

# The Vesuvius Observatory, an invaluable scientific, historical and naturalistic geosite in the framework of the most famous volcano in the world



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The Vesuvius Observatory is the first volcanological observatory in the world. Since its foundation in 1841 and thanks to the approval of King Ferdinand II of Bourbon, in this site began the systematic study of Vesuvius and its eruptive activity. The Observatory site must be considered among the most representative geosites of the Vesuvius surroundings, due to the geological setting of the area and its historical and scientific value.

In the XIX century volcanologists based much of their research on the direct observation of the volcanoes, so it was decided to found the Observatory not far from the Vesuvius crater. The choice could seem hazardous, but actually it never was. In fact at that time the Vesuvius activity was only characterized by effusive or low-energy explosive eruptions, and the site was always only lapped by lava flows, as reported in the first volcanological map of Vesuvius, by Johnston Lavis (1888).

Names of distinguished scientists, who have dedicated their entire lives to the study of the volcano, are the flagship of the Vesuvius Observatory since its foundation. Many of them have directed it, thus linking their name to this site as well as to important discoveries in both volcanological and seismological fields.

At present the historical site of the Vesuvius Observatory hosts a permanent exhibition, in which collections of great scientific, artistic and cultural value – unique for their abundance and variety – tells the story of this institution. The exhibition also introduces the visitors to volcanism and related hazards, the forecasting of volcanic eruptions and the monitoring systems of active volcanoes, proposing itself as an invaluable instrument of risk mitigation, by increasing the population awareness about the threat posed by these volcanoes and generating the conditions for a correct land-planning and management, and a sustainable development of the territory.



The Observatory owns and houses the following collections, unique in their combination of scientific, historical and artistic importance:

### Old books on Volcanological matters

The Observatory library treasures among its possessions numerous antique books of largely volcanological content including 9 sixteenth century volumes, 64 from the seventeenth century which deal mainly with questions regarding the 1631 eruption, while those of the 18th century are compendia of Vesuvian history by various famous writers like Serao, Sorrentino, Mecatti, De Bottis and Ascanio Filomarino. The most valuable book is undoubtedly that of the Jesuit Athanasius Kircher, *Mundus Subterraneus*, and dates to 1668.

### Collection of Rocks, Minerals, volcanic ash and other materials from Historical-period eruptions of Vesuvius

Many of these samples were collected personally by Teodoro Monticelli, Arcangelo Scacchi, Vittorio Matteucci and Alessandro Malladra. They are samples of lava, ash, lapilli and bombs produced by eruptions since XIX century.

### Recordings on smoked paper of Vesuvian Seismic activity from 1915 until 1970

These registrations are of notable scientific and historical value, since they are evidence of the volcano's seismic activity over a long time period. The collection also includes apparatus for smoking the paper.

### Scientific Instruments

The instruments belonging to this collection illustrate the long journey made by seismology, the uncontested pioneers of which were Palmieri and Mercalli, both past directors of the Vesuvius Observatory. Possessions include the oldest seismoscopes and Palmieri's famous electromagnetic seismograph, all in excellent condition, as well as numerous pieces of meteorological, magnetic, geodetic and geochemical apparatus, used for the study and surveillance of Vesuvius since the birth of the Vesuvius Observatory.

### Geological and Geomorphological Maps and Models

The collection is privileged to include a geological map by Johnston Lavis (1888), one of the earliest volcanological maps of Vesuvius. There are also surveys of the modifications undergone by the cone of Vesuvius following various eruptions, conducted by Matteucci, Mercalli and Malladra. The collection is completed by numerous models of Vesuvius, Campi Flegrei, Santorini, Stromboli, Etna and Fogo (Cape Verde). The oldest dates from 1878 and represents Vesuvius on a zinc sheet electroplated with copper.

### Vintage photographs and filmed sequences of eruptions

The collection contains a large number of photographs and films of eruptions made between 1865 and 1944. The oldest film in the archive is also the first film ever made of a volcano in eruption, shot by the Lumière Brothers in 1898, only two years after the invention of the cinematograph. The short film records the formation of Colle Umberto (1895-1899).

