said Saturday.

The Large Hadron Collider (LHC) was halted "following technical issues, including a power cut due to the passage of a weasel on a high voltage electrical transformer," CERN spokesman Arnaud Marsollier told AFP.

The collider suffered a "severe electrical perturbation" at 5:30 am (0330 GMT) Friday, CERN, the French acronym for the European Organisation for Nuclear Research, said in its daily activity summary.

It said the cause was a "short circuit caused by fouine"—a beech marten, which is a member of the weasel family—on a 66-kilovolt transformer.

Marsollier said that "some connections were slightly damaged and we are at work to repair" the damage caused by the weasel, which did not survive its high-voltage encounter.

The repairs "should take no longer than a few days," he said.

"Not the best week for LHC!" CERN said in its summary.

The LHC, housed in a 27-kilometre (17-mile) tunnel straddling the French-Swiss border, was used to prove the existence of the Higgs Boson, also known as the God particle, by crashing proton beams at velocities near the speed of light.

That discovery of the Higgs—the long-sought maker of mass—earned the 2013 Nobel physics prize for two of the scientists who had theorised its existence back in 1964.

## Restart delayed

Friday's incident came at an unfortunate time.

Scientists had been gearing up to resume experiments at the giant lab early next week following a technical stoppage of several months, and to relaunch their superpowered hunt for particles that could change our understanding of the Universe.

Following the weasel incident and several other technical issues, Marsollier said "we will now need to check over the entire machine again".

He said it remained unclear when the experiments could resume, but added that it clearly would "take more time before we can get started."

The weasel was not the first animal to wreak havoc at the LHC.

In 2009, a peckish bird briefly knocked out part of the particle collider when it dropped a baguette on an external electrical power supply and triggered a chain reaction that shut down part of the LHC's cooling system.

But that time the system was restored within several hours.

After the Higgs discovery, the LHC underwent a two-year upgrade, reopening last year with double energy levels and a vastly expanded the potential for groundbreaking discoveries.

The lab allows beams containing billions of protons to shoot through the massive collider in opposite directions.

Powerful magnets bend the beams so that they collide at points around the track where four laboratories have batteries of sensors to monitor the smashups.

The sub-atomic rubble is then scrutinised for novel particles and the forces that hold them together.

Late last year, before the technical shutdown and after running for more than six months at double energy levels, scientists said they had discovered anomalies that could possibly hint at the existence of mysterious new particle.

Some have theorised it could be a larger cousin of the Higgs boson, or that it could imply the existence of extra space-time dimensions.

"We might have the first hint of something unexpected," CERN physicist Paris Sphicas told AFP this week, stressing the importance of rebooting the LHC experiments.

"The only way to tell if this thing is real or just a statistical fluctuation, a fluke, ... (is with) much more data," he said.

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