

COVER IMAGE

The formation and preservation of sandstone landforms such as pillars and arches are enigmatic.

Experiments and numerical modelling show that load-bearing material weathers more slowly, and thus the internal stress field can shape and stabilize sandstone landforms. The image shows Double Arch at Arches National Park in Utah, USA at night.

Letter p597; News & Views p552

IMAGE: MARSEL VAN OOSTEN
COVER DESIGN: DAVID SHAND

ON THE COVER

Australian drought

Attributed to human action Letter p583; News & Views p551

Planet Mercury

Hit-and-run getaway Letter p564

Pliocene warmth

Pole-to-equator gradient intact Article p606; News & Views p555



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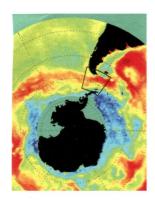
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J. M. Toole, S. N. Waterman and A. J. Watson

Федеральное государственное бюджетное учреждение науки Центральная научная библистека уральского отделения Расаййскай академии наук (ЦНБ УрО РАН)



In the Southern Ocean, deepwater masses of the world ocean upwell to the surface and subsequently sink to intermediate and abyssal depths in two overturning cells. Observational evidence relates changes in abyssal mixing — a key influence on the lower cell — to oceanic eddy variability. Letter p577; News & Views p554



Despite the role that calving plays in Greenland mass loss, the mechanisms of calving are poorly constrained. Observations of Greenland's Helheim Glacier suggest that buoyant flexure at the glacier terminus leads to the propagation of basal crevasses and iceberg calving.

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