

An introduction to the observation method of imaging volcanoes by using cosmic-ray muons

*Seigo Miyamoto¹

1. Earth Research Institute, University of Tokyo

The purpose of this presentation is widely to inform a method of exploring the density structure inside a gigantic structure such as a volcano, by using high energy muons included in cosmic rays. It is considered that there are some reasons for low awareness. For example, the history of this method which is applied to Earth and planetary science is still short, knowledge about "Muon" which is one of "cosmic rays" or "elementary particles" is not known widely. To improve such a situation, we will review the fundamental principles to evaluate the internal density of volcanoes using cosmic-ray muons, past and going-on observation examples of volcanoes, and technological developments stories in this presentation.

Keywords: volcano, cosmic-ray, muon, imaging