

posts, the State Department is offering to coöperate with foreign governments to ensure the return of academic visitors and will give assistance for foreign recruiting teams in the US. In addition, American companies in Peru are engaged in a pilot project to provide jobs for returning Peruvian students and scientists.

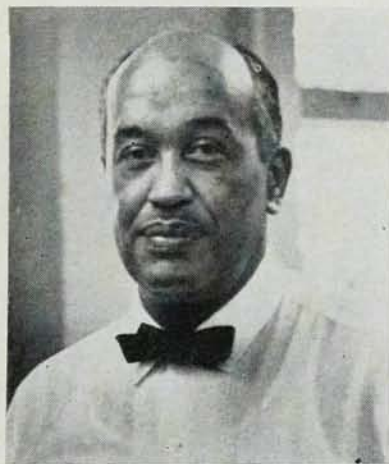
Critics of our policies would have the US do far more. They suggest that we raise our entrance requirements for all foreign students, limit

admissions of foreign undergraduates and tailor their education to problems they will meet at home. Gregory Henderson of the UN Institute for Training and Research has urged that we use our "great armory of resources overseas to help the hard-pressed returnee whenever possible." Henderson and Perkins would also have us develop a more "honest" immigration policy. "A developing country," says Henderson, "gives its passport strictly for a temporary purpose." But that

country loses control over its emigré student when our immigration service grants permanent status to the student. And for several countries that send large numbers of students, conversion to such status has become the rule rather than exception. "We must close up some of the more selfish loopholes". . . says Perkins, "the all-too-easy solutions to our need for teaching assistants . . . and laboratory aides, offered in the name of scholarships and fellowships."

The Negro in physics—An interview with Herman Branson

As educator and researcher, Herman R. Branson has participated actively in two of the most momentous revolutions of our time, modern physics and civil rights. We talked with him recently in his office at Howard Uni-



BRANSON

versity to find out his views on the prospect of the Negro in physics. In sometimes sanguine, sometimes critical tones, he told us that current efforts will produce many more Negro physicists a few years hence, that severe staff problems are created by recruitment of his students by integration-conscious agencies and industries, and that much more money and understanding are needed to help the Negro student and his college.

Branson, a native of Virginia, did his undergraduate work at the University of Pittsburgh and Virginia State College and received his PhD from the University of Cincinnati in 1939. His teaching career began as an instructor in mathematics and physics at Dillard University in New Orleans, and since 1941 he has been

on the Howard faculty. Branson was named professor of physics at Howard in 1942 and has headed the physics department for the last decade. He has been a senior fellow of the National Research Council at the California Institute of Technology and a faculty fellow of the National Science Foundation at the University of Hamburg and with the French Commissariat A L'Energie Atomique at Saclay. His research interests have included mass spectroscopy, diffusion, radioisotopes in medicine and information theory in biology and physics of molecules.

As a physics teacher at a predominantly Negro college, Branson has had first-hand experience in training and guiding Negro scientists during the historic advances in Negro rights over the past quarter century. He has also been active in proposing new legislation aimed at improving the condition of Negro colleges. In his most recent and strongest interest Branson heads a precollege project to salvage talent in youngsters from disadvantaged backgrounds and thus hopefully to produce more Negro scientists. We asked him:

● *Why do we see so few Negroes at American Physical Society meetings?*

"To begin with, very few departments of physics at Negro institutions have either the resources or programs that would give a Negro physicist teaching in these schools any reason for coming to APS meetings. Then, of course, you must remember that the revolution in conscience, the civil rights struggle, is quite a recent thing, and until we provide Negroes with suitable opportunity from the time

they are born, we are not going to have as many Negro physicists as numerically we should.

