

LABORATORY: CNR-ISPC

NAME OF THE INSTRUMENT

Georadar Stream C, IDS System

GENERAL DESCRIPTION:

The georadar available in MOLAB is used in several fields of investigations due to its extremely handy, fast, and completely non-invasive. The georadar method (also known as Ground Penetrating Radar - GPR) is a high-resolution technique that allows to acquire a large amount of information on large areas in the first meters of the subsoil, referable to the presence of buried bodies, cavities, structures of archaeological interest, subsoil stratifications, etc. Stream C is the compact GPR array solution for real-time 3D mapping of underground utilities and features. Thanks to the increased level of accuracy, provided by a massive antenna array.

Benefits of the Stream C include High Productivity: Surveys only need to be performed in one direction to ensure optimal detection of both longitudinal and transversal structures; **Reduced user fatigue:** Thanks to electronic ride height adjustment and a motor assisted drive wheel; **Facilitates large surveys:** The system can be towed manually or with a small vehicle, increasing the acquisition speed (up to 6 km/h).

TECHNICAL DESCRIPTION:

The portable georadar instrument is equipped with a control system, a series of 34 antennas in two polarisations with frequency of 600MHz.



Figure: georadar stream C

FURTHER INFORMATION:

- LeucciG., 2007, Ground Penetrating Radar: Un'introduzione per gli Archeologi; Aracne Editrice, Roma; ISBN: 978-88-548-0951-2.
- Leucci G., 2015, Geofisica Applicata all'Archeologia e ai Beni Monumentali. Dario Flaccovio Editore, Palermo, pp. 368. ISBN: 9788857905068
- Leucci G., 2019, Nondestructive Testing for Archaeology and Cultural Heritage: A practical guide and new perspective. Springer editore pp 217, ISBN 978-3-030-01898-6

- Leucci G., 2020, *Advances in Geophysical Methods Applied to Forensic Investigations: New Developments in Acquisition and Data Analysis Methodologies*. Springer editore, pp 200, ISBN 978-3-030-46241-3
- Giannino F., Leucci G., 2021. *Electromagnetic Methods in Geophysics: Applications in GeoRadar, FDEM, TDEM, and AEM*. Wiley, pp 352, ISBN: 978-1-119-77098-5

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