

## **New prototype of 6-component seismograph Rotaphone CY: laboratory testing and pilot measurements**

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Rotaphones are seismic sensor systems consisting of parallel pairs of geophones attached to a rigid frame anchored to ground. Such an arrangement allows to measure both translational and rotational ground motions. Translations are measured by individual geophones while rotations are determined using differential records from the paired geophones. The individual geophones are calibrated simultaneously with each measurement utilizing overdetermined rotational components. A new prototype, Rotaphone CY has been recently developed. The design has been improved taking into account experience with field measurements performed using older prototypes. The device is optimized for recording weak ground motions from local microearthquakes, both natural or induced, in a high-frequency range. The instruments were carefully tested in laboratory conditions. A local network of seven Rotaphones CY has been recently deployed in scope of Litomerice geothermal project to investigate induced seismicity related to the production of geothermal energy.