SMART cables: A new undersea look at earthquakes

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by Charlotte Rowe

Approximately 10,000 earthquakes large enough to be felt by humans occur every year as tectonic plates below the earth's surface slide past one another to relieve stress. The seismic activity from these earthquakes is recorded at thousands of seismic stations around the world. Using data from these stations, scientists can learn more about the geology inside of the earth, including things like earthquake location and magnitude.

Even with all those seismic stations, though, and more than 100 years of earthquake records, there are still significant holes in the data because seismic stations are not sampling the earth evenly or completely.

But now, that gap may be closing thanks to an international joint task force that is exploring the use of special underwater telecommunications cables to gather geophysical data.

The task force, of which Los Alamos National Laboratory is a part, is proposing the next generation of cables, called Science Monitoring and Reliable Telecommunication (SMART) cables, which would be outfitted with scientific sensors every 50 miles or so. These are primarily for oceanographic monitoring but they also include seismic sensors.

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