

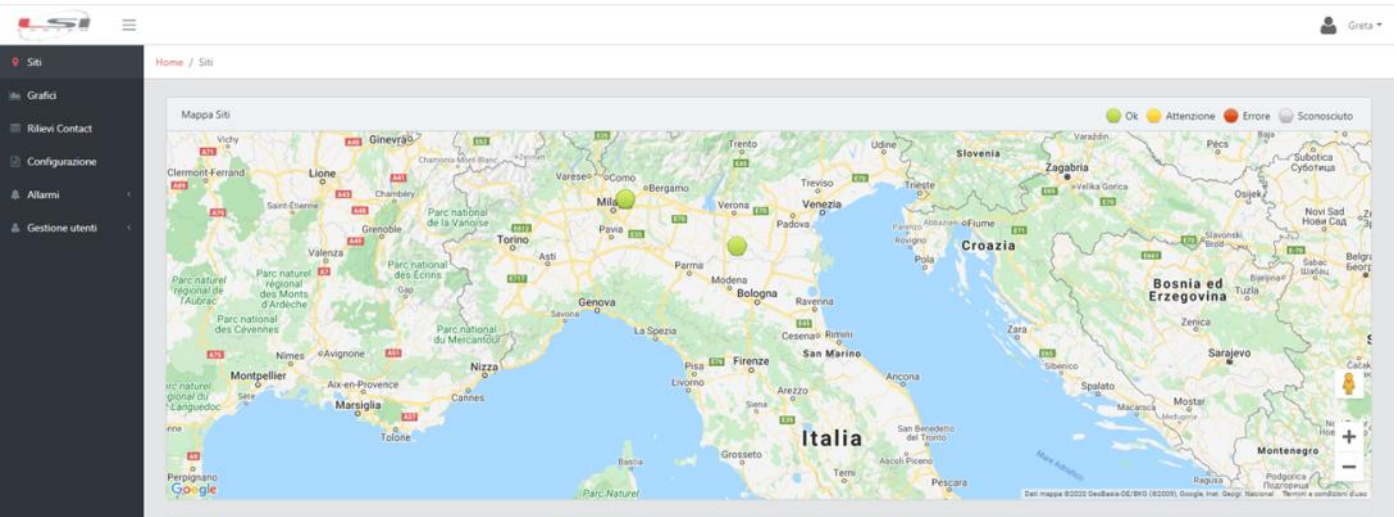
# G.Re.T.A. CLOUD (SWCLA1022)

Web-based cloud platform that allows access to the data of G.Re.T.A. systems from any Internet location. This service is offered by subscription by LSI LASTEM. The website is available with the introduction of login credentials. It is available in Italian, English, French and Spanish.

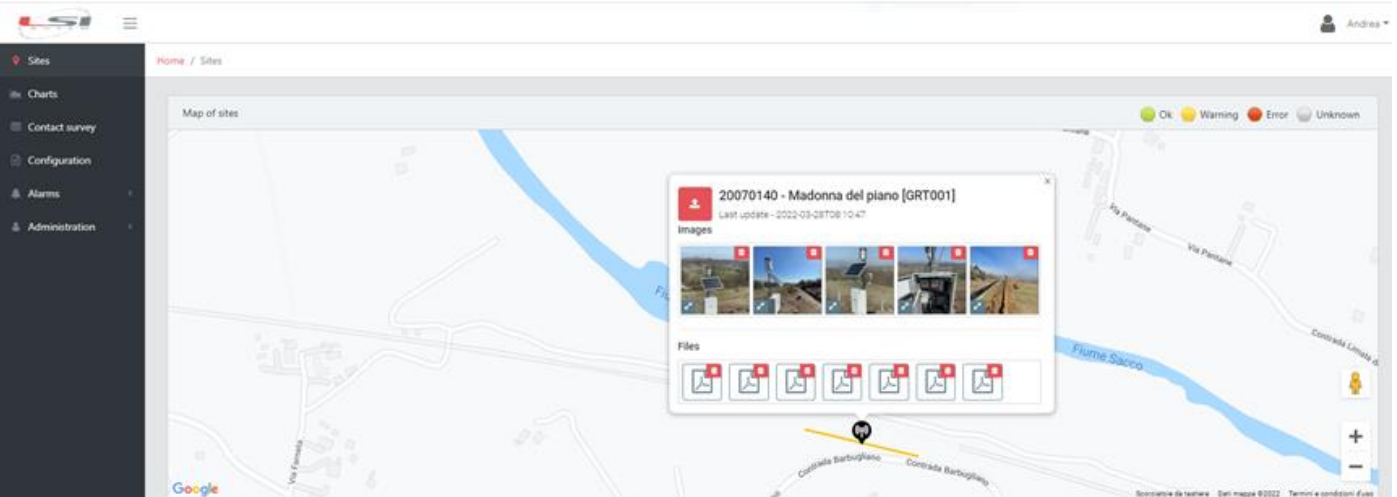
## Main features

- ▶ Visualization of resistivity data
- ▶ Visualization of acquisition parameters
- ▶ Comparison between data of different days
- ▶ Measurement of contact resistance between electrodes
- ▶ Inversion algorithm included in the cloud software
- ▶ Possibility of integrating environmental and piezometric measurements inside the platform
- ▶ Possibility of inserting a calibration function to convert resistivity sections into sections of soil water content
- ▶ Ability to set alarm thresholds
- ▶ Acquisition configuration section
- ▶ Data export in text or JSON format

