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: *UnICorn*

Principal investigator: *Prof. Dr. Jonathan Bedford, Ruhr University Bochum, https://orcid.org/0000-0002-8954-4367*

Project team (if applicable): *Dr. Marco Roth, Ruhr University Bochum; Anna Schulte, Ruhr University Bochum; Stamatina Kanakaki, Ruhr University Bochum*

Project title: ***Un****locking the* ***I****nSAR 3D velocity field with extra GNSS measurements north of the* ***Cor****i****n****th Rift*

Project acronym: *UnICorn*

Hosting installation: *TA3-88-2*

Hosting team: *Dr. Panagiotis Elias, Assistant Professor of Geodesy with Applications in Geology, University of Patras; Dr. Konstantinos Chousianitis, Research Director in the Institute of Geodynamics, National Observatory Athens*

Period of access: *March 01 – March 12 2026*

Report of activities:

The installation team of Dr. Marco Roth, Anna Schulte, and Stamatina Kanakaki installed 6 continuous GNSS stations in the Thessaly / Epirus regions of northern Greece. The work consisted of picking up installation equipment from the University of Patras (TA3-88-2), driving to sites, arranging the optimal site locations on public buildings on-site with local municipal workers and doing the installation work, and then returning the equipment to TA3-88-2. The hosting institution (TA3-88-2) provided the support with obtaining municipality site permissions and other related logistics. The original plan was to install 10 sites but challenges in obtaining permissions at some sites resulted in 6 installations being done in total. 5 of the stations continue to work (TT43, TT45, P014, P026, P027), while another one (P033) has been removed due to a hardware malfunction. Each installation consists of a u-blox ANN-MB2-00 multi-band patch antenna connected to a tinBlack receiver from maram UG that contains the Piksi-multi multi-frequency GNSS module from Swiftnav. The installations are sampling every 30 seconds and sending binary files of multi-frequency GNSS observations that we convert to RINEX. The installations are unconventional continuous GNSS stations in the sense that most of these UnICorn installations are glued on sloped, tiled roofs. Despite this, we expect the data will be useful for providing 1st order strain rates and the 3D reference frame ties for the InSAR obtained in the region.

Project outcomes:

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