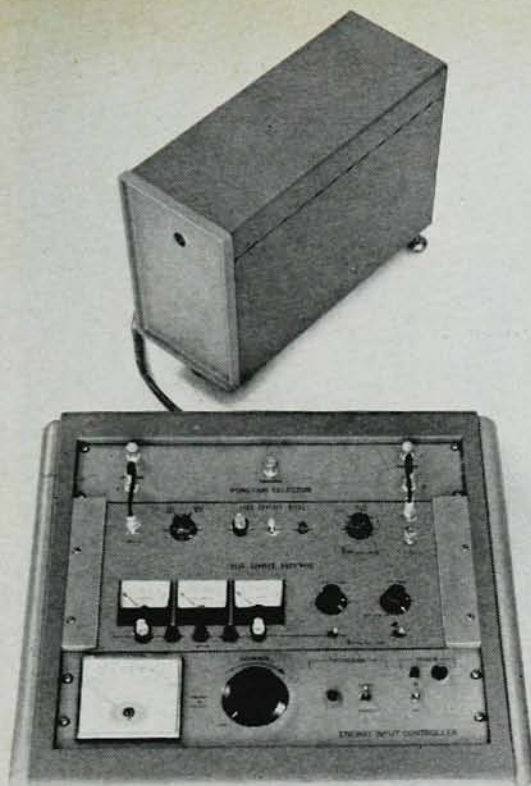
"But I think the situation is going to improve greatly from now on. Increasing numbers of Negroes are going into the sciences. We might take America as an example in this respect. The US was a relatively old country before it started producing many of its own scientists. The same thing applies here; it takes a long, long time before you can expect to get any returns."

● *Is there anything in the home environment of the Negro child that handicaps his approach to science?*

"Oh, definitely. Freud contended that the first three years of life are the crucial years and that everything else only modifies the established pattern. If you give a child very little intellectual content in his first three years, how can you expect him to develop into a physicist or biologist or any other kind of intellectual worker?"

● *What difficulties does the Negro scientist starting out today encounter?*

"If he has his PhD, perhaps his most difficult problem is trying to avoid some of the high-paying industrial jobs offered to him. It's unfortunate that young Negro physicists, as soon as they get their degrees, are sought avidly by industries who want to improve their public image. I would very much prefer to have our young people move more normally upon getting their PhD's and undergo a period of low income while they continue their studies in post doctoral research, thus obtaining the real credentials of a scientist."



THIS IS OPTICS TECHNOLOGY'S 100+ MEGAWATT LASER

AND HERE ARE EIGHT REASONS WHY YOU SHOULD OWN ONE.

1. Q-switching is done either by Kerr Cell or Passive (bleachable liquid) method, whichever is best for your application.
2. Outputs at 6943 Å or 1.06 microns (easily interchangeable) useful in non-linear optics and photon-phonon interaction studies.
3. Synchronization and trigger controls let the experiment run the laser or vice versa. Time jitter is held to a few nanoseconds, making the laser valuable in photography and plasma physics work.
4. Interferometer optics mounted on granite base assure alignment stability even under adverse environmental conditions.
5. Multi-element glass flats and TIR prism (which will withstand full-power operation indefinitely) have replaced the easily-damaged thin-film interferometer reflectors common to other Q-switched lasers.

6. Ultraviolet shield is incorporated to protect ruby. Ruby life is indefinite.

7. Two linear lamps in the close-coupled and efficient pumping cavity have made fragile helical lamps obsolete. Forced, filtered air cools laser crystal and pumping lamps.

8. Power supply and control electronics are mounted in a compact console which also holds the laser head when not in use. High voltage interlocks and automatic dump circuit are standard safety features.

Priced from \$7,695. Ready to talk applications? Write us for the whole story.

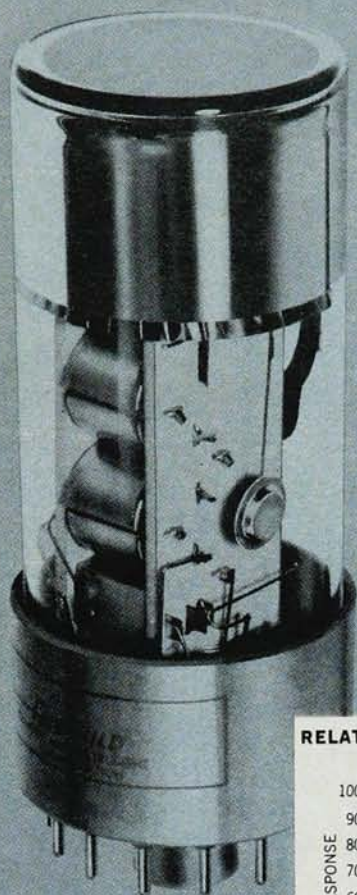
P.S. We also make a variety of other laser products: gas lasers, fast detectors, power meters, lab lasers, microscope lasers, laser photocoagulators, interferometers and dewars, plus laser coatings of all kinds.

