

Earth's crust pulsates in the Amazon basin

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Earth's crust pulsates up and down in the center of the Amazon basin, new research suggests, according to researchers in Brazil and United States.

A global positioning system station, located next to the Amazon and Rio Negro rivers in Brazil, recorded the station's altitude from 1995 to 2002. During that period the station oscillated up and down within a range of about 75 millimeters, or 3 inches, which was 3 to 9 times larger than observed at GPS stations around the world.

Michael Bevis of Ohio State University in Columbus, working with a team of colleagues, compared vertical crustal displacement with the fluctuation of the water level in the river and found an almost perfect anti-correlation.

As the river rises, the ground sinks. Conversely, as the river level falls in the dry season, the solid earth rebounds. The authors argue the motion of the GPS station changed due to elasticity in the planet's crust in the region, according to the study published in Geophysical Research Letters.

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