

PRESS RELEASE



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100 7003 東京都千代田区丸の内2-7-2 J Pタワー／K I T T E 2-3F

<JP Tower/KITTE 2-3F, 2-7-2 Marunouchi, Chiyoda-ku, Tokyo 100 7003 JAPAN>

www.intermediatheque.jp

Notice on the Opening of the Special Exhibition “Muography: Perspective Drawing in the 21st Century”

October 2015

In December, the JP Tower Museum INTERMEDIATHEQUE (IMT) is opening the special exhibition “Muography: Perspective Drawing in the 21st Century.”

The invention of X-ray photography has brought revolutionary changes in the medical field. This surprising innovation, which enables to see through the human body from outside, originated from the findings of Wilhelm C. Roentgen, who was awarded the first Nobel Prize in Physics in 1901.

We may be observing something similar happening now. In 2007, Prof. Hiroyuki Tanaka of the Earthquake Research Institute (ERI), the University of Tokyo, announced that he succeeded in obtaining a perspective view through an active volcano from the outside. He showed the exact locations of magma and its conduit inside the active volcano, which was literally a long-cherished wish in volcanology.

The inside of massive bodies such as volcanoes and large buildings are impossible to examine with X-rays, as it decays within a short distance. Prof. Tanaka thus utilizes muons, which are particles generated by cosmic rays and can penetrate a significantly longer distance than X-rays, in order to establish muon radiography, or muography, as a new method to obtain a perspective view of a massive body. His breakthrough draws considerable attention from scientists all over the world, and its application areas are now rapidly expanding into many research fields including perspectives of nuclear reactors, blast furnaces, pyramids, and perhaps, even space explorations in the near future.

In order to widely demonstrate the principles and importance of this new technology and its future applications to the general public, this exhibition will mainly introduce the newest muography instrument and the world's first volcano observation seismography developed in Italy. This technology also attracts significant attention in Italy, the birthplace of volcanology, and major international joint research projects between Italian institutions and the University of Tokyo are in progress. This exhibition is an event commemorating the 150th anniversary of the establishment of diplomatic relations between Japan and Italy.

Main exhibits

- The newest muography instrument (with a real-time demonstration experiment of perspective view through surrounding buildings)
- The world's first volcano observation seismography developed in Italy (Collection of the Museo Vesuviano, with a letter of acknowledgement by Toshimichi Okubo attached)

Key Information

[Title] “Muography: Perspective Drawing in the 21st Century”

[Dates] December 5, 2015 – February 21, 2016

[Opening Hours] 11:00 - 18:00 (open until 20:00 on Thursday and Friday; last entry 30 minutes before closing)

*Opening hours may change.

[Closed on] Mondays (or the following Tuesday if Monday is a National Holiday) and Year-end holidays. May close irregularly.

[Venue] Intermediatheque 2F [GREY CUBE]

[Organizers] The University Museum, The University of Tokyo (UMUT) + Earthquake Research Institute, The University of Tokyo (ERI)

[Cooperation] Istituto Nazionale di Fisica Nucleare (INFN; National Institute for Nuclear Physics), Istituto Nazionale di Geofisica e Vulcanologia (INGV; National Institute of Geophysics and Volcanology)

[Support] Embassy of Italy in Japan, Embassy of Hungary in Japan, Komazawa University, Nippon Steel & Sumitomo Metal Corporation

[Admission] Free of charge

[Address] JP Tower / KITTE 2-3F, 2-7-2 Marunouchi, Chiyoda-ku, Tokyo, JAPAN

[Access] JR lines and Tokyo Metro Marunouchi line Tokyo Station. Direct access from the Marunouchi Underground Pathway.

For further information about this special exhibition, please contact:

+81 3 5777 8600 (Hello Dial)