

Isotopic composition of Slovenian precipitation: A 10 year record at station Portorož

P. Vreča⁽¹⁾, I. Krajcar Bronić⁽²⁾ and A. Leis⁽³⁾

(1) Jožef Stefan Institute, Department of Environmental Sciences, 1000 Ljubljana, Slovenia

(2) Ruđer Bošković Institute, Bijenička 54, 10000 Zagreb, Croatia

(3) Institute of Water Resources Management, JOANNEUM RESEARCH, Elisabethstrasse 16/II, 8010 Graz, Austria

Isotopes in precipitation (i.e. stable isotopes of hydrogen and oxygen and radioactive isotope tritium) have been measured in Slovenia since 1981. Monitoring was carried out systematically in the frame of Global Network for Isotopes in Precipitation (GNIP) until 2000 only at station Ljubljana. Because isotope data represent an important research tool in water cycle investigations and also due to geographical diversity of Slovenia it was necessary to extend the network to other parts of the country, also to SW part of Slovenia. Therefore, we started in autumn 2000 with isotope monitoring at synoptic station at Portorož airport where monthly composite precipitations samples have been collected. Investigations in this area are important not only for studying the isotopic patterns of local meteorological conditions but also for improvement of the knowledge of the isotopic input signal needed for hydrological and hydrogeological studies of karstic springs and groundwater in the area.

Until now a complete set of numerical data and the statistical evaluation was presented for the period 2000–2006 [1]. Unfortunately, some measurements are still missing for last few years of observation; therefore, a 10 year isotope record for the period 2001–2010 will be presented and discussed together with basic meteorological parameters.

[1] P. Vreča, I. Krajcar Bronić, A. Leis, *Geologija* 54(1), 2011, 129–138.