Low-cost Satellite-based Monitoring Services for Geoscientists & Vulcanologists

Overview

Our bespoke GNSS services are carefully designed to meet the precise needs of your ground-motion monitoring projects - at a highly competitive price.

We provide 24/7/365 monitoring to detect centimetre-scale movements between an array of fixed stations.

Our complete solutions incorporate the latest GNSS hardware & software, comprehensive spatial processing, and expert interpretation that can be incorporated into your monitoring projects, research, and grant applications.

We have a proven record of academic collaboration with multiple successful grants and high-impact publications in leading journals including Nature Scientific Reports, Journal of Geophysical Research, Geomorphology, Annals of Geophysics, Geosphere, and many others.

See our research profile at: http://geospatial-research.com/research-archive/

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GNSS Monitoring

Our complete GNSS monitoring solutions are a tried-and-tested low-cost route to high-impact science

Wide-ranging Applications

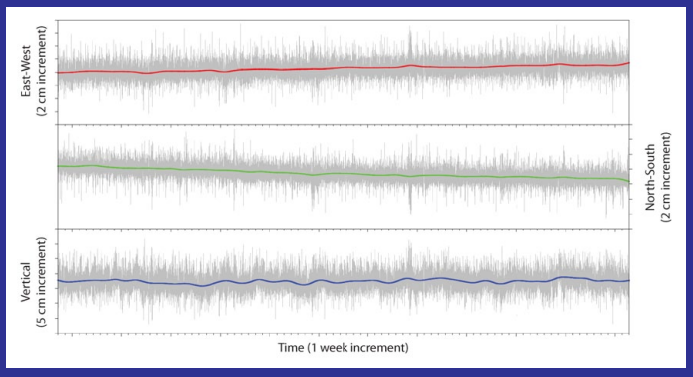
- Monitor surface deformation in active volcanic systems.
- Analyse pre-eruption & dome collapse.
- Assist development of early warning systems.
- Integrate and correlate with other datasets (seismic, radar, ultrasound, and gas emissions).
- Investigate volcano-tectonic interactions.

Complete GNSS Deployment & Processing

- Survey design.
- Equipment selection and assembly.
- Field installation.
- Spatial processing of raw data.
- Expert collaboration to aid your interpretation.
- Full support for publication in peer-reviewed journals.

Various Equipment & Price Options

- Single frequency, short baseline positioning.
- Dual frequency, long baseline positioning.
- Up to 20 Hz data rate.
- Fully-autonomous solutions with data delivery.
- Real-time data processing.
- Long-term deployment.
- Easily integrated with our Lidar & UAV services.



Technical Specification

- Constellations utilised: GPS, GLONASS, Galileo, BeiDou & QZSS.
- Output of raw observation data at up to 5 Hz: pseudorange, carrier phase, doppler & SNR in rinex format.
- FTP hosting of rinex observation data at hourly/six-hourly/daily intervals.
- Single cm accuracy of instantaneous position in horizontal and vertical components provided at baselines up to 10 km, dependant on deployment location.
- Sub-cm horizontal and 1 - 1.5 cm vertical accuracy over extended epochs is possible in processing.
- Configurable data management and transmission using FTP via GSM or long range radio.
- Extremely low power. Self-sufficient power is provided by a small footprint solar panel and 12v battery.
- Typical installation time is 1 – 2 hours.

Discuss your project needs

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