

CONCENTRATIONS OF ^{222}Rn AND ITS PROGENY ^{210}Pb IN LOWER ATMOSPHERE OF BRATISLAVA

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ABSTRACT

Monitoring of atmospheric radioactivity in Bratislava has been carried out in the Department of Nuclear Physics and Biophysics of Faculty of Mathematics, Physics and Informatics of Comenius University. Air activity concentration of gaseous ^{222}Rn and its progeny ^{210}Pb , bound to aerosol particles, were measured. The concentrations of ^{222}Rn varied from 0.59 to 11.1 $\text{Bq}\cdot\text{m}^{-3}$ (average value $3.73 \pm 0.17 \text{ Bq}\cdot\text{m}^{-3}$) and concentrations of ^{210}Pb from 0.22 to 2.37 $\text{mBq}\cdot\text{m}^{-3}$ (average value $0.83 \pm 0.02 \text{ mBq}\cdot\text{m}^{-3}$). Temporal variation with seasonal behaviour was observed. The correlation study has been carried out between the meteorological factors and concentrations of radionuclides.

Key words: seasonal variations, ^{222}Rn , ^{210}Pb , air radioactivity
agnetic screening, pollution of roadside soils