## Geolocation of the stations

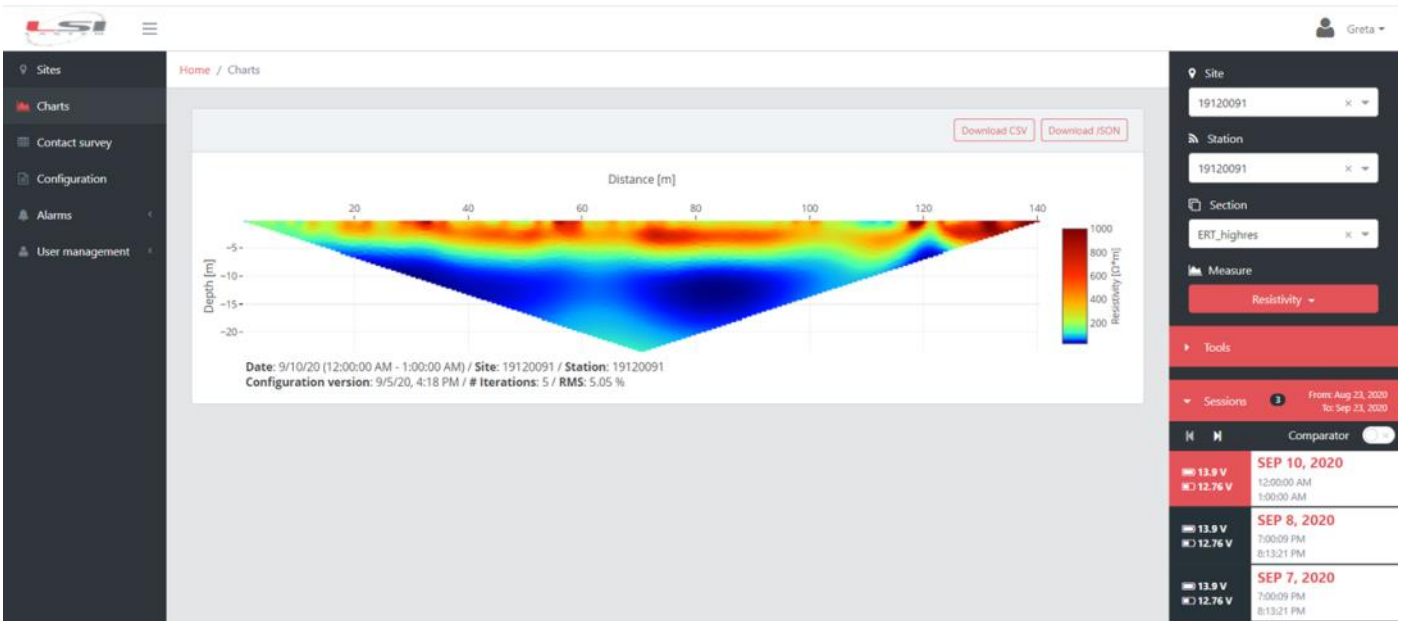


▶ Display on a cartographic basis of the position of the G.Re.T.A. stations with name and first level of diagnostics on operation. G.Re.T.A. system communication to the LSI LASTEM server via Modem / Router. Geolocation of stations on the map: the colored dot indicates a first diagnostic on the correct functioning of the system.



