Gravitational wave rumors ripple through science world

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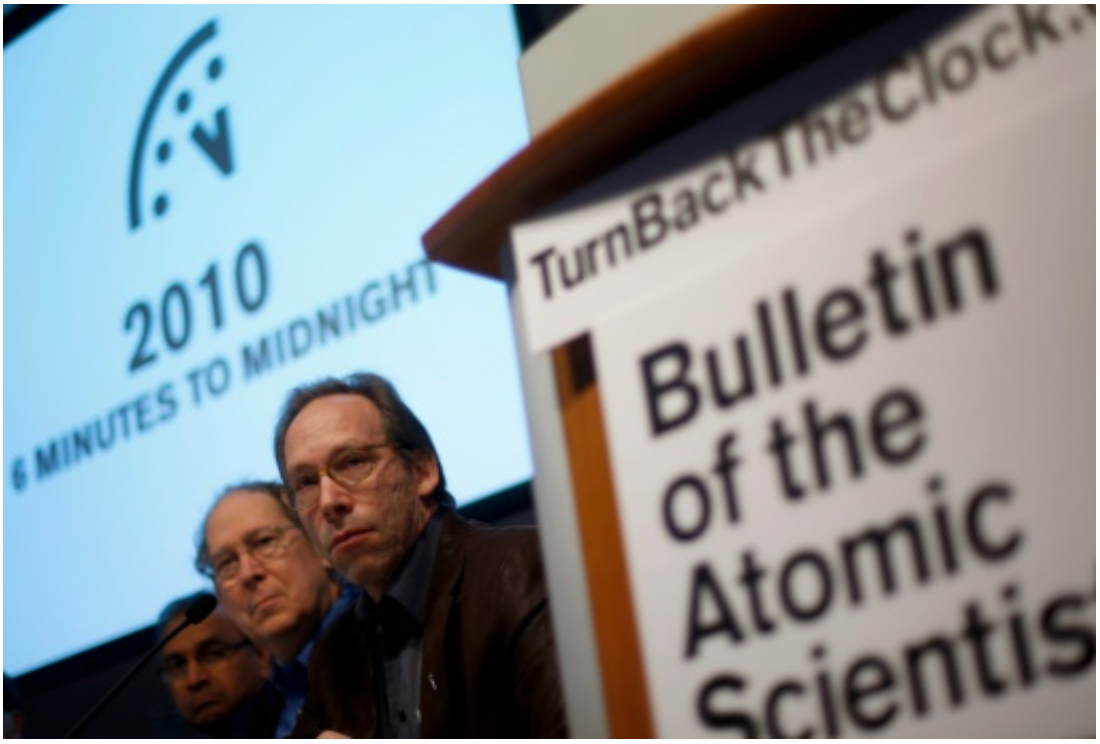

Arizona State University cosmologist Lawrence Krauss (R), pictured on January 14, 2010, sparked a firestorm of speculation and excitement by tweeting that gravitational waves may have been discovered

Rumors are rippling through the science world that physicists may have detected gravitational waves, a key element of Einstein's theory which if confirmed would be one of the biggest discoveries of our time.

There has been no announcement, no peer review or publication of the findings—all typically important steps in the process of releasing reliable and verifiable scientific research.

Instead, a message on Twitter from an Arizona State University cosmologist, Lawrence Krauss, has sparked a firestorm of speculation and excitement.

Krauss does not work with the Advanced Laser Interferometer Gravitational Wave Observatory, or LIGO, which is searching for ripples in the fabric of space and time.

But he tweeted on Monday about the apparent shoring up of rumor he'd heard some months ago, that LIGO scientists were writing up a paper on gravitational waves they had discovered using US-based detectors.

"My earlier rumor about LIGO has been confirmed by independent sources. Stay tuned! Gravitational waves may have been discovered!! Exciting," Krauss tweeted.

His message has since between retweeted 1,800 times.

If gravitational waves have been spotted, it would confirm a final missing piece in what Albert Einstein predicted a century ago in his theory of general relativity.

The discovery would open a new window on the universe by showing scientists for the first time that gravitational waves exist, in places such as the edge of black holes at the beginning of time, filling in a major gap in our understanding of how the universe was born.

A team of scientists on a project called BICEP2 (Background Imaging of Cosmic Extragalactic Polarization) announced in 2014 that they had

discovered these very ripples in space time, but soon admitted that their findings may have been just galactic dust.

A spokeswoman for the LIGO collaboration, Gabriela Gonzalez, was quoted in The Guardian as saying there is no announcement for now.

"The LIGO instruments are still taking data today, and it takes us time to analyze, interpret and review results, so we don't have any results to share yet," said Gonzalez, professor of physics and astronomy at Louisiana State University.

"We take pride in reviewing our results carefully before submitting them for publication—and for important results, we plan to ask for our papers to be peer-reviewed before we announce the results—that takes time too!"

Other observers pointed out that any supposed detection may be a simple practice run for the science teams, not a real discovery.

"Caveat earlier mentioned: they have engineering runs with blind signals inserted that mimic discoveries. Am told this isn't one," Krauss tweeted.

But science enthusiasts may have to wait awhile longer to get all the details.

The LIGO team's first run of data ends Tuesday, January 12.

"We expect to have news on the run results in the next few months," Gonzalez was quoted as saying by New Scientist magazine.

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