Wageningen measures Tonga eruption

The eruption of the volcano near Tonga in the Pacific was deafening. But we didn't notice a thing here, 16,400 kilometres away. Or so you might think. But in fact the equipment at WUR's Veenkampen measuring station picked the signal up loud and clear. Not just once, but several times as the pressure waves circled the Earth repeatedly.

The volcanic eruption near Tonga • Photo Shutterstock

The first peak came 15.5 hours after the eruption, as PhD candidate Wouter Mol's graph shows. Given the distance of roughly 16,400 kilometres, that means a speed of 308 metres per second, which is not that different to the standard speed of sound. But hang on, there's a second peak. It is smaller but still clearly visible, especially in the graph that is adjusted to take account of background air pressure.

The first peak came 15.5 hours after the eruption

The second peak puzzled Mol at first. But then he realized the sound travelled in all directions, and that means it arrived in Wageningen from the other side of the globe too. He was thrilled when the two peaks were seen again in the days that followed. Three sets of peaks were eventually recorded, showing a signal that went 2.5 times round the world.

According to experts at the Royal Netherlands Meteorological Institute, the blast was comparable to the famous eruption of Krakatoa in 1883. Even Pinatubo in 1991 was not as powerful. RK

Who is tallest?

First-year students of Plant Sciences and Biology doing the Genetics course are on campus, standing in front of signs giving heights: 151-154, 154-158, through to 203 and above. Teacher Fons Debets: 'We are demonstrating the normal distribution for height. The first photo of such a "living histogram" was taken in 1914 and it can be found in the genetics book. This is the eighth time we are taking such a photo, and the first time with face masks. So it's a historic photo...' WA

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