

# CNN.com / SPACE

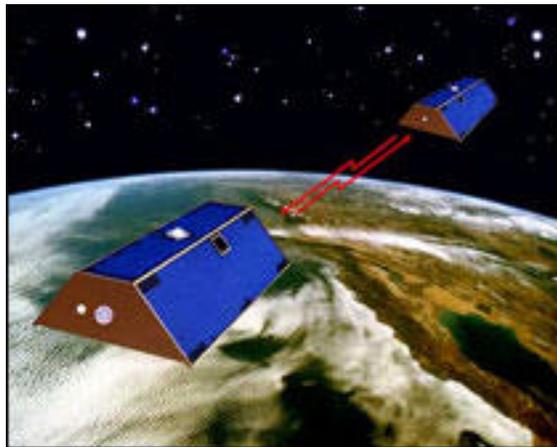
SEARCH GO

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

## Twin probes to map Earth's gravity

March 17, 2002 Posted: 11:54 AM EST (1654 GMT)

By Kate Tobin  
CNN Sci-Tech



Twin probes will use a microwave beam, depicted by red lines, to track each other.

**MOSCOW, Russia (CNN) -- NASA German Space Agency have success: launched two satellites into orbit on year mission to study Earth's gravity**

The twin spacecraft of the Gravity Recon Climate Experiment, or Grace, blasted off a Russian-made Rokot booster at 12:09 a.m. EST (0921 GMT), Russian space forces spokesman Sergei Derevyashkin told The Associated Press.

The satellites were launched from a launch pad at 4:21 a.m. EST from the Plesetsk Cos in northwest Russia.

EXPERTS AGREE:  
When offered  
MONEY for  
Nothing...

- QUICK NEWS
- LOCAL
- COMMUNITY
- MULTIMEDIA**
- 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**
- CNNenEspañol.com**
- CNNArabic.com**
- set your edition**

Languages

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

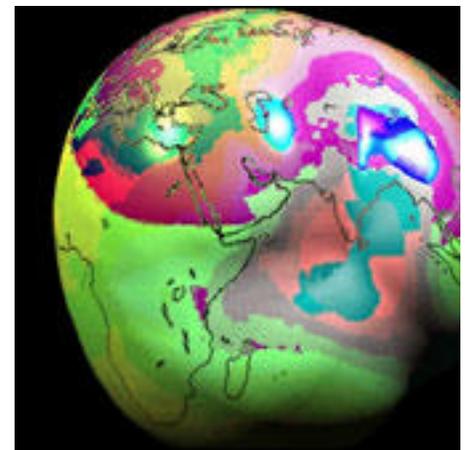
Grace aims to map variations in the Earth's gravity field as it changes over time in response to shifts in sea levels, the ebb and flow of glaciers, the seasonal melting and freezing of ice sheets, and other such fluctuations.

The twin satellites will fly in tandem about 137 miles (220 km) apart, circling the Earth 16 times a day. Subtle variations in Earth's gravity field will cause tiny shifts in the distance between the two as they orbit.

The satellites' measurements of the distance between the two will be combined with data from the Global Positioning System, allowing scientists on the ground to assemble a composite map of Earth's gravity field.

NASA said that map will help researchers create precise digital global terrain models for use by geologists, oceanographers, hydrologists and glacial scientists.

The maps will also be useful to scientists who study global climate change.



Exaggerated map of Earth's "bumpy" gravity field



**RELATED STORY:**

- [NASA satellite pair to tackle weighty task](#)  
January 1, 2002

**RELATED SITES:**

- [GRACE: Gravity Recovery and Climate Experiment](#)
- [NASA Home Page](#)
- [German Space Agency \(English\)](#)

**Note: Pages will open in a new browser window**  
*External sites are not endorsed by CNN Interactive.*

**SPACE TOP STORIES:**

- [Twin probes to map Earth's gravity](#)
- [Probe spies mysterious X-ray storm on Jupiter](#)
- [Galaxy spotted near edge of universe](#)
- [Bush withdraws nomination of NASA deputy](#)
- [Radiation instrument aboard Mars Odyssey fixed](#)

[\(More\)](#)

Search

CNN.com 

[Back to the top](#)

© 2002 Cable News Network LP, LLLP.  
An AOL Time Warner Company. All Rights Reserved.  
[Terms](#) under which this service is provided to you.  
Read our [privacy guidelines](#). [Contact us](#).