Photogrammetry is a technique that uses imagery collected from airborne and terrestrial platforms, such as drones, to construct high resolution images of Earth’s topography.

InSAR (Interferometric Synthetic Aperture Radar) uses radar images of Earth’s surface to monitor ground surface deformation.

Borehole Strainmeters monitor Earth deformation by measuring tiny changes in the dimensions of a borehole at depths of 100 to 250 meters.

Gravity measurements, some of which are collected by two NASA satellites in paired orbit, allow geodesists to determine how mass is distributed around the planet and how this distribution varies over time.

Lidar is a 3D imaging technology that uses lasers to create high resolution images of the Earth’s surface. Lidar can be collected from a tripod, an airborne platform, or from space.

GPS (Global Positioning System) is the United States’ component of GNSS (Global Navigation Satellite System). High precision allows geodesists to detect Earth movements with millimeter-scale accuracy over extended periods of time.