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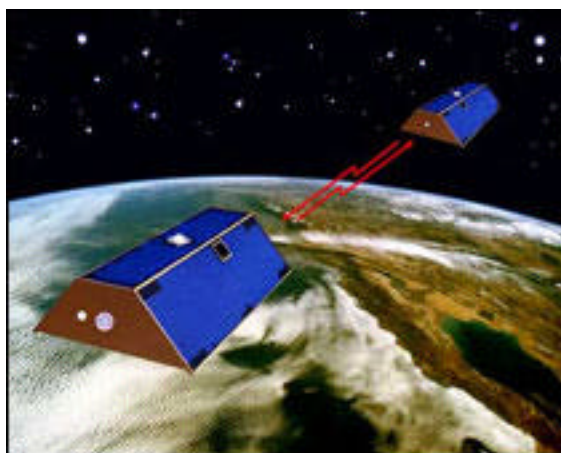
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Twin probes to map Earth's gravity

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.

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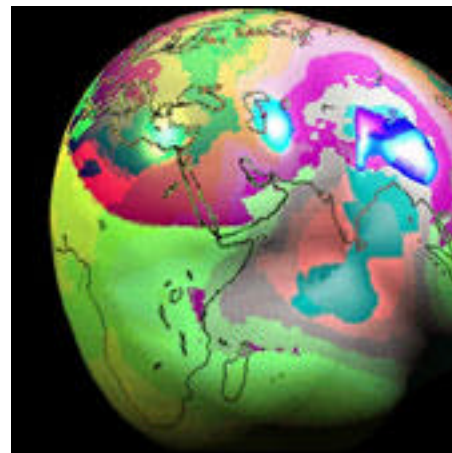
Grace aims to map variations in the Earth's gravity field as it changes over time in response to shifts in sea levels, the ebb and flow of glaciers, the seasonal melting and freezing of ice sheets, and other such fluctuations.

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



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