

Particle imaging of the volcano's interior and the development of innovative solutions in the Global Muography Network: G-ENDEAVOR

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The first attempt to explore the internal structure of the Earth by using elementary particles called muons was made 60 years ago in Australia. This primitive technique has been developed as the new particle imaging technique called muography within 50 years. After the first successful imaging of the internal structure of a volcano in 2006, muography has been adopted worldwide and applied not only to the world volcanoes but also to other fields including global warming and energy, for example, by imaging and monitoring the thickness of glaciers, carbon capture and storage as well as ore bodies. Such social demands have started to ignite the generation of new entrepreneurial industries throughout the world. Specific examples and a brief history of muography developments will be introduced in this talk. The recently established EU-Japan muography research consortium called Geophysicist-Elementary particle physicists Network DEvelopment Alliance for new style of VOlcano Research (G-ENDEAVOR) will be also briefly introduced.