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Temporal and spatial changes of radon concentration in borehole water (Little Carpathians Mts., Slov

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Abstract. The ²²²Rn activity concentration in ground water from boreholes was investigated from January 2006 to June 2008. The boreholes are situated in the region of the Astronomical and Geophysical Observatory in Modra-Piesok (Little Carpathians Mts., 40 km NW from Bratislava, Slovakia). Three boreholes have been drilled in Lower Tertiary quartzite. Another borehole has been drilled in granodiorite of the massif in which the quartzite is folded. Temporal and spatial differences in radon concentration were observed. Significant short-term variations were noticed in all boreholes. Precipitation caused the changes of water level and strongly affected the values of ²²²Rn activity concentration in deep boreholes. The measured activities in boreholes ranged from approximately 1–240 kBq/m³.

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