OPTICS TECHNOLOGY INC

901 California Avenue ■ Palo Alto, California ■ 327-6600 (Area Code 415)

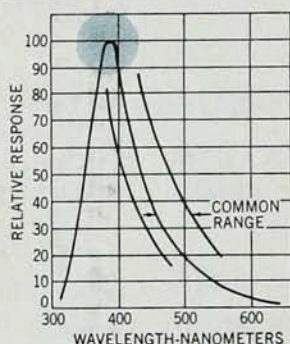
In Europe, contact Optics Technology Instruments, Ghent, Belgium

TRUE BLUE!



DuMont Type KM2520 Photomultiplier
10-stage, end-window, bi-alkali photo cathode

RELATIVE SPECTRAL RESPONSE



DuMont's low-cost Bi-Alkali Blue-Scintillation Photomultiplier

Here's DuMont's bi-alkali photomultiplier tube for blue-scintillator applications. Sensible low cost is maintained at increased cathode efficiency.

Here's what the Type KM2520 gives you: ■ High quantum efficiency ■ Blue sensitivity of $8\mu\text{A}/\text{lumen}$ ■ Cathode sensitivity at maximum response of $0.07\mu\text{A}/\mu\text{W}$ ■ Anode dark current $<0.01\mu\text{A}$ at 20 A/L ■ Available in $1\frac{1}{4}$, $1\frac{1}{2}$, 2, 3, 5" sizes.

For your blue scintillator work today, the performance of the Type KM2520 and its very, very reasonable cost make it worth looking into. May we send you details?

FAIRCHILD

DU MONT ELECTRON TUBES

A DIVISION OF FAIRCHILD CAMERA AND INSTRUMENT CORPORATION
CLIFTON, N.J.

● *Has the situation changed since your own graduate days?*

"Unquestionably so. I remember vividly how one of my professors urged me to take a job with a major industrial company and how many strings he pulled to get me the offer. Today that same company sends several recruiters to this campus often in a vain attempt to hire one or two students. The change is magnificent. Just a few years ago, a Negro couldn't get a job at a governmental or nonprofit laboratory, but today they are bragging when they hire their first or second Negro. There are now more opportunities than there are people to fill them."

● *Does the allure of governmental and industrial work create problems of staff at Howard?*

"It does create great shortages. First of all, our supply is small. And then most of this small supply goes into governmental and industrial positions. Of course, it's like everything else in American education; if things are bad in general, then they're always worse for the predominantly Negro college."

● *What professions do your students in the introductory courses enter later?*

"In the sciences the traditional opportunities for Negroes have been primarily in fields like medicine and dentistry. These are socially important fields, where a young man can find prestige and a good income. But with the opportunities in the natural sciences as they now are, I would like to see more students in this area. I think that we, at places like Howard, Fisk and Atlanta University, all ought to have special programs both to identify the talent in physics and to salvage it and develop it."

● *What disciplines do your physics majors tend toward?*

"Our population, of course, is extremely small. We have a good mixture of theoreticians and experimentalists. Now, there are not too many going into high-energy physics because we lack suitable equipment. We have some students working in theoretical nuclear physics, others doing experiments in magnetic properties at low temperature and things of this type. With 15 full-time faculty members, all

with PhD's, we can offer a reasonable graduate program."

