

Computer model looks at cooling the Earth

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A U.S. computer model study suggests two unusual methods, including injecting sulfates into the atmosphere, might be used to stabilize the Earth's climate.

The National Center for Atmospheric Research model involves using reductions in greenhouse gas emissions as well as injections of climate-cooling sulfates into the stratosphere. Researcher Tom Wigley says that might prove more effective than either approach used separately.

Wigley's model calculates the impact of injecting sulfate particles, or aerosols, every one to four years into the stratosphere in amounts equal to those lofted by the volcanic eruption of Mount Pinatubo in 1991. It found that, if environmentally and technologically viable, such injections could provide a "grace period" of up to 20 years before major cutbacks in greenhouse gas emissions would be required, he concludes.

He said his study doesn't endorse any particular approach to reducing climate change, nor is it intended to address any technical and political challenges involved in potential geoengineering efforts.

Instead, it analyzes whether the much-discussed idea of injecting sulfates into the stratosphere could, in fact, slow global warming and therefore provide more time for society to reduce the emissions of carbon dioxide.

The study appears in the journal *Science*.

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