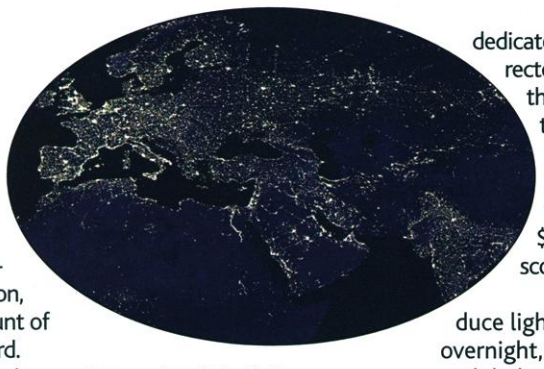
Darker Skies Over Europe



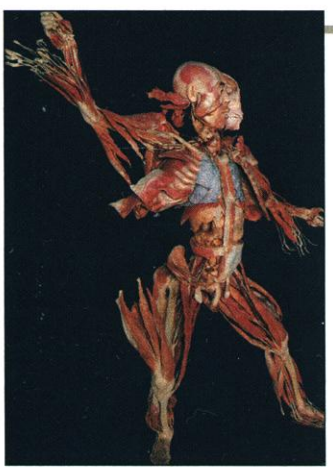
Europe by night light.

Astronomers in the Czech Republic now have the law on their side in peering into the heavens. The country is the world's first to enact nationwide "dark sky" legislation, aimed at reducing the amount of artificial light shining skyward.

The legislation, which President Vaclav Havel signed last month, is part of a bill that brings the Czech Republic into compliance with European Union atmospheric pollution rules. Representative Stanislav Fischer, a former astronomer, helped slip wording into the law that defines light pollution as "every form of illumination by artificial light which is dispersed outside the areas it is dedicated to, particularly if directed above the level of the horizon." Regulations to implement the new law are set to take effect 1 June, with fines of up to $4300 for light scofflaws.

The law won't reduce light pollution overnight, cautions astronomer and dark-sky advocate Jenik Hollan of the Nicolaus Copernicus Observatory and Planetarium in Brno. Cities, for instance, won't be required to shield street lighting immediately. But he hopes that the rules will put an end to "sky-beamers," powerful sky-directed searchlights used to attract crowds and promote events. Until now, he says, "nobody has been able to do anything about them."

Guts for the Masses



Making a pitch for anatomy.

Body Worlds, a traveling exhibition of skinned and preserved human bodies in lifelike postures, opened its doors in London last week. The revealing show is the brainchild of Gunther von Hagens, an independent anatomist who developed a "plastination" technique for preparing the specimens. Plastination replaces body fluids with special resins, making it possible to display whole bodies in dramatic poses. A pitcher, for instance, is frozen in midthrow (left), and a swimmer floats in midstroke. There are also disembodied spectacles, such as a complete human circulatory system.

The exhibit, which has toured Europe and Japan in various forms since 1997, has been dogged by questions about how von Hagens obtains the specimens. He says some are the remains of friends, and that all donors approved the use of their bodies for education.

Ian Parkin, who runs a large-scale dissection facility for medical students at the University of Cambridge, says the exhibits are "very instructive" and that von Hagens is helping "return anatomy to the people and to demystify the inner workings of the human body." Body Worlds will be at London's Atlantis Gallery through the end of September.

Want to Go for a Spin?

Can living at twice the force of gravity for almost a full day help astronauts stave off the unhealthy effects of extended space flight? That's what NASA hopes to learn if it can recruit enough healthy young men for a series of hypergravity experiments this summer.

Weightlessness weakens the body: Without the pull of gravity, bones grow brittle, and the heart pumps sluggishly. Malcolm Cohen, chief of NASA's Human Information Processing Branch at Ames Research Center in Mountain View, California, wants to know if the extra stress of hypergravity has the opposite effect. Might double gravity condition the body to perform better?

To find out, in July Cohen hopes to begin exposing paid volunteers—all men, because women's physiology is more complicated—to seven bouts of hypergravity over several weeks, ramping up by quarter steps from 1*g* to 2*g*. Five sessions in a small, spinning cabin will last 22 hours each.

Some scientists worry that such long stints could be harmful. Willem Bles, leader of the Equilibrium & Orientation research group at the private TNO Human Factors Research Institute in Soesterberg, Netherlands, notes that "everything in your body starts to hurt" after 90 minutes at 3*g*, and the resulting motion sickness can last up to 10 hours.

Cohen, however, predicts that his subjects will survive the discomfort by lying down, watching TV, reading, and sleeping.

Antarctic Ice Shelf Collapses

A hunk of ice bigger than the state of Rhode Island broke off from the Antarctic Peninsula in recent weeks, shattering into a flotilla of icebergs (above). The final collapse of the northern half of the Larsen B ice shelf appears to be the latest dramatic sign of warming on the peninsula.

Temperatures on the peninsula have been rising five times faster than the global average—2.5°C since the late 1940s—but whether greenhouse warming is to blame isn't yet known. The Larsen B shelf, a floating sheet of ice about 220 meters thick, first made headlines in 1998, when British scientists predicted its collapse. But the rate at which the shelf's northern section has finally disintegrated—3250 km^2 over 35 days since 31 January—is "staggering," says David Vaughan of the British Antarctic Survey. "It's the largest single event of its kind since we've been watching" over the past 30 years, adds Ted Scambos of the National Snow and Ice Data Center at the University of Colorado, Boulder.

CREDITS: (TOP TO BOTTOM) CRAIG MAHEW AND ROBERT SIMMON/NASA GSFC; T. SCAMBOS/NSIDC/NASA; G. VON HAGENS