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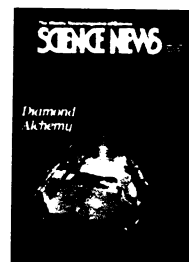
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Cover: For more than 30 years, tiny synthetic diamonds formed under super-high pressures have served as the basis of an abrasive-material industry. Lower-pressure techniques called chemical vapor deposition (CVD), used for making diamond coatings, may usher the once-rare crystal into the category of everyday resource. The carat-sized synthetic diamond shown here rests on a bed of diamond grit, made from methane gas using a CVD process. The grit serves as a starting material for a high-pressure step that produces gem-size diamonds. This large diamond was made from an especially pure form of methane. It conducts heat better and withstands more laser energy than natural diamond. (Photo: GE Research and Development)



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Letters

Plato said so

To support the claim that "Pythagoreans and other ancient Greeks were not merely head-in-the-sky theoreticians," but rather conducted extensive empirical investigations, mechanical engineer Andrew Dimarogonas turns to the writings of the Roman scholar Boethius, who lived 1,000 years after Pythagoras died ("First lab" attributed to Greeks," SN: 5/12/90, p.295).

The evidence from Boethius, he says, should help to "get Greek culture out from the grips of Plato."

But Dimarogonas didn't have to go so far to get significant support, for Plato himself characterized Pythagoras' followers as devoting their time to extended, minutely detailed empirical observation, particularly in the field of acoustics (*Republic*).

Plato, however, was critical of such an approach, arguing that its results will never be fully intelligible if it ignores mathematical-conceptual analysis. Thus Plato's own emphasis on theoretical mathematics as underpinnings for scientific knowledge.

phasing on theoretical mathematics as underpinnings for scientific knowledge.

Jonathan Shear
Assistant Professor of Philosophy
Virginia Commonwealth University
Richmond, Va.

Many wonders

I read with great interest your article about the theoretical possibility of creating an artificial environment in which the speed of light in vacuum could be increased ("Secret of the vacuum: Speedier light," SN: 5/12/90, p.303).

This reminded me of a science fiction story I wrote in 1981. The premise was that the total mass of the universe determines the speed of light. A supercomputer was created which operated at many times the speed of light by "isolating it from universal inertia." In rejecting the story, one editor wrote: "There are far too many wonders in here."

The reason I enjoy SCIENCE NEWS so much is the many wonders you bring me each week.

Richard Snedeker
Pittston, Pa.

Galactic musings

James R. Graham and his colleagues speculate that merging galaxies and the forming of their cores into binary black holes may be a triggering device of quasars ("Unveiling a Galaxy's Power Source," SN: 5/12/90, p.292). If so, wouldn't this help explain quasars' apparent abundance in deep-space/deep-time? Was their high incidence in the early universe due to nothing more peculiar than the more congested state of matter at that time, which would result in more frequent galactic collisions?

Could much of the missing dark matter of our universe consist of galaxies that have swallowed each other?

Stephen Bankhead
Watsonville, Calif.

CORRECTION

The Tibetan mountain range shown on the July 14 cover rises 2,500 meters above the valley floor, not 2,500 kilometers as stated in the caption on page 19.

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