



Results of the radon measurements in the area of volcano Popocatepetl, Mexico

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Anomaly variation of the concentration of radon measured in the area of the volcano Popocatepetl and their analysis are presented. Permanent observations in the different sites during December 2007 - December 2009 revealed certain stable tendency: the character of radon variation in Tlamacas station area differs essentially from the similar measurements in all the other sites. Thus, numerous gradual depressions of the radon concentration with duration from about 12 hours up to several days were detected there as possible response to the major and moderate volcano eruptions.

In order to determine presumed peculiarities of the Tlamacas site we realized detailed study of the natural radioactivity near Tlamacas and surrounding area, combining measurements of the Radon concentration in 25 sites in the mentioned area with radioactive spectroscopy (K, U and Th) study. Obtained distributions of the Rn, K, U and Th permit us to surmise a possible existence of a hidden tectono-volcanic structure in the area of Tlamacas mountain with anomalously enhanced emanation of radon.