

The Weekly Newsmagazine of Science

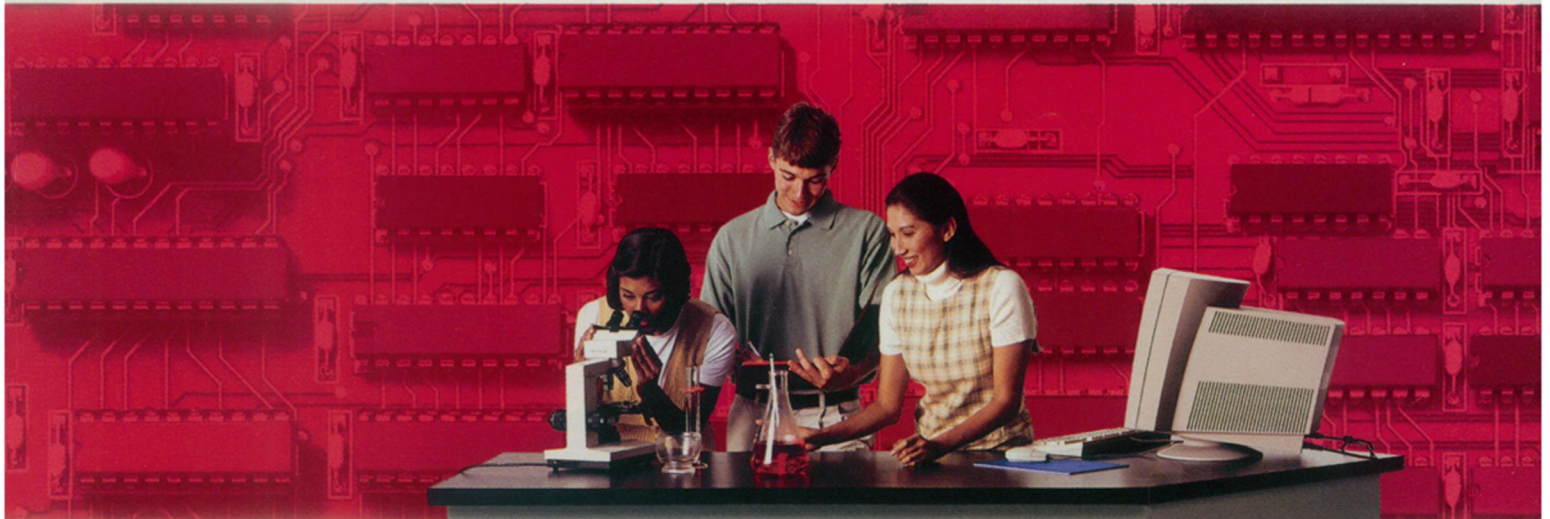
# SCIENCE NEWS

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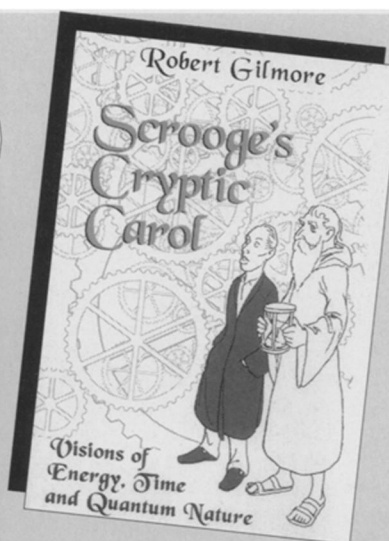
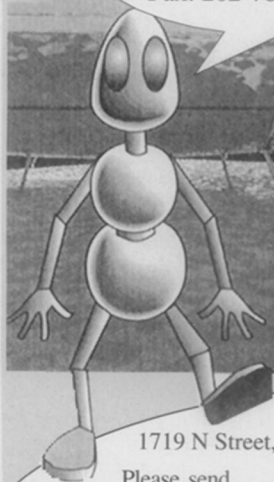
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Like his famous ancestor, the modern Scrooge—who hews tightly to the credo “it is enough for a man to understand his own business and look to his own advantage”—is about to be visited by ghosts. But it's not his hard heart that needs opening this time, it's his closed mind. The wisdom these ghosts bring is not love and charity but science.

Physicist Robert Gilmore, author of the popular *Alice in Quantumland*, presents a delightful takeoff on Charles Dickens' *A Christmas Carol*. Here the three visitations represent Science Past (the Spirits of Energy and Entropy, who explain the laws of thermodynamics, equilibrium and a troublesome HEAT DEATH sign), Science Present (the Spirit of Time, who tells him of inconstancy, change, and creation), and Science Future (the surreal world of quantum uncertainty, where it is the observer or measurement that creates a unique reality). For everyone who wants a playful, painless, yet surprisingly sophisticated introduction to the ideas of modern physics, this is a brilliant tour de force and a charming read. —from Copernicus

