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This Week

Research Notes

Articles

Cover: Positron emission tomography (PET) scans of the brain of a person with no psychiatric diagnoses (top images) and the brain of an obsessive-compulsive patient (bottom images). Glucose metabolism is significantly greater for the obsessive-compulsive in a brain region involved in the control of attention and repetitive behaviors. Areas of highest metabolic activity are coded in red and orange. (Images: Baxter)

Departments

Letters

Calico revisited

In "Flakes, Breaks and the First Americans" (SN: 3/14/87, p.172) Bruce Bower manages to drag up old arguments for the Calico site years after a study done by William T. Venner and myself had answered the question of the site as to its human manufacture of tools (JOURNAL OF FIELD ARCHAEOLOGY: Winter 1979). In our study, we found that the "tools" were not in any way related to any other Paleoindian tools on the North American continent. They did not display any of the functional angles that a stone tool would have to have to be useful. Further statistical comparisons of the tools to many other broken rocks from the site indicated a much higher correlation between the so-called "tools" and the broken rocks.

After studying all of the 179 tests that we ran on a CDC 3150 computer, we found that the "tools" were selected as such because of their looks or form. So, out of literally millions of broken rocks found in the alluvial fan, fewer than two thousand were selected as tools, even though they apparently had no possible function. Bower's report really sheds no new light on what seems to be a settled matter.

James G. Duvall III
Instructor of Anthropology
West Hills College
Lemoore, Calif.

Physics and logic

There is an error in this statement in "Neutrino Astronomy Born in a Supernova" (SN: 3/21/87, p.180): "If neutrinos have a small rest mast, they will have a small magnetic moment, a small intrinsic magnetism. (The converse is not true, so a zero magnetic moment does not necessarily mean no mass.)"

Let "neutrino has non-zero rest mass" be statement A, and "neutrino has non-zero magnetic moment" be statement B. You are saying that "A implies B" does not necessarily imply "not-B implies not-A." But that is wrong. "A implies B" *does* necessarily imply "not-B implies not-A." Particle physics may be counterintuitive at times, but it doesn't overthrow the rules of logic.

I think you probably meant "A implies B" does not necessarily imply "B implies A," which is certainly true, in which case the statement in parentheses should read something like: "(The converse is not true, so a non-zero magnetic moment does not necessarily imply a non-zero mass.)"

Donald J. Klemencic
Bridgeville, Pa.

The statement was in error. It should have read: "If the neutrino has a magnetic moment, it will also have mass. But it can have mass without having a magnetic moment."

— D.E. Thomsen