

CNN.com / SPACE

SEARCH

Report: Cosmic rays influence climate change

- MAIN PAGE
- WORLD
- U.S.
- WEATHER
- BUSINESS
- SPORTS
- POLITICS
- LAW
- SCI-TECH
- SPACE
- HEALTH
- ENTERTAINMENT
- TRAVEL
- EDUCATION
- IN-DEPTH

July 31, 2002 Posted: 9:26 AM EDT (1326 GMT)



By Richard Stenger
CNN

(CNN) -- The Earth has experienced higher surface but not atmospheric temperatures in recent decades. Now a climate scientist thinks he knows why: highly charged particles originating beyond the solar system.

The inconsistencies in ground and air temperature patterns have led some scientists to dismiss the idea that global warming is taking place.

-  [SAVE THIS](#)  [EMAIL THIS](#)
-  [PRINT THIS](#)  [MOST POPULAR](#)

But one New York researcher suggests the discrepancy takes place because of the effect of interstellar cosmic rays on cloud coverage. Other climate scientists have proposed a link between cosmic rays and clouds.

Research professor Fangqun Yu of the State University of New York-Albany goes further, proposing that low and high altitude clouds react differently to the rays, contributing to greater thermostat gaps near the surface and higher in the atmosphere.

The number of cosmic rays that strike Earth depends to some degree on the sun. Solar winds, which can protect the Earth from the interstellar rays, vary in intensity as the sun waxes and wanes in intensity, according to Yu.

"A systematic change in global cloud cover will change the atmospheric heating profile," he said in a statement this week.

"In other words, the cosmic ray-induced global cloud changes could be the long-sought mechanism connecting solar and climate variability."

Yu said that observations of global warming this century have corresponded with lowered cosmic ray intensities.

The hypothesis does not disregard man-made contributions to climate change. Greenhouse gases introduced by humans could affect the cosmic ray-cloud interactions, he said.

In any case, Yu proposes that cosmic rays help stoke the formation of dense clouds in the lower atmosphere while having a little or negative affect on cloud cover in the upper atmosphere.

- VIDEO
- LOCAL
- CNN NEWSWATCH
- E-MAIL SERVICES
- CNNtoGO
- ABOUT US/HELP

- CNN TV
- what's on
- show transcripts
- CNN Headline News
- CNN International
- askCNN

- EDITIONS
- CNN.com Asia
- CNN.com Europe
- CNNenEspanol.com
- CNNArabic.com
- set your edition

Languages
 Time, Inc.



The low clouds retain more surface energy, keeping the surrounding air hot, while thin high clouds reflect more sunlight into space, keeping the upper atmosphere cooler.

Satellite data offer evidence consistent with the hypothesis, which Yu presents in the July issue of the Journal of Geophysical Research-Space Physics.

 [SAVE THIS](#)  [PRINT THIS](#)  [E-MAIL THIS](#)  [MOST POPULAR](#)

E-MAIL NEWSLETTERS

[Don't miss out! Find out what's on CNN. Sign up for your Tonight on CNN e-mail.](#)

RELATED SITES:

[See related sites about Space](#)

SPACE TOP STORIES:

- [NASA starts countdown to Mars mission](#)
- [Shuttle probe could take six months](#)
- [Shuttle widows grasp faith, each other](#)
- [EPA approves new modified corn](#)
- [Mexico saves island from tourism build-up](#)

[\(More\)](#)

Search





[Back to the top](#)

© 2003 Cable News Network LP, LLLP.

A Time Warner Company. All Rights Reserved.

[Terms](#) under which this service is provided to you.

Read our [privacy guidelines](#). [Contact us](#).