



EGU24-9625, updated on 08 Mar 2024
<https://doi.org/10.5194/egusphere-egu24-9625>
EGU General Assembly 2024
© Author(s) 2024. This work is distributed under
the Creative Commons Attribution 4.0 License.



Geophysical Imaging Of Shallow Geological Structures In Malta

Peter Iregbeyen et al. ▶

ABSTRACT

There have been growing needs for scientists to search for efficiently high-resolution geophysical techniques to image the subsurface features, formations, and shallow geologic structures (e.g. faults, void, stratigraphy features). At shallow depths, an in-depth understanding of these features/structures could be pivotal in the management of the environment and crucial examination of hazardous terrains which are of growing threat to human safety. In the case of Malta, with a limited land space, their study could be relevant to the environmental planning agency in advocating for safe building sites for structural architecture as well as use of land. In this regard, this study will be investigating such features located in Malta, one in the Selmun Promontory, located in the north-eastern zone, and the second in the Mellieha valley located in the north-western zone of the Maltese archipelago.

On the Selmun area ERTs arrays and passive seismic measurements were recorded both in the slope and on the plateau. Results are interpreted in terms of geological stratigraphy and whether zones on the plateau were identified, where rock falls and other slope processes are incipient.

In the Mellieha Area, ERTs arrays, GPR scans and ambient noise measurements indicate the presence of unmapped fault zones and sediment distribution, improving the understanding of the local geology.

How to cite: Iregbeyen, P., D'Amico, S., Galone, L., Colica, E., Villani, F., Martino, S., Iannucci, R., and Aigbedion, I.: Geophysical Imaging Of Shallow Geological Structures In Malta, EGU General Assembly 2024, Vienna, Austria, 14–19 Apr 2024, EGU24-9625, <https://doi.org/10.5194/egusphere-egu24-9625>, 2024.

