Deep-Earth tremor detected by Japanese scientists

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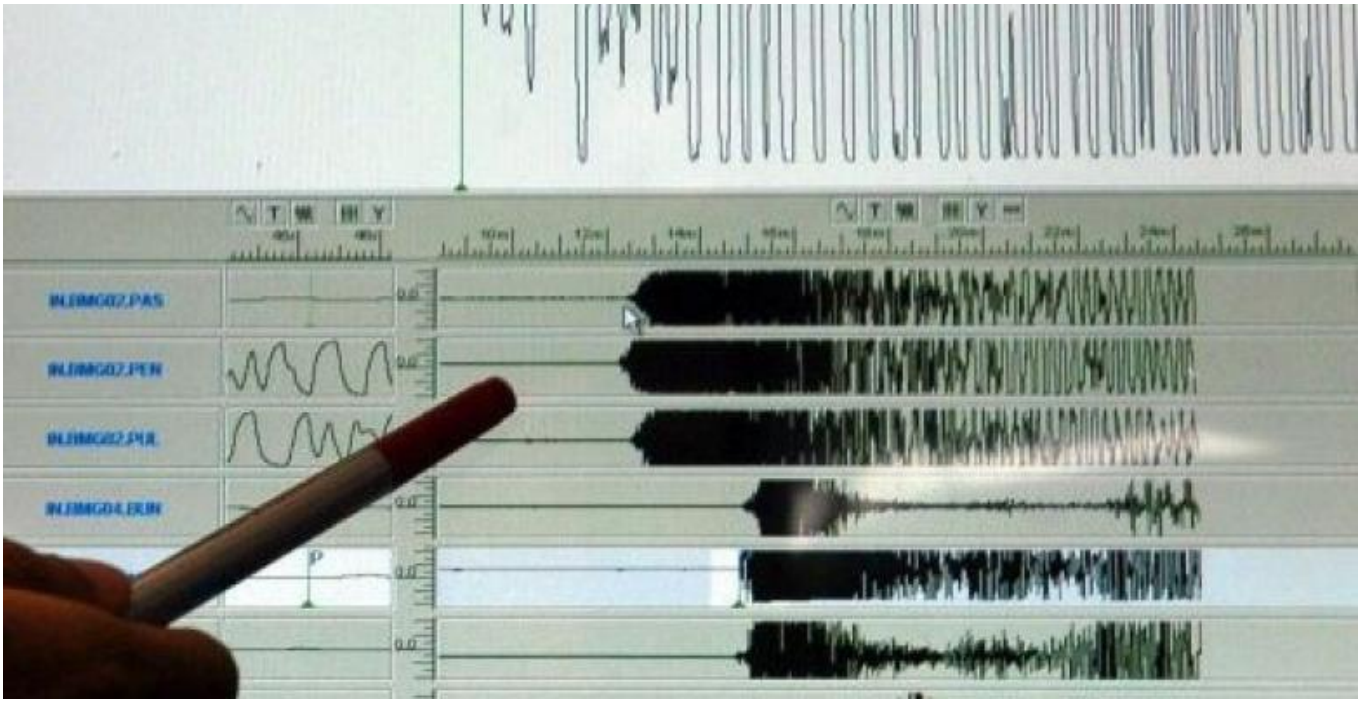

Deep-Earth tremor — A group of Japanese seismologists were able to detect for the first time a seismic wave (S) of a deep-earth tremor and to determine that it was due to a powerful storm on the other side of the Earth, according to the journal Science on Thursday.

This discovery could help experts better understand the internal structure of the Earth and to improve early detection of earthquakes and ocean storms.

The storm causing this deep-earth tremor occurred in the North Atlantic between Iceland and Greenland. It was presented by the scientists as a “weather bomb” and the waves pounded the ocean floor to the point of producing some the deep-earth tremors. These tremors are what were detected by Japanese scientists.

They used seismic equipment placed at the bottom of the ocean, which are typically used to measure the erosion of the Earth’s crust during earthquakes. And for the first time they detected these deep-earth tremors known as secondary seismic wave name (S).

Other major waves, known as primary waves (P) are detected much more easily during earthquakes and also during hurricanes.

S-waves are slower and propagate only through rocks, not in liquids.

Using more than 200 stations operated by the National Research Institute for Earth Science and Disaster Prevention, in the district of Chugoku, Japan, the researchers Kiwamu Nishida and Ryota Takagi “detected not only P-waves micro-earthquakes triggered by a severe and distant storm in the north Atlantic, but also S waves,” notes the study.

“This is the first time that scientists were able to observe the S wave of a micro-earthquake,” the study continues.

This discovery “gives seismologists a new tool with which to study the deep structure of the Earth”, wrote in an article in support of this study Gerstoft Peter and Peter Bromirski, of the University of California, San Diego.