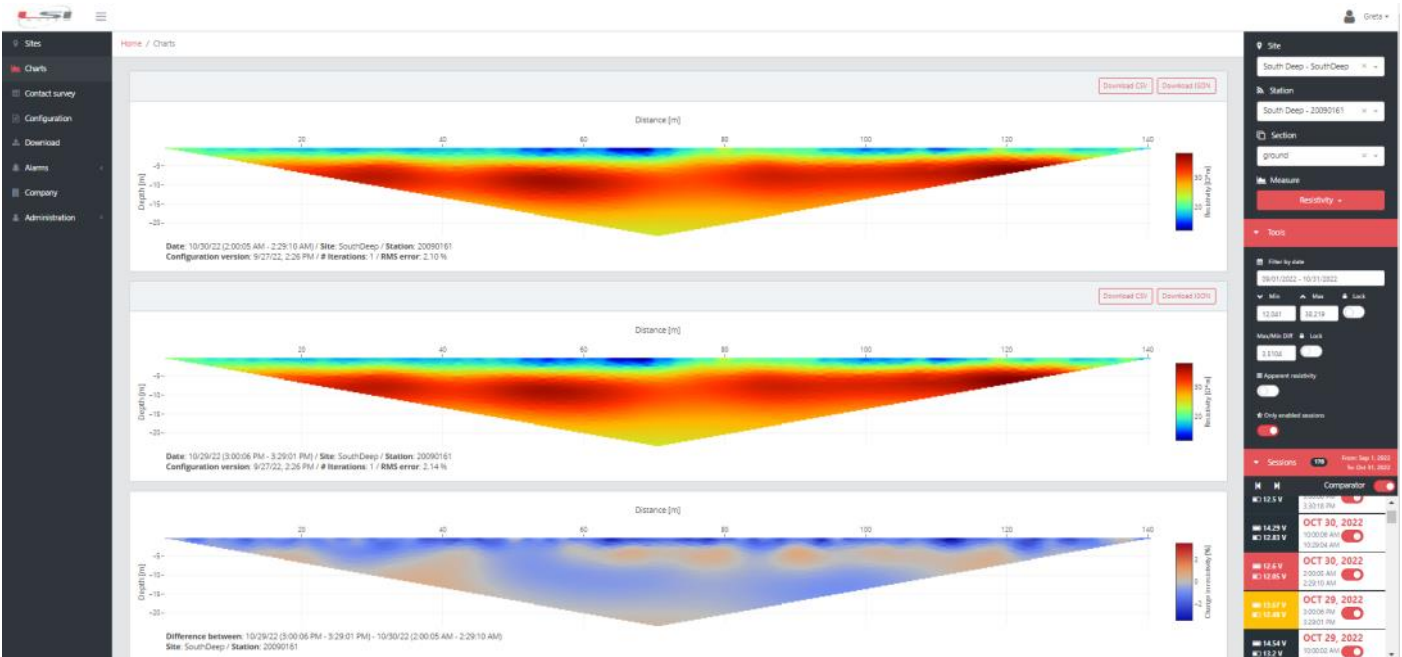
▶ Visualization of the profiles on the Google map and possibility to upload, download and view images, documents and other metadata.

## Display of resistivity data and acquisition parameters



► Display of apparent and inverted resistivity data. Display of the acquisition parameters, such as injected current, measured voltage, standard deviation of the measurements and soil water content.

## Data comparison



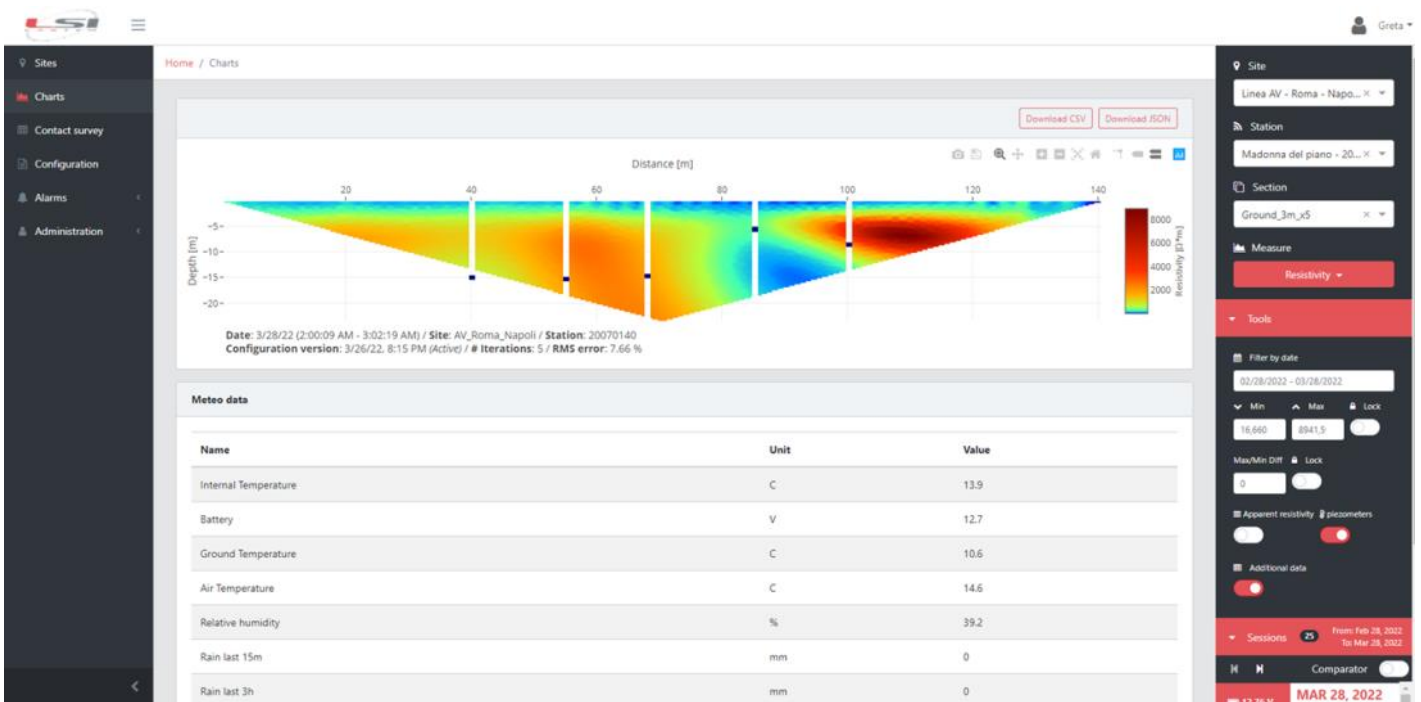
► Possibility of comparing data acquired at different times, selectable from the list of measurements performed.

