Topographic map of the Moon based on measurements from the Lunar Orbiter Laser Altimeter, showing the boundary between Oceanus Procellarum, a smooth, relatively young mare region on the western nearside (upper right), and the older, more heavily cratered highlands (center and lower left). Colors indicate increasing elevation from blue to red. The crescent-shaped Lorentz crater (center) is ~312 kilometers in diameter.

See the Reports on pages 1504, 1507, and 1510.

Image: NASA/LRO/LOLA/GSFC/MIT/Brown
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1487 Island Biogeography Reveals
the Deep History of SIV
M. Worobey et al.
Separation of the island of Bioko from
West Africa about 10,000 years ago dates
the origins of simian immunodeficiency virus.

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1488 Hemispheric Aerosol Vertical Profiles:
Anthropogenic Impacts on Optical Depth
and Cloud Nuclei
A. Clarke and V. Kapustin
Vertical profiles of atmospheric aerosols
from throughout the Pacific region show
the influence of anthropogenic combustion.
>> Perspective p. 1474; Report p. 1513

1492 Evidence for an Alternative Glycolytic
Pathway in Rapidly Proliferating Cells
M. G. Vander Heiden et al.
Characterization of cancer cell metabolism
provides evidence for a previously
uncharacterized metabolic pathway.

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1500 Quantum Walks of Correlated Photons
A. Peruzzo et al.
Pairs of correlated photons retain their
quantum-mechanical correlations as they
propagate through a waveguide maze.
>> Perspective p. 1477

1504 Global Distribution of Large Lunar Craters:
Implications for Resurfacing and Impactor
Populations
J. W. Head III et al.
An analysis of high-resolution global
topography data advances our understanding
of the impact history of the Moon.

1507 Global Silicate Mineralogy of the Moon
from the Diviner Lunar Radiometer
B. T. Greenhagen et al.

1510 Highly Silicic Compositions on the Moon
T. D. Glotch et al.
Remote thermal emission spectroscopy
reveals the existence of complex igneous
processes on the Moon.

1513 Rainforest Aerosols as Biogenic Nuclei
of Clouds and Precipitation in the Amazon
U. Pöschl et al.
The majority of cloud condensation nuclei in
the Amazon during the wet season are derived
from biogenic precursors.
>> Perspective p. 1474; Research Article p. 1488

1516 Melting of Peridotite to 140 Gigapascals
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High-temperature and high-pressure
experiments reveal details about how
and where the mantle melts.

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D. R. Matute et al.

Hybrid Incompatibility “Snowballs”
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L. C. Moyle and T. Nakazato
Two studies support the theory that the number
of genes involved in hybrid incompatibility
increases faster than linearly.

The Ecological Significance of Tool Use
in New Caledonian Crows
C. Rutz et al.
Stable isotope analysis reveals the
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New Caledonian crows.
>> Science Podcast

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A New Facet for Adaptive Responses to
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A. Baudry et al.
The uptake transporter for a key
neurotransmitter is regulated by a
microRNA, yielding new insight into
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Relating Introspective Accuracy to
Individual Differences in Brain Structure
S. M. Fleming et al.
Individual differences in the capacity
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Impeding Xist Expression from the Active X Chromosome Improves Mouse Somatic Cell Nuclear Transfer
K. Inoue et al.
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IDH2 Mutations in Patients with D-2-Hydroxyglutaric Aciduria
M. Kranendijk et al.
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Propane Respiration Jump-Starts Microbial Response to a Deep Oil Spill
D. L. Valentine et al.
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Expanding the Genetic Code
E. Pain
Trained as a chemist, Jason Chin is rewriting the central dogmas of biology by coaxing cells to make proteins containing novel amino acids.

Evolution of Signaling Systems
N. R. Gough
Domains provide evolution with tools for the creation of new functions.

Perspective: Domain Recombination—A Workhorse for Evolutionary Innovation
G. Apic and R. B. Russell
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