

Three gravitational wave projects unveiled in China

February 17 2016



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Chinese scientists have unveiled three separate projects to investigate gravitational waves, state media said Wednesday, days after earthshaking US discoveries that confirmed Einstein's century-old predictions.

Space officials said such research would give China—which has an ambitious, military-run, multi-billion-dollar space programme that Beijing sees as symbolising the country's progress—an opportunity to become a "world leader" in the field.

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The Chinese Academy of Sciences (CAS) rolled out a proposal for a space-based gravitational wave detection project, the official Xinhua news agency reported.

The proposed Taiji programme, named after the "supreme ultimate" of Chinese philosophy symbolised by the yin-yang sign, would send satellites of its own into orbit or share equipment with the European Space Agency's eLISA initiative.

Separately, Sun Yat-sen University in Guangzhou also proposed to launch satellites into [space](#), while the Institute of High Energy Physics at CAS suggested a land-based scheme in Tibet.

All three projects have yet to obtain government approval, state media said.

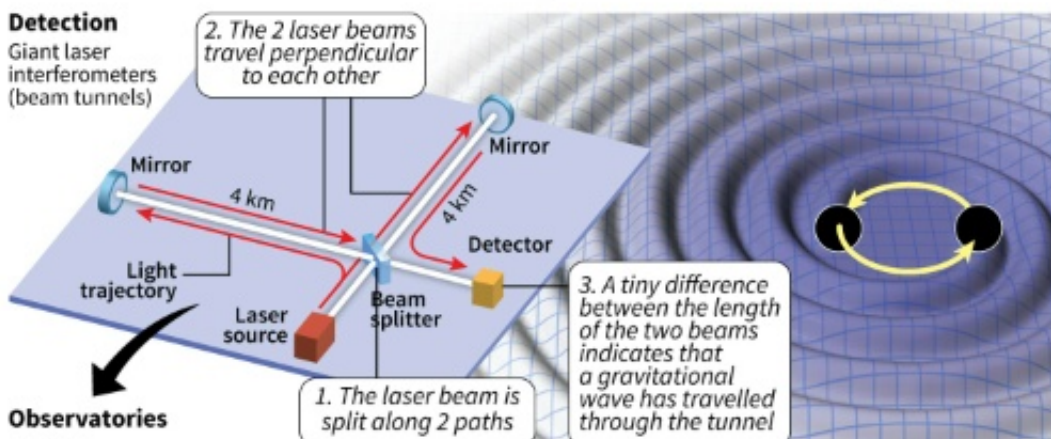
Gravitational waves observed directly for the first time

A major advancement that opens a window on the universe

► Waves were detected Sept 14 at 16:51GMT ► Origin: fusion of 2 black holes 1.3 billion of years ago

Detection

Giant laser interferometers (beam tunnels)



Observatories

LIGOs*

2 detectors equipped with interferometers



Albert Einstein

predicted gravitational waves in 1916 in his General Theory of Relativity



Detection of gravitational waves makes it possible to **work backwards to the first millisecond of the Big Bang**

Sources: Nature, CNRS

*Laser Interferometer Gravitational Wave Observatories

AFP

Graphic explaining what gravitational waves are and how they can be detected

But Chinese physicist Hu Wenrui told the People's Daily newspaper, the official mouthpiece of the Communist party: "If we launch our own satellites, we will have a chance to be a world leader" in gravitational wave research.

Success "depends on the decision-makers' resolution and the country's investment", he added.

On a verified social media account the Chinese Academy of Science said: "If we can participate in these sorts of extremely precise technological projects then in a short time it will give a huge boost to our

country's manufacturing industries."

Last week, scientists with the US-based Large Interferometer Gravitational-Wave Observatory (LIGO) said they had detected waves resulting from the collision of two black holes 1.3 billion years ago.

The executive director of the laboratory hailed the discovery as being comparable to Galileo's use of the telescope four centuries ago to open the era of modern astronomy.

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Citation: Three gravitational wave projects unveiled in China (2016, February 17) retrieved 23 April 2024 from <https://phys.org/news/2016-02-gravitational-unveiled-china.html>

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