● *What would you say are the main deficiencies of Negro colleges? Why can't they compete in physics?*

"It's a very simple matter. I just read that Stanford was lamenting because it must raise some \$165 million by 1970. Well, you must remember that \$165 million is an impossible achievement over the same time for all 72 of the accredited predominantly Negro colleges together. We know how to make a first-rate school in America; it's primarily a question of money. With a sympathetic board and money, you can bring in top-flight people from anywhere and build up a program. If a Negro college did have proper resources and could design a program for young people of ability whose backgrounds may be weak, I don't doubt at all that we could build up first-rate programs in many places. And I think we're going to show this. We have organized a new group called Institute for Services to Education (an offshoot of Educational Services Inc.), which is going to look at the predominantly Negro college in a forthright, constructive way. We are hopeful that in the next five years or decade we will see first-rate programs develop with many more students moving into the mainstream of physics than you've seen in the past."

● *Do you feel that the science community is biased to any degree?*

"I don't think so. On the other hand, I don't believe they exactly understand and appreciate the difficulties of a person who must move from a subculture to the general culture. But, in general, scientists (and especially physicists) are among the most liberal people to be found anywhere. Now this was not true some years ago."

● *Do you find that your physics students are just as active in civil rights as the humanities students?*

"Perhaps embarrassingly so. The physicists as a group, you know, are pretty vocal and outspoken. In the last few years (quite to my surprise) several student leaders in our local civil rights movements announced themselves as physics majors. We lost some very bright people whom we thought would have contributed more

as physicists than as activists in civil rights."

● *Is the government doing enough to encourage Negro students in science?*

"I never feel the government is doing enough, though it does a great deal. For example, I was just looking at details of a government program where something like \$5 million was set aside for developing colleges. The \$5 million was appropriated for a billion dollar need. If you are sincere, you have to spend money, and you have to have a different orientation about how to achieve your objectives. Like many people, I'm distressed about how things are developing in the areas of finding and developing talent."

"Suppose you take a 17-year-old from an indifferent intellectual and cultural background; what can you do to bring him into 20th-century science? It's not only a tough question for America but for the rest of the world as well. We have to determine the most effective way of overcoming initial handicaps. That is why I so much favor our ESI programs that are directed toward salvaging talent in the precollege youngster."

● *What besides money is required?*

"We need people with vision. How you get this I don't know. The people who I think have vision are not always the people the government thinks have vision."

● *Would you point to any government agencies as helping you accomplish your objectives?*

"I think the National Science Foundation has lots of people who understand this problem and are sympathetic towards it. There are also some individuals at the Office of Education who understand this problem and especially at the Ford Foundation and Carnegie Corporation."

● *In what ways can the physics community help?*

"Private sentiments are more effective than official statements. Perhaps the best thing is to realize that there is no racism in science and to try to give every person his opportunity to develop. Certainly, we want complete sympathy, understanding and every other help that the community can supply."—BH ☐

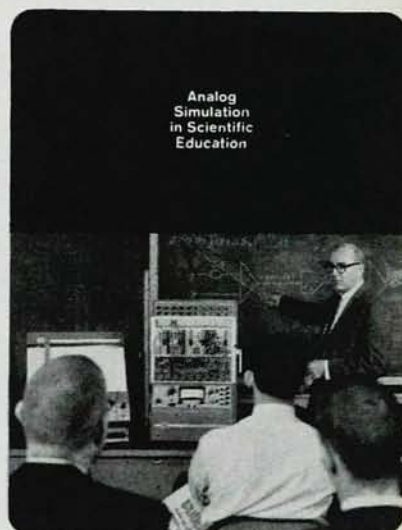
NO SCIENTIFIC EDUCATION IS COMPLETE WITHOUT ANALOG SIMULATION

Write for your copy of "Analog Simulation in Scientific Education."

It shows you how analog computers are being successfully used in over 500 educational institutions in education and research programs.

It gives you important new information on analog computation both as a subject of study and as a vital scientific tool.

Included in the report is a section describing actual applications in engineering and science departments with comments by leading educators. There are descriptive notes on analog computer fundamentals and informative material on the characteristics of computers and how they may be applied in research, classroom instruction and student laboratory use.



READ THIS REPORT.

Available free to all faculty members. For your copy, send the coupon to Electronic Associates, Inc., West Long Branch, N. J. 07764.

PT-96

NAME _____

TITLE _____

SCHOOL _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____

CITY _____ STATE _____ CODE _____

EAI[®]
ELECTRONIC ASSOCIATES, INC.
West Long Branch, New Jersey