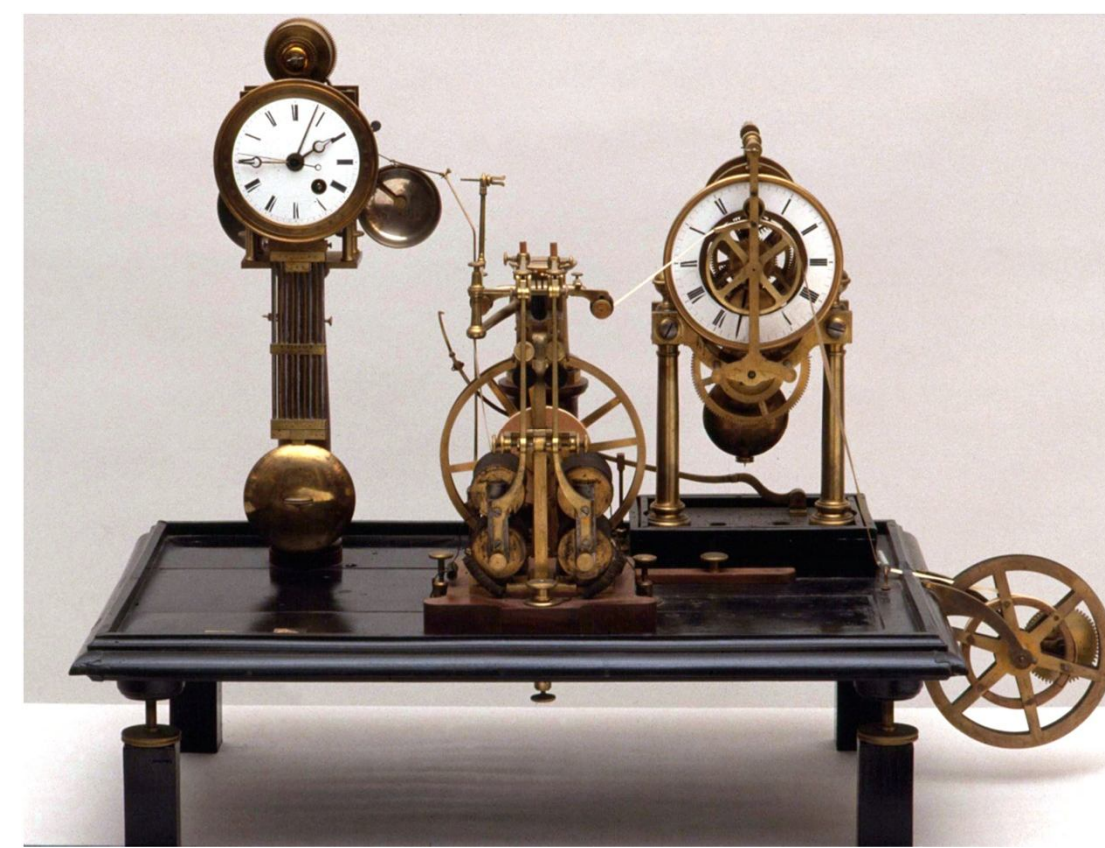
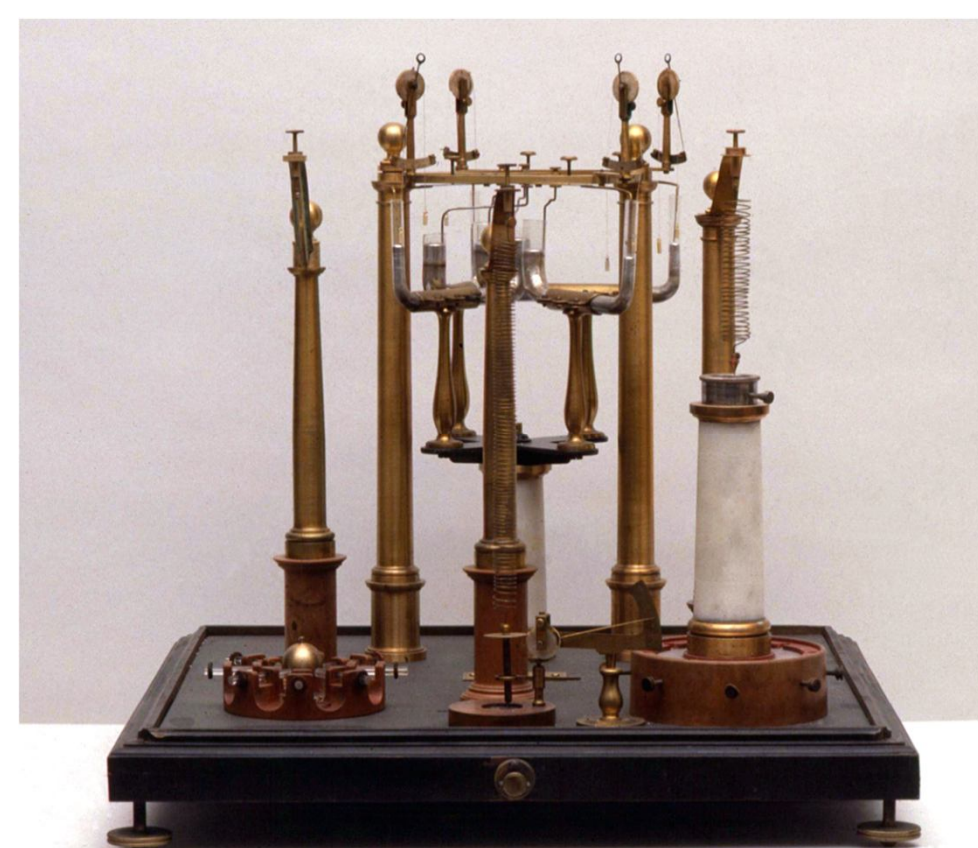
Another rarity is the film of the catastrophic 1906 eruption made by the Troncone Brothers. The most recent film is of the 1944 eruption and was shot by the Allied Forces and donated to the director Giuseppe Imbò. The collection is completed by numerous photographic plates and negatives showing Vesuvius, Etna, Stromboli and Vulcano.

### Gouaches of Vesuvius

The collection consists of 15 gouaches of which three are by Odoardo Fischetti, one by Luigi Gentile and the others by unknown artists. They all share as their subject Vesuvius and its eruptions, and were painted between 1819 and 1834.

### Lava Medals

The collection consists of 95 pieces and bears witness to life around Vesuvius and the type of eruptive activity that occurred at the time of their production. The medals were made on Vesuvius itself. Small quantities of liquid lava were taken from as close as possible to the points of emission, and on them were inscribed images and writing using metal punches.



1906 eruption and Matteucci in the Observatory (9th April)



Medal made with the lava of the May 1855 eruption. Myth of Hebe offering drink to an eagle

On the second floor of the building there is the Great Hall, now the Palmieri Hall, embellished by the paintings of Gennaro Maldarelli (1795-1858). The subjects of the central paintings are: Minerva crowning the God of Science with various cherubs in attendance. It is a mythological scene in which Minerva, goddess of wisdom, crowns Prometheus, dispenser of the fire of knowledge.