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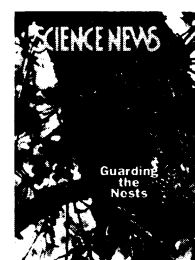
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Cover: While the activities of many people are destroying the preferred nesting sites of birds, conservationists are using a variety of tools to restore and protect the animals' customary homes. The Mexican spotted owl is just one of many species that bird lovers have taken under their wing. This owl pair inhabits Grant County, N.M. (Photo: Dale and Marian Zimmerman)



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Letters

LCDs' electric orientation

In "Tilting at LCDs" (SN: 6/1/96, p. 348), you imply that LCDs use a magnetic field to reorient the liquid crystal. Although liquid crystals respond to magnetic fields, they respond far more readily to electric fields.

As in most condensed matter, the ratio of the dielectric to diamagnetic susceptibility is comparable to the ratio of molecular size to the classical electron radius: about 1 million. Commercial displays therefore use electric fields to control the liquid crystal orientation.

*Peter Palfy-Muhoray
Liquid Crystal Institute
Kent State University
Kent, Ohio*

Tricks of the trade

One doesn't have to be a ballplayer to take advantage of the insight provided in "Running gaze catches on with fielders" (SN:

6/15/96, p. 372). We learned a similar trick some time ago in driver's education.

As two cars approach a common point, such as an intersection or merge, your car will get there first if the image of the approaching car appears to be moving away from the merge point. If you don't have to change your angle of gaze, both cars will arrive at the same point at the same time.

*Scott Lucero
Arlington, Va.*

Every pilot learns early to recognize a collision course with another airplane—the image of the plane on the windshield doesn't move. So it doesn't seem surprising, but it is nice to know, that by altering his running speed and direction, a ball player keeps his angle of gaze constant and manages thereby to collide perfectly with the ball.

*J. William Newitt
Flemington, N.J.*

You suggest that outfielders catch fly balls by maintaining a consistent "angle of gaze" between 0° and 90° while chasing the balls. It would seem, however, that this would only be appropriate during the second half of the ball's trajectory, while the ball is falling back to Earth.

At the moment the ball is hit, the angle has to be pretty close to 0°, increasing while it rises.

A good outfielder starts heading toward where the ball will land very soon after it is hit, so I think McLeod and Dienes need a little more work.

*Daniel J. Brunelle
Burnt Hills, N.Y.*

Gaze angle is not the only factor at work here. In their article, McLeod and Dienes note the need for research into the ability of fielders to begin moving in the right direction just after the crack of the bat. — B. Bower

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