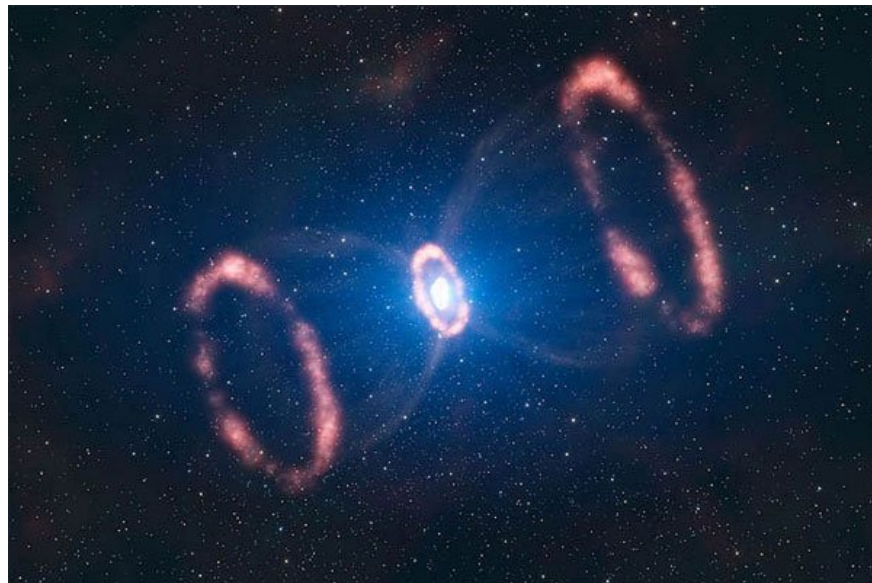


# Is the speed of light slower than assumed in Einstein's theory of relativity?

Recently, James Franson, a physicist at the University of Maryland (USA), claims to find evidence that light is slower than Einstein's assumption.

According to Einstein's general theory of relativity, the speed of light is  $299,792,458\text{m / s}$  in a vacuum. But recently, James Franson, a physicist at the University of Maryland (USA), claims to find evidence that light is slower than Einstein's assumption.

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2. When you turn off the light in the room, where did the light go?
3. 20 interesting facts about light you may not know



Supernova SN 1987A.(Photo: NASA).

The Franson expert made this conclusion based on the data obtained during the observation of supernova SN 1987A from Earth. Supernova SN 1987A exploded into creating a power of 100 million Suns in 1987.

Researchers on Earth captured photons and neutrinos from the explosion, but photons arrived 4.7 hours later than expected. At that time, scientists thought this delay might be due to photons coming from another source.

Franson said that because the photon has a vacuum polarization feature, it means that a photon separates into electrons and positrons in a very short time before recombining into the same photon, creating a gravitational difference between the pairs of electrons. accumulate, resulting in small energy impacts when they combine. This energy is enough to delay the travel time so the light slows down.

During the 168,000 light-year journey (distance from Earth and SN 1987A) vacuum polarization can take place multiple times with many other photons leading to a delay of 4.7 hours.

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