



MEASURING THE  
**EARTH**  
THE SCIENCE OF  
**GEODESY**

**EARTH ON THE MOVE** The motion of tectonic plates, along with erosion and deposition, alter Earth's surface, creating mountains and valleys and causing earthquakes. Earth's shape also constantly changes because of gravitational forces between our moon, sun, and other celestial bodies. Movements on the order of tens of centimeters could trigger geologic events like volcanic eruptions. All these motions can be monitored using tools such as high-precision GPS and laser scanning (lidar).

*Photo: Alph Lake and Koettlitz Glacier, Antarctica by Brendan Hodge, UNAVCO*



a monthly series on the how and why of geodesy