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São Paulo ozone pollution more severe with biofuel

BURIED SOIL CARBON
Unexpectedly reactive

EXPLOSIVE VOLCANOES
Eruption style set at source

LUNAR WATER
Beyond a dry Moon





COVER IMAGE

Ethanol-based vehicles are thought to generate less pollution than gasoline-based vehicles. An analysis of pollutant concentrations in the subtropical megacity of São Paulo, Brazil, reveals that levels of ozone pollution fell, but levels of nitric oxide and carbon monoxide rose, during periods of prevailing gasoline use relative to ethanol use. The image shows part of the São Paulo cityscape. Article p450; News & Views p395

IMAGE: © LAZYLAMA / ALAMY

COVER DESIGN: DAVID SHAND

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Unexpectedly reactive
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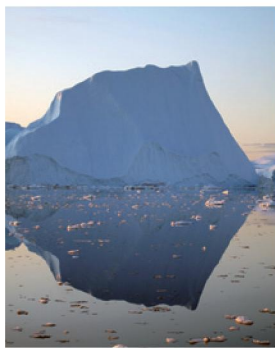
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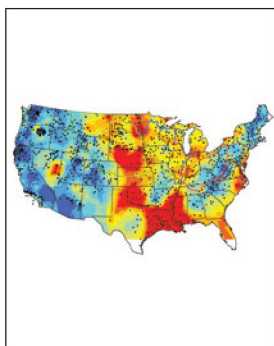
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During the last glacial termination, climate changes associated with the Bølling-Allerød warming were seen throughout much of the Northern Hemisphere. A combination of ice core records and box modelling shows that this climate change was nearly synchronous across high and temperate latitudes.

Image by Julia Rosen.

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River water circulates through river bed and bank sediments. Model simulations suggest that practically all of the river water that reaches the mouth of the Mississippi River network has circulated laterally through its banks.

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