[JJ] Evening Poster | H (Human Geosciences) | H-TT Technology & Techniques

[H-TT18]Development and applications of environmental traceability methods

convener:Ichiro Tayasu(Research Institute for Humanity and Nature), Takanori Nakano(Research Institute for Humanity and Nature, Inter-University Research Institute Corporation National Institutes for the Humanities), Keisuke Koba(京都大学生態学研究センター)

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Modern society uses almost all the elements present in the natural world. Although there have long been calls for the sustainable use of the resources that provide these elements and the building of human societies that are in harmony with the environment, the survival of the human race is increasingly at risk as a result of qualitative changes to the environment as a whole. Implementation by the society of methodologies for diagnosing and tracking these various elements of the natural environment and their relationships with humans are now required.

Elements transport in the spheres on the surface earth and the human society and human body. Information on the concentrations and stable isotopes of elements is powerful in tracing the transportation of materials and have been applied in studies on the atmosphere-hydrosphere circulation, ecological service, and the life, health and history of humans. We propose a session to discuss development and applications of environmental traceability methods to achieve traceable system.

Especially, we encourage to present a research based on Environmental Isotope Study, which integrates isotopic studies in various disciplines, such as geochemistry, hydrology, ecology, geology, mineralogy, anthropology, food science (identification of origins), and forensics.

[HTT18-P02]Seasonal precipitation isotope variability in the northern Nobi Plain, central Japan

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Keywords:precipitation, hydrogen isotope ratio, oxygen isotope ratio, Nobi Plain

The weekly isotopic compositions of precipitation in the northern Nobi Plain, central Japan have been investigated in the period from August 2016 to the present. Rain gauges were installed at five observation sites along the 4 km east-west survey line from Gifu university to Mt. Kinka, (329 meters msl) in Gifu city. The weekly precipitation and their hydrogen and oxygen isotope ratios obtained show clear seasonal variations, and especially in March and October, d-excess values changed significantly. Weekly horizontal distribution patterns of precipitation were classified by their characteristics and the weather conditions. The vertical isotopic gradients are slightly different between east and west slopes of Mt. Kinka, and this suggests that those differences are related to seasonal changes of wind directions and rain-producing clouds.