

DISCHARGE PROPERTIES OF RADON ISOTOPES IN HELLENIC GEOTHERMAL FIELDS

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Two groups of radon's isotope (Rn^{220} and Rn^{222}) measurements were carried out, first in the flat part of the Nissyros Caldera, and secondly in the Sousaki geothermal field area. Some representative measurements were also performed in Western Kos, in the Voulkania geothermal area.

Radon (Rn^{222}) originates from U^{238} disintegration and thoron (Rn^{220}) from Th^{232} disintegration. These Rn isotopes are significant because of their origin; they have been used in order to inexpensively locate uranium and thorium source-deposits, while their anomalous concentrations have been reported to correlate with active geological elements. The emission of these isotopes was measured in the above geothermal areas by the R.M. 1003 radon detector (Pylon instruments).

Two profiles, one from the Nissyros Caldera and one from the Sousaki area were made in order to detect anomalous concentrations of Rn isotopes. It was found that significant anomalous Rn concentrations were observed in these regions. However, the amplitude of the anomaly was higher in Nissyros than in the Sousaki geothermal field. The observed difference in the amplitude emission of these isotopes was explained as due to the difference in the lithology and geothermal activity characteristics prevailing in Nissyros Caldera and Sousaki area. The distribution of Radon and Thoron in these areas was also correlated with the geology and the oddities of the geothermal field. It appears that their distribution depends on geothermally active elements, like faults, and this method seems to be sensitive in detecting such geological formations, at a very low marginal cost.

TWO LAGOMORPHS FROM THE PLIOCENE OF MACEDONIA, GREECE

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The Pliocene mammalian localities of Greece and of eastern mediterranean regions are few with poorly known faunas. One of them is the locality of Megalo Envolon in Macedonia (Greece) known from the beginning of this century. During our investigations in the area, three different fossiliferous levels have been found and few material of large and small mammals has been collected. The first fossiliferous site (MEV) is situated at