

COVER

The surface of the Sun shows rapidly changing patterns due to convection, as well as global oscillations of very low amplitude. The CoRoT (Convection Rotation and Planetary Transits) satellite, launched in December 2006, has now measured both phenomena in other stars. See page 558.

Image: Thomas Berger; ISP/Royal Swedish Academy of Sciences

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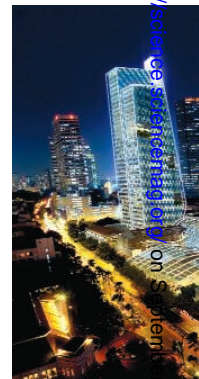
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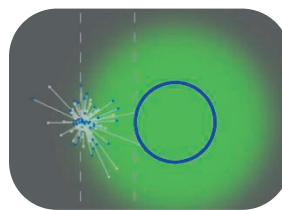
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EVOLUTION

Variation in Evolutionary Patterns Across the Geographic Range of a Fossil Bivalve

M. Grey, J. W. Haggart, P. L. Smith

Within a fossil bivalve genus, evolution tended to occur as a random walk at the highest latitudes and to be in stasis mode in deep marine environments.

10.1126/science.1162046

CELL BIOLOGY

De Novo Formation of a Subnuclear Body

T. E. Kaiser, R. V. Intine, M. Dunder

The Cajal body, a nuclear structure for small ribonucleoprotein metabolism, can self-assemble from any one of its components immobilized on a substrate.

10.1126/science.1165216

CELL BIOLOGY

Regulation of Microtubule Dynamics by Reaction Cascades Around Chromosomes

C. A. Athale, A. Dinarina, M. Mora-Coral, C. Pugieux, F. Nedelec, E. Karsenti

A reaction-diffusion model involving regulatory molecules and a microtubule-stabilizing phosphoprotein predicts the spatial distribution of microtubules during cell division.

10.1126/science.1161820

PLANETARY SCIENCE

Lack of Exposed Ice Inside Lunar South Pole Shackleton Crater

J. Haruyama et al.

A view into the permanently shaded Shackleton crater from the SELENE (KAGUYA) spacecraft now orbiting the Moon shows that it lacks large visible water-ice deposits.

10.1126/science.1164020

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EVOLUTION

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Although environmental signals regulate whether female ants become sterile workers or queens, genetic interactions between their parental genomes also influence the phenotype.

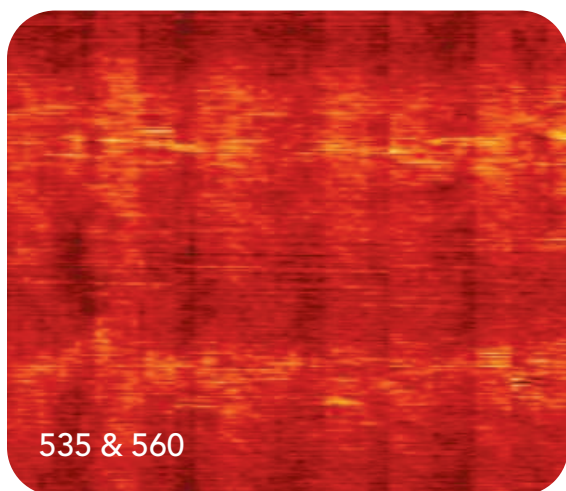
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>> *Perspective p. 536; Science Podcast*

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N. R. Gough

The consequences of various input signals must first be understood to gain a systems-level explanation of signaling networks.

PERSPECTIVE: Systems- and Molecular-Level Elucidation of Signaling Processes Through Chemistry

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PERSPECTIVE: A Scaffold Makes the Switch

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PERSPECTIVE: Probing Pathways Periodically

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RESEARCH ARTICLE: Fault Diagnosis Engineering of Digital Circuits Can Identify Vulnerable Molecules in Complex Cellular Pathways

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An engineering approach reveals the weakest links in cellular signaling networks.



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Online professional networking Web sites can advance your job search.

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A Ph.D. chemist found a rewarding career designing toilets.

From the Archives: Of Noble Descent

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There are ways of getting elite positions without being nobility or going to the "right" university.

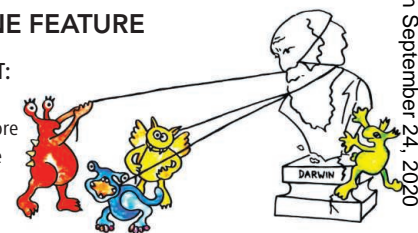
SCIENCE ONLINE FEATURE

THE GONZO SCIENTIST: Flunking Spore

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