

## Reconstruction of the flux of galactic cosmic rays using travertine deposits: A pilot study

Hongyang Xu[1]; # Hiroko Miyahara[2]; Kazuho Horiuchi[3]; Limin Zhou[4]

[1] East China Normal Univ.; [2] Humanities and Sciences, Musashino Art Univ.; [3] Hirosaki Univ.; [4] East China Normal Univ,

Cosmogenic nuclides in the annual layers of natural materials record temporal variation of galactic cosmic ray flux in the past. Carbon-14 in tree rings or beryllium-10 in ice cores from polar region are often used to retrieve accurate history of GCRs. However, the variation of carbon-14 produced in the atmosphere is strongly attenuated in the carbon cycle. In the case of beryllium-10 in ice cores, it remains relatively large amplitude, but the records are accompanied with dating uncertainties. We therefore seek for a possibility to retrieve the information of GCR flux from the beryllium-10 content in annual layers of endogenic travertine deposits. In this paper, we report on our preliminary results of the measurements of beryllium-10 in travertine samples obtained from China.