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FOR IMMEDIATE RELEASE

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Alexandria, Va. – Global Positioning System (GPS) technology was conceived in the 1960s to provide precise time and location data to the U.S. military, but it was soon embraced by geodesists and earth scientists. The first major test of GPS as a seismic tool occurred on Oct. 17, 1989, when the Loma Prieta earthquake struck San Francisco just as the third game of the World Series was about to begin at Candlestick Park. The quake killed 63 people, injured several thousand and caused an estimated \$6 billion in damage.

Prior to the quake, geoscientists had placed GPS markers in and around the San Francisco area. Immediately after the quake, researchers converged on the area to collect and compare the pre- and post-quake GPS data, which revealed the direction and speed of surface movements, allowing scientists to infer the pattern of slip on the fault plane that had ruptured far underground. GPS had proved its worth. Whereas strain gauges, trenching and other approaches provide useful information on crustal motion, only GPS can provide scientists with precise measurements of both large- and small-scale displacements. Today, GPS is an essential tool for geoscience research that extends far below — and above — Earth's surface.

Read more about how GPS benefits science as well as the millions of people living close to fault systems in the May issue of EARTH Magazine, now available on the digital newsstand: <http://bit.ly/11D7PJF>.

For more stories about the science of our planet, check out EARTH Magazine online or subscribe at www.earthmagazine.org. The May issue features stories on earthquakes setting off electrical displays in rift zones, scientists discovering 17 ancient super-eruptions in Utah and Nevada, and a recipe for remediation that mixes acid mine drainage with contaminated wastewater from hydraulic fracturing, plus much, much more.

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<http://www.earthmagazine.org/>. Published by the American Geosciences Institute, EARTH is your source for the science behind the headlines.

The American Geosciences Institute is a nonprofit federation of 50 geoscientific and professional associations that represents more than 250,000 geologists, geophysicists and other earth scientists. Founded in 1948, AGI provides information services to geoscientists, serves as a voice of shared interests in the profession, plays a major role in strengthening geoscience education, and strives to increase public awareness of the vital role the geosciences play in society's use of resources, resiliency to natural hazards, and interaction with the environment.

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