

## SPATIAL DISTRIBUTION OF ATMOSPHERIC AEROSOL DEPOSITION MEASURED WITH $^7\text{Be}$ AS A TRACER AND MOSSES AS A SAMPLING MEDIUM

Friday, 15 July 2022 12:10 (20 minutes)

Cosmogenic radionuclide  $^7\text{Be}$  is frequently used as an atmospheric tracer. Air concentrations or deposition rate of  $^7\text{Be}$  are usually measured at limited number of locations equipped with air samplers or depositional collectors. Mosses that do not have root system but receives and retains nutrients from the atmosphere can be used as natural filters that provide very good spatial resolution of sampling. Deposition rate at some selected location is governed by a number of factors, among which the most important are meteorological conditions and the characteristics of the relief.

The spatial distribution of  $^7\text{Be}$  atmospheric deposition was measured once using terrestrial mosses on the territory of the Republic of Serbia [1]. In order to assess whether there are some areas with preferentially higher or lower atmospheric deposition, a three-year project has been started. The moss samples will be periodically taken in the northern part of Serbia and  $^7\text{Be}$  concentrations will be measured.

In the first campaign, moss sampling was performed at 70 locations in the northern part of Serbia. Dried samples, compressed into 200 ml plastic containers were measured in an anti-Compton NaI detector adapted for this purpose to serve as a high efficiency well-counter.

In this work, the results of the first sampling campaign are presented and compared with results of previous study. An analysis was made to establish to which extent the deposition patterns in two existing measurements coincide.

1. M. Krmar et al., Journal of Radioanalytical and Nuclear Chemistry 318, 1845 (2018)

### The speaker is a student or young scientist

No

### Section

1. Nuclear technology and methods in medicine, radioecology

**Primary authors:** KRMAR, Miodrag (Faculty of Science, University Novi Sad); RADNOVIĆ, D. (University of Novi Sad, Novi Sad, Serbia ); ILIĆ, M. (University of Novi Sad, Novi Sad, Serbia ); ARSENIĆ, I. (University of Novi Sad, Novi Sad, Serbia ); JOVANČEVIĆ, N. (University of Novi Sad, Novi Sad, Serbia )

**Presenter:** KRMAR, Miodrag (Faculty of Science, University Novi Sad)

**Session Classification:** Nuclear technology and methods in medicine, radioecology.