

ΣΥΝΕΔΡΙΑ ΤΗΣ 28^{ΗΣ} ΙΑΝΟΥΑΡΙΟΥ 1988

ΠΡΟΕΔΡΙΑ ΓΕΩΡΓΙΟΥ ΜΕΡΙΚΑ

ΣΕΙΣΜΟΛΟΓΙΑ.— Premonitory seismic electrotelluric signals outside the greek boundary, By P. Varotsos, K. Alexopoulos and K. Nomikos*,
διὰ τοῦ Ἀκαδημαϊκοῦ κ. Καίσαρος Ἀλεξοπούλου.

Transient variations of the telluric field have been successfully used in Greece for the prediction of earthquakes. The lead time of these seismic electric signals lies between 6 hours and one week. Similarly the duration varies between a few minutes and nearly an hour. Both these characteristics are independent of the magnitude and probably depend on the qualities of the rocks of the seismic volume[1]. Up to now premonitory signals with these specifications had not been noticed in other countries so that the question arose if they actually occur only very near the greek territory although the greek network of measuring stations had collected such signals from nearby regions i.e. Albania and western Asia Minor (Callipollis and east of Samos). The present short notice describes signals from other countries.

In 1987 one of the present authors (K.N.) installed a station in Brazil in the practically aseismic region of Joe Camara (Natal) after an outbreak of earthquakes. The measurements, in effect, showed a few pulses that could be ascribed to earthquakes. However the seismicity quickly subsided so that no further use of the station could be made.

In 1986 Ralchovski, Djakov and Rangelov of the Academy of Sciences

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of Sofia published[2] a clearly developed signal of around 5 mV at a station in Bulgaria (42.5 n, 23.2 E). The signal was followed around 6 hours later by a 5.1 Richter earthquake that occurred at a distance around 230 km. Taking in consideration the magnitude and epicentral distance the relative resistivity of the station is around 20 times greater than the corresponding sensitivity of the PIR-station of the greek network.

Lately Professor Massinon of the french atomic energy commission and his coworkers has kindly informed us[3] that they have collected two seismic telluric signals in the south of France.

The above observations testify that seismic electric signals occur also in other geographic regions.

Π Ε Ρ Ι Λ Η Ψ Η

Γεωηλεκτρικά σήματα προαναγγέλλοντα σεισμούς εις τόν έξωελλαδικό χῶρο

Μεταβολές τοῦ γεωηλεκτρικοῦ πεδίου τῆς Ἑλλάδος ἔχουν χρησιμοποιηθεῖ γιά τήν πρόβλεψη σεισμῶν. Ἡ παρούσα βραχεία ἀνακοίνωση ἀναφέρεται σέ ἀνάλογες μεταβολές στή Βραζιλία, Βουλγαρία καί Γαλλία.

R E F E R E N C E S

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2. T. M. Ralchovski, I. S. Djakov and B. K. Rangelov, C. R. Acad. Bulg. des Sciences **39**, 61, 1986.
3. J. Massinon, private communication.