



The Keck Institute for Space Studies
presents an open technical lecture:

Venus: Earth's Evil Twin or Just Misunderstood?

Dr. Sue Smrekar
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Monday, November 5, 2012

4:30 pm refreshments

5:00 pm lecture begins

Lees Kubota Auditorium

Guggenheim Building

California Institute of Technology

Venus is the second rock from the sun, and the planet most like Earth in terms of size and bulk composition. Yet the clouds contain sulfuric acid, the surface pressure is 100 times that of Earth's, and the surface temperature is 460° C, thanks in large part to the runaway greenhouse. Further, Venus has no plate tectonics, the system of moving plates that shapes Earth's geology.

How did Venus end up so different from Earth today given its similar birth position in the solar disk? Volatiles and volcanism are keys to understanding Venus' history. Water, carbon dioxide, and sulfur dioxide are key greenhouse gasses, and are released into the atmosphere from the interior when volcanoes erupt. But the volcanic history is controversial.

Was resurfacing of the entire surface a rapid event, followed by little activity, or has it been more steady and more Earth-like? A discovery of geologically recent volcanism has reopened this debate and provided new insights into the sources of volcanism. Several volcanic locations previously identified as hotspots (areas where hot mantle plumes create volcanism, like Hawaii) show signs of recent volcanism.

What does this tell us about how active Venus is today?
Just how Earth-like is Venus?

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www.kiss.caltech.edu

No registration is required for this free lecture.
Seating is limited and is available on a first come, first served basis.