

A new active volcano in the Tyrrhenian Sea?

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Abstract

A strong earthquake occurred in 2002 offshore from the northern coast of Sicily in the Southern Tyrrhenian Sea (Italy), and was followed by a series of hundreds of aftershocks. Communications through the fibre-optic cable between Palermo and Rome were interrupted a few hours after the occurrence of the main shock. After the required technical checks, the failure point was found a few kilometres away from the seismic sequence area. A few days later, a specialised cable ship reached the failure area. One side of the cable was completely burnt, while about three kilometres of cable was found locked. Tests on slices of cable showed that the temperature at which the cable was heated went well above 700°C. We can speculate that the earthquakes triggered off the emission of a submarine lava flow that buried, trapped and burnt the fibre-optic cable. The revising of the bathymetric survey made before the cables deployment allowed for the identification of a seamount in the vicinity of the rupture. This structure could represent the lava flows source volcano.

Keywords

seismicity and volcanic activity in deep marine areas; fibre-optic cable failure; Southern Tyrrhenian Sea

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References

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
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