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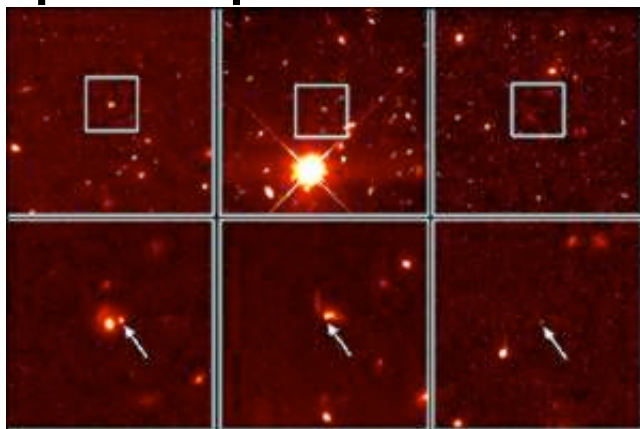
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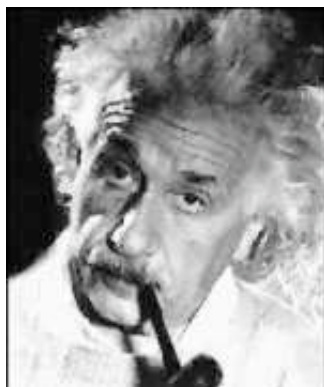
Universe's expansion speeds up



Hubble pinpoints distant supernovae

An international team of scientists has found evidence of a mysterious anti-gravity force that is causing the universe to expand at an accelerating rate.

The finding supports a concept first proposed by Albert Einstein, who later discarded the idea and called it his biggest blunder.



Einstein discarded his theory of anti-gravity

"It is such a strange result we are still wondering if there is some other sneaky little effect climbing in there," said Adam Riess, an astronomer at the University of California, Berkeley.

The 15-member team that made the discovery "have looked hard for errors," but found none, he said.

If true, the discovery could challenge the current thinking on the history of space and time.

Galaxies far, far away

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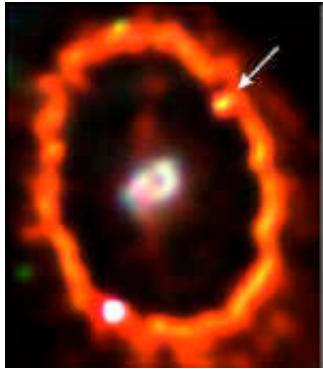
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Scientists say they discovered the force using the Hubble Space Telescope and ground-based telescopes in Hawaii, Australia and Chile while analysing the light arriving from 14 supernovae, or exploding stars, that are seven billion to 10 billion light-years from Earth.

A light-year is the distance that light travels in one year - about six trillion miles.



1997 photo of a supernova

The scientists expected to find that the expansion of the universe was slowing slightly from the effect of gravity. Instead, they say, it is actually speeding up.

One of the scientists involved, Robert Kirshner said the acceleration would continue and within billions of years many of the stars now seen would disappear from view.

"The universe will be a very different place to look at," he said. "It will be very lonely."

Questions answered

If the speed of expansion of the universe is accelerating, it could solve one problem for astronomers.

Some measurements have put the age of the universe at about 10 billion years. This is younger than the measured ages of some stars, a dilemma that has confounded astronomers.

With the acceleration of the universe factored in, the universe would have to be about 14 billion years old, some two billion years older than the oldest star, according to UC Berkeley's Mr Riess.

The team's conclusion will go through an intensive review by many astronomers before the results are accepted, according to Mr Kirshner. He noted however that preliminary results from a parallel study by another astronomy group agreed with the findings.

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