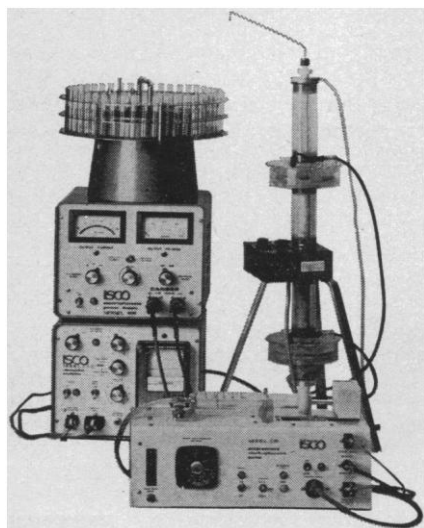


# scanning density gradient electrophoresis



Easy determination of electrophoretic mobilities as well as physical separation of mixtures and quantitative microanalytical results can be obtained with the ISCO Model 210 Density Gradient Electrophoresis apparatus. Microgram size samples can readily be separated. Low sample concentration permits the use of dilute buffers, allowing a wide operational temperature range of from 0 to 25° C.

Between preset periods during which the density gradient column is subjected to an electric field, the column is automatically raised and lowered past a narrow bandwidth UV absorbance scanning monitor. Quantitative results can be obtained from these scans or from a final chart record made automatically at the conclusion of migration as separated specimen components are discharged into a fraction collector for further assay.

For more information please request Brochure E37.



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erence to the possibility that a study has profound implications for our understanding "perhaps for origin and distribution of ore deposits," as I have recently been working on this very subject (1). In this study I come to the conclusion that the constituents that form the metal deposits probably originated in the earth's upper mantle, at a depth of some 25 miles below the surface. I would therefore be much more interested in knowing the constitution of the earth's upper mantle, 25 miles below us, than the constitution of the moon, 250,000 miles away in space.

A sidelight of my study of the metal provinces was that one particular area in southern Arizona, partly overlapping into New Mexico, has a record of production plus probably reserves of copper of some \$26 billion of gross value. This is by far the greatest known concentration of value of nonferrous metallic wealth in the United States. It will be noted that this total gross value is very nearly equal to the total cost of the entire Apollo program including development, research, and facilities (\$24 billion). On the other hand, the *net* value of the metallic wealth is very much less. In fact, I doubt very much if the *net* value of all the known metallic wealth of the United States is equal to the cost of the Apollo program.

JAMES A. NOBLE  
1474 East California Boulevard,  
Pasadena, California 91106

## Reference

1. J. A. Noble, *Geol. Soc. Amer. Bull.* **81**, 1607 (1970).

## Appalachia: Focus of Health Care

As a member of the Student Health Coalition whose activities were discussed in "Appalachia: Two approaches in student summer health projects" (21 Aug., p. 746), I would like to clarify the relationship between our project and Vanderbilt University. Goldhaber implied that there was a lack of cooperation on the part of the university. In actual fact our project received considerable support from a number of faculty members and the offices of the dean of the medical school and the chancellor of Vanderbilt. . . . The lack of cooperation alluded to does not pertain to individuals but to the institutional framework. The medical school has investigated but not committed itself to the academic questions involving comprehensive

health care. A faculty committee recently issued a report concerning the university's role in health care and declared, "It is really not a question as to whether the Vanderbilt Medical Center can afford to hire such a Director [for comprehensive health care programs] but rather whether it can afford not to and still provide leadership for or even remain in the mainstream of American medicine in the future."

We are hopeful that the recommendations of this report can be realized, and that the university will be increasingly responsive to the need for research in new methods of urban and rural health care delivery.

WILLIAM W. DOW  
Box 40, Station 17,  
Vanderbilt Medical School,  
Nashville, Tennessee 37203

## Federal Largesse

In Greenberg's article ("Daddario: Scientific community's friend on the Hill is leaving," 25 Sept., p. 1291) I believe there is a misconception of the power of the appropriations subcommittees vis-à-vis the authorizing committees. He suggests that the legislative process consists solely of doling out money and that a member who is not on the appropriations committees might just as well stay home. This isn't so. The overview committees for federal programs do exercise great influence, particularly when they also handle annual authorization bills. The Joint Committee on Atomic Energy, the Senate and House Armed Services Committees, and the Space Committees of each body have had a major impact on science, research, and development. Senator Lister Hill chaired the Labor and Public Welfare Committee and thus influenced the course of the National Institutes of Health.

An objective analysis would show substantial effects of the National Science Foundation authorization hearings on appropriations this past session—only the second year they have been held. It seems clear that these annual hearings in the House and Senate—given the direction and momentum of the Daddario era—will have a key role in the determination of the future federal patronage of science.

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