

NaGNet GPS Monitoring

Long-term monitoring to detect local movements in the earth's crust



The satellite-based precision measurement network "NaGNet" stands for "Nagra's permanent GNSS Network" and is used to monitor the smallest movements in the geological subsurface. Over the next few decades, the measurement stations will record highly accurate position data from the "Global Navigation Satellite System" (GNSS).

The data collected is used to infer the smallest movements in the geological subsurface. In terms of the long-term safety of future geological repositories for the long-term storage of radioactive waste, the models for the movement of the earth's crust are thus being verified.

The stations supplement the existing GNSS measurement network AGNES – "Automatic GNSS Network of Switzerland", which is operated by the Federal Office of Topography (swisstopo).

- 📍 Northern Switzerland and Southern Germany
- 👤 NAGRA, Switzerland
- 🕒 2010 - 2027

Leistungen

- ◆ General contractor for the planning, construction and operation of a GNSS network with 11 stations
- ◆ Automated processing, quality control and data (evaluation by the Federal Office of Topography swisstopo, Bern)
- ◆ Comprehensive monitoring of systems and processes to ensure correct and uninterrupted operation
- ◆ Half-yearly deformation measurements of the foundations using precision levelling and tachymetry
- ◆ Web customer portal with hourly updates on the operating status of all measuring stations, as well as numerical and graphical representations of many quality parameters.

Technologien

- ◆ GNSS hardware: Leica GRX1200+GNSS with Leica AR25 choke ring antenna
- ◆ Operating and evaluation centre with Leica GNSS Spider and Spider QC software
- ◆ TEDAMOS Web, password-protected customer portal with 24/7 access