

Search Terms: **universe, expanding, supernova**

FOCUS™

[Search Within Results](#)

[Edit Search](#)

[Print](#) [Email](#)

[Document List](#) [Expanded List](#) [KWIC](#) [Full](#)

[◀previous](#) **Document 83 of 117.** [next▶](#)

Copyright 1998 The Oregonian
All Rights Reserved
The Oregonian (Portland, Oregon)

March 4, 1998 Wednesday
SUNRISE Edition

SECTION: SCIENCE; Pg. E13

LENGTH: 513 words

HEADLINE: TEAM FINDS **UNIVERSE** IS FLOORING ACCELERATOR

BYLINE: PAUL RECER The Associated Press

DATELINE: WASHINGTON

BODY:

Wednesday, March 4, 1998 TEAM FINDS **UNIVERSE** IS FLOORING ACCELERATOR

Summary: Instead of slowing, scientists say, the **universe is expanding** at an ever-increasing rate

Scientists studying exploding stars more than 7 billion light-years away have found evidence of a mysterious antigravity 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.

``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. He said he and the others in the 15-member international team that made the discovery ``have looked hard for errors" but found none.

The findings were discussed at a recent meeting of scientists in Los Angeles and reported in the journal Science.

Using the Hubble Space Telescope and ground-based telescopes in Hawaii, Australia and Chile, the astronomers analyzed the light arriving from 14 supernovae, or exploding stars, that are 7 billion to 10 billion light-years from Earth. A light-year is the distance that light travels in one year -- about 6 trillion miles.

Riess said these stars are seen the way they were when the universe was only about half its present age.

By repeatedly observing the objects and analyzing how their motion stretched the light, the astronomers were able to measure the speed at which the stars were moving away.

This rate was then compared with the motion of supernovae much closer to the Earth.

What astronomers expected to find was that the expansion of the universe was slowing slightly from the effect of gravity, said team member Robert Kirshner of the Harvard-Smithsonian Center for Astrophysics.

``What people thought is that the universe was just coasting" from the force of the Big Bang, he said. ``Instead, we found it is actually speeding up."

Kirshner said this acceleration will continue and within billions of years many of the stars now seen will be gone from view.

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

Rocky Kolb, a University of Chicago astronomer, said in Science that the finding is so startling ``I think everyone should reserve judgment."

Kirshner said that the conclusion will go through an intensive review by many astronomers before the results are accepted, although he noted that preliminary results from a parallel study by another astronomy group are in agreement.

If 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, Riess said, the universe would have to be about 14 billion years old, about 2 billion years older than the oldest star.

``That would no longer make the daughter older than the mother," Riess said.

LOAD-DATE: April 6, 2006

[◀previous](#) **Document 83 of 117.** [next▶](#)

[Terms and Conditions](#) | [Privacy](#)

[Copyright ©](#) 2007 LexisNexis, a division of Reed Elsevier Inc. All Rights Reserved.