Examination of ¹⁰Be in travertine sediment as a possible tool to reconstruct past solar activity

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In this study, we explore the possibility of using travertine sediment for reconstructing the past solar activity. We obtained an annual ¹⁰Be record from travertine deposit from the modern period and compared with the neutron monitor data. We discuss a possible methodology to calibrate the climatological impact on ¹⁰Be deposition and to obtain the signal of past solar and cosmic-ray variations.

Keywords: Beryllium-10, cosmogenic nuclide, solar activity, endogenic travertine