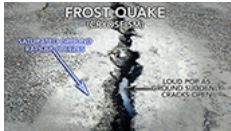


### **Paris, MO Experiences Rare Frost Quake** **News**

Posted by : Randy

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ST. LOUIS (AP) -- Chuck Herron heard the loud thud, then another and another. It sounded like someone was dropping big snowballs on the roof of his home.



The house is more than 100 years old and creaks, Herron said, but he had "never heard anything like that before."

As his neighbors in tiny Paris, Mo., huddled around televisions Sunday for the Super Bowl, many were startled by similar strange noises. Some even saw flashes of light and called 911.

Scientists say the community experienced a rare natural phenomenon known as a "frost quake," which happens when moisture in the ground suddenly freezes and expands. If conditions are just right, the soil or bedrock breaks like a brittle frozen pipe, generating mysterious noises that range from an earthquake-like rumble to sharp cracking sounds sometimes mistaken for falling trees.

This winter has been ripe for frost quakes, known technically as cryoseism. Temperatures have been frigid, but occasional warm-ups have allowed for thawing. And the temperature swings have sometimes been abrupt.

That was the case last weekend in Missouri, where temperatures in the 40s on Saturday gave way to single-digit readings by Sunday night.

In Mark Twain's hometown of Hannibal, Mo., 100 miles north of St. Louis, police and emergency dispatches received several calls within about two hours. Facebook feeds were filled with worries.

Some people compared the noise to a sonic boom that rattles windows, said Michael Hall, executive director of the 911 center that covers the Hannibal area. Others described it as sounding like "somebody banging on their house."

Missouri isn't alone. Frost quakes were reported last month in Canada and in several other states - Indiana, Michigan, Ohio, Wisconsin.

In DeKalb, Ill., Lisa Kammes and her family were getting ready for bed earlier this winter when the loud popping noises began.

"The louder ones sounded like somebody was throwing snowballs at the house," Kammes said.

Neighbors heard noises too, and several contacted police.

"It wasn't the regular noise you hear when your house is creaking, blowing in the wind or ice is breaking," Kammes said.

The light flashes reported by some people are believed to come from electrical changes that occur when the freezing compresses rocks.

## Paris, MO Experiences Rare Frost Quake

<http://www.kttn.com/kgozfm/modules/news/article.php?storyid=111356>

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Robert Herrmann of the Saint Louis University Earthquake Center said frost quakes are far different from real earthquakes. Tremors typically occur a mile or two underground. Frost quakes are near the surface and do not show up on seismographs.

"People nearby will probably notice them a lot because they are shallow, but because they do not penetrate deep within the earth, the magnitude will not be large," Herrmann said. "But the process is the same. There is something that is causing rock to move, and as the rock moves, it generates sound waves and the ground motion."

AccuWeather meteorologist Alex Sosnowski said frost quakes are most common in the northern Plains.

"It has to get suddenly colder," Sosnowski said. "If you have a mild winter, you're probably not going to have a lot of this going on."

Experts say damage is rare but homeowners who experience a frost quake should check for foundation cracks and watch for damage to water and natural gas lines.

Damage is not common, but it happens. In Waupun, Wis., a frost quake last month created a 100-foot crack in a driveway. Homeowner Dennis Olssen told authorities the boom was so loud he thought it was an explosive until he learned that neighbors experienced the same thing.

Kammes said the noise on that otherwise quiet night was so alarming that her husband went outside to make sure no one had damaged the home.

"When we found out what it was," she said, "it was actually a relief."