



Report of Transnational Access Projects

(Note: the information here will be publicly disclosed in the Geo-INQUIRE website, do not include sensitive information)

Project ID: *C4_TA3-88-2_2*

Principal investigator: *David Zuliani, Istituto Nazionale di Oceanografia e di Geofisica Sperimentale - OGS, <https://www.ogs.it/en/users/david-zuliani>*

Project team (if applicable): *Paolo Fabris and Simone Galvi, OGS.*

Project title: *LZERO Evaluation with Geo-INQUIRE support in the Active NFO framework of TRANSFORM²*

Project acronym: *LEGANT*

Hosting installation: *Corinth Rift Laboratory - Distributed Temperature and Strain Sensor (DTSS) on fibers - GNSS network*

Hosting team: *Christos Evangelidis, National Observatory of Athens & Panagiotis Elias University of Patras*

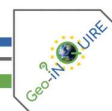
Period of access: *March 3rd, March 4th and March 5th of 2026*

Report of activities:

On 4 March 2026, within the framework of the TRANSFORM² project and the Geo-INQUIRE Transnational Access activity "LZERO Evaluation with Geo-INQUIRE support in the Active NFO framework of TRANSFORM²" (LEGANT), a LZERO GNSS station developed by OGS was installed at the Corinth Rift Laboratory (CRL), Greece. The installation was carried out by OGS technicians Paolo Fabris and Simone Galvi in collaboration with the local CRL team. The activity aimed to evaluate the performance of a cost-effective GNSS solution within a Near-Fault Observatory (NFO) environment.

The installed system corresponds to the LZERO NET model, a GNSS monitoring platform designed for continuous operation at remote monitoring sites. The station integrates a multi-constellation u-blox ZED-F9P receiver, a calibrated GNSS antenna and a compact Linux-based computer running RTKLIB software for data acquisition and management. Installation activities included antenna deployment, hardware configuration, network connectivity setup, and validation of the complete data acquisition chain.

Following installation, the station was configured to acquire continuous GNSS observations at a sampling rate of 1 Hz and to automatically generate standard RINEX products for scientific post-processing. The resulting dataset provides a valuable resource for evaluating the reliability and long-term stability of cost-effective GNSS technology in a real monitoring environment. The activity demonstrated the capability of the LZERO



platform to operate continuously within an established NFO infrastructure while maintaining compatibility with standard geodetic processing workflows.

The experiment contributes to Task 2.4 of the TRANSFORM² project, dedicated to the assessment of cost-effective GNSS technologies for research infrastructures and environmental monitoring. The Corinth Rift Laboratory, one of the flagship NFO sites within the EPOS framework, offers an ideal environment for testing innovative GNSS solutions under real operating conditions.

The installed station, identified as OGUP00ITA, continuously acquires GNSS observations and generates standard geodetic products for scientific use. The resulting dataset is publicly available through OGS services and will be integrated into two EPOS-GNSS GLASS nodes: the CEGNxEPOS node operated by OGS and the NOA node operated by the National Observatory of Athens. This integration improves the visibility, accessibility and long-term sustainability of the dataset while demonstrating the interoperability of the Geo-INQUIRE, TRANSFORM² and EPOS research infrastructures. The activity represents both a successful technical validation of the LZERO platform and a contribution to the development of a distributed European GNSS monitoring ecosystem based on FAIR and open-data principles.

Geo-INQUIRE is funded by the European Union (GA 101058518).

Project outcomes:

Weblink to access stored data: https://frednet.crs.ogs.it/frednet_data/Projects/GEOINQUIRE/

Note: Data, products, software and publications resulting from TA activities must be publicly accessible under a CC-BY 4.0, GPLv3 or equivalent open license. No embargos beyond June 2026 are allowed. They must cite Geo-INQUIRE as the source of funding. Minimal citation: “Geo-INQUIRE is funded by the European Union (GA 101058518)”.

