

A new public service to visit the Conrad Observatory at any time, but a little differently: virtually!

Barbara Leichter

The Conrad Observatory is a unique geophysical infrastructure located in a remote place, far away from human interferences, and built to fulfill the very special requirements of sensitive measurements. The technical solutions used to fulfill these requirements, as well as unique experiments performed with special sensors make the observatory a very interesting place to visit – from now on also virtually.

Being a public institution, we welcome visits to our observatory from the general public, as well as for specialized audiences. Unfortunately, visits must be limited to insensitive areas of the observatory, where the presence of people does not disturb our most sensitive measurement equipment. Vibrations, metallic objects, minute temperature changes, and even body mass can affect our continuous measurements of seismic signals, radioactivity background, magnetic fields, and the Earth's gravity.

Furthermore, there is also the need to inform the public and potential collaborators about the capabilities of our facilities, the data collected, the locations of different sensors, as well as building or tunnel dimensions for project planning. In order to accommodate these needs, we have set up a virtual reality environment for the Conrad Observatory, which makes it possible to experience our facilities without visiting the site. You can visit the observatory virtually and walk through the tunnel systems, explore sensor positions that are normally not accessible, even if you were on site.



Figure 1: Schematic representation of the tunnel system of the Geomagnetic Observatory, with colored points for which a description is available.

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To give visitors more than just a visual overview of the Conrad Observatory, information boxes with descriptions of the entire facility and the measuring instruments, as well as detailed pictures and short videos are embedded in the online tours in addition to 360° images. During the tour, you will find basic information and links to real-time data as well as links to detailed explanations of what certain data are actually used for.

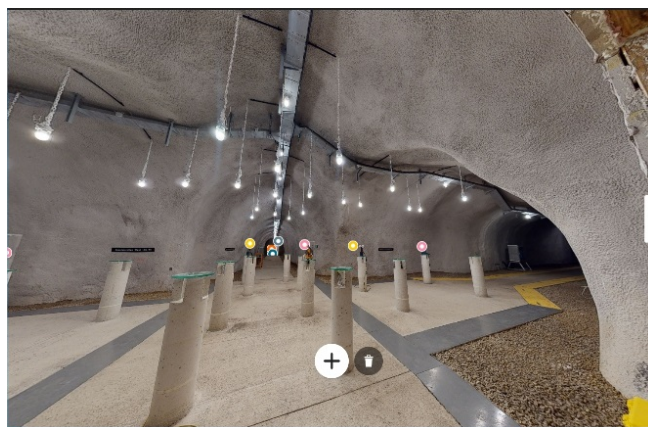


Figure 2: The heart of the Geomagnetic Observatory, the absolute measuring area.

There is a separate tour for both sections of the observatory, which host seismic/gravimetric and magnetic sensors, respectively. Each tour also includes descriptions of the outdoor sensor technology.

Links:

<https://cobs.zamg.ac.at/gsa/index.php/en/observatory/virtual-3d-tour-gmo>

<https://cobs.zamg.ac.at/gsa/index.php/en/observatory/virtual-3d-tour-sgo>

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