## Integration of additional data

The system can be integrated with meteorological sensors connected to an additional data logger that can be installed in the same box of the system. It is also possible to connect piezometers.

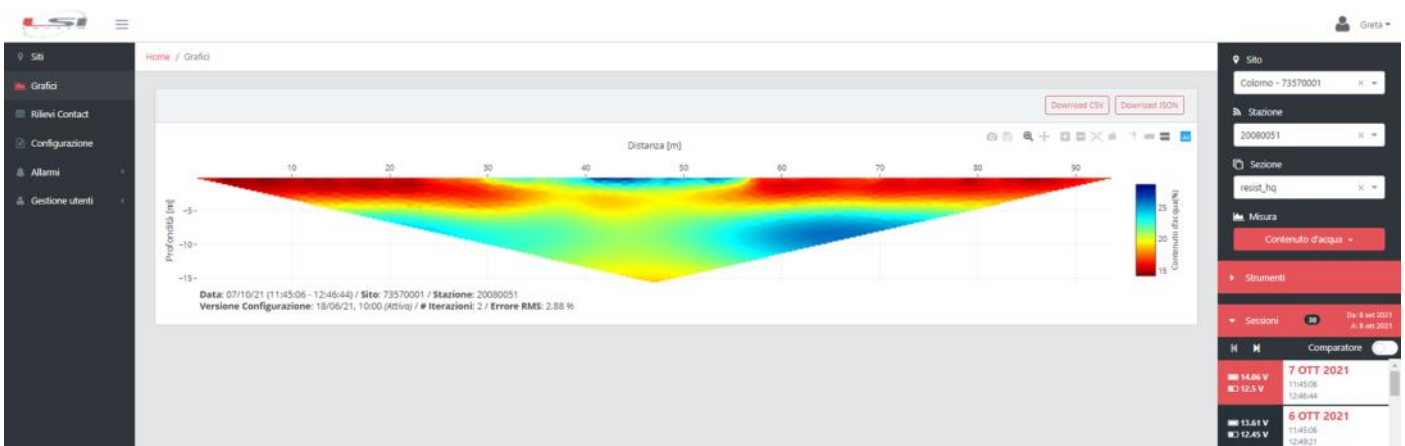
All additional data can be conveyed to the cloud platform to be displayed together with the acquired resistivity sections.

It is possible to view tables of environmental and piezometric data acquired at the same time of the geoelectrical measurement and view the groundwater level directly on the resistivity section.



► Display of additional data: environmental data (coming from meteorological sensors added to the system) and piezometric data from piezometers connected to an additional data logger connected to the G.Re.T.A.

## Introduction of the resistivity-water content calibration function



► The user can enter the calibration parameters of a specific site-dependent function for the transformation of resistivity sections into sections of soil water content. To obtain parameters A and B of the function, it is necessary to perform a core drilling with extraction of samples at different depths in order to measure the water content of the soil.

## Measurement configuration

The user configures the execution of the G.Re.T.A. system measurements indicating the type of survey:

- apparent resistivity measurement
- measurement of contact resistances

And choosing the time frequency of the measurement. The system updates automatically, recognizing the presence of a new configuration file on the cloud.

## Alarm module

The user can set alarms to be activated when the resistivity data variation thresholds are exceeded. It is possible to choose the area of the section on which apply the alarm, the temporal distance on which evaluate the command and the % change in resistivity to be achieved. For each system it is possible to set different alarms with different thresholds, applied to different areas of the section or acting on different time periods.

The user is notified of the threshold exceedence via an email and can visualize the measurements that provoked the alarm.

