

http://www.elcomercio.com/pais/Volcan-Tungurahua-estaciones_0_740925972.html

Tungurahua volcano will have 500 stations



The plan to set up volcano monitoring stations with better technology, but smaller and cheaper started in Tungurahua, Ecuador. Scientists from the Universities of Michigan, North Carolina and Georgia (USA) and technicians of the Geophysical Institute (GI) of the National Polytechnic School tested a prototype station at a conventional monitoring site of Tungurahua volcano this week.

"The goal by 2015 is to install 500 stations with portable technology and linked together that will put Baños in the forefront of research of volcanoes," said Mario Ruiz IG, during the tour that was met on Friday in the station at Runtún in what is called the Tree House. The experts arrived from the U.S. with their Ecuadorean counterparts found the data recorded with modern instrumentation.

To Mayra Cow, head of the technical area of the IG, the five stations with broadband technology, of the 17 running around the Tungurahua, responded very well to the tests. "If it continues like that, the giant volcano will be the first to have a massive collection of data so that we will reveal its internal structure."

In the coming months, said Vaca, we will define the design, Ecuadorean staff will be trained in the U.S., and the IG is responsible for implementing, building, assembling and installing the new stations.

The prototype was tested using a smartphone to store data and process information. It has a backup power system that guarantees autonomy for several days. It also has a small GPS module inside that gives the exact position and time that will be recorded along with the seismic data.

"In the same electronic card is installed a small amplifier that allows us to take the appropriate signal from the geophone placed on the ground. It is the most important of the reason because it is the seismic data that captures what is happening now. "

The Tungurahua volcano in eruption process since October 1999, drew the attention of volcanologists around the world. Therefore, U.S. experts decided to support the IG in the implementation of this

system. Jonathan Lees, University of North Carolina said the first result from the prototype will be published in scientific journals that will appeal across the globe.

Scientific interest: In the future, volcanologists will not have to visit the stations to collect data. These will be automatically transmitted to a switch. In the first test used a small set of monitoring with a prototype. But over the next three years will develop more experiments. Participating in counseling were Wenzhan Song, Georgia State University, and Guoliang Xing, Michigan State University. A conventional station used to monitor the volcano costs more than USD 20 000, but with the new technology does not cost more than USD 500.