

Internationalizing Batavia

The way for a small country to provide its physicists with the latest equipment for experiments in particle physics is to associate with its neighbors. The cost of the next generation of particle accelerators is beyond the means of all but the largest single nations. Europe learned this years ago, when CERN was established. And high-energy physics more than most fields, has always been rife with feelers and proposals for international cooperation as an answer to the cost of doing research.

The Soviet Union and the United States have both built only national facilities. But for the U.S. giant under construction at Batavia, Ill., that picture may change.

Canadian physicists have been urging their Government to become involved in the United States' 200- to 400-billion-electron-volt accelerator.

Their American counterparts are willing. If the governments act, the door will be open.

The Canadian interest is not new; Canadian physicists had once proposed building their own experimental wing at Batavia (SN: 8/3, p. 108). Now what they propose is a level of internationalization for the whole accelerator, and a partnership in it for Canada.

The group, which seeks more or less to represent the interest of Canadian particle physicists generally, includes Dr. E. P. Hincks, chairman of the physics department at Carleton University in Ottawa, chairman; Dr. A. W. Key, a University of Toronto research fellow now attached to the National Accelerator Laboratory at Batavia; Dr. Bernard Margolis, professor of physics at McGill University in Montreal; Dr. J. D. Prentice, professor of physics at the University of Toronto; Dr. W. T. Sharp, associate chairman of the department of mathematics at the University of Toronto, and Dr. D. G. Stairs, professor of physics at McGill.

Their proposal is taking the partnership route at least in part because of difficulties in determining a piece of equipment that could be the Canadian contribution under the earlier plan; partnership would also offer a better voice in laboratory management.

Specifically, the Canadians propose that the Canadian Government supply \$4 million a year for five years, after which a review would be made and further contributions determined. The money would be held in Canada in an account that the director of NAL could spend, at his discretion, on needs of the accelerator purveyed by Canadian contractors.

To manage the Canadian side of the



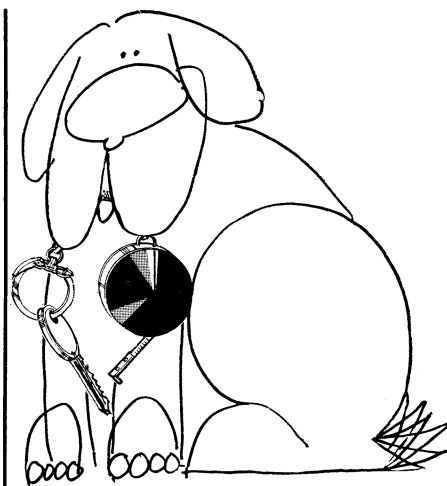
Dr. Key: Batavia liaison from Canada.

project, they suggest formation of Canadian Universities Research Association parallel to the Universities Research Association that is now managing the United States effort. A joint committee of the two associations would settle matters of joint concern in laboratory policy.

While neither government has yet made an official comment on the suggestion, the feeling of the Batavia staff and management is favorable. "We are enthused," says Donald R. Getz, assistant director of NAL. "We can see lots of good things in it." And Dr. Norman Ramsey, president of the U.S. association, says: "It seems to me that the form of cooperation and joint participation proposed by the Canadian Study Group is particularly suitable and should be highly effective." Dr. Ramsey also sees reason to anticipate favorable U.S. Governmental reaction to a formal Canadian proposal, which could come by summer. Collaboration with still other nations might be similarly welcome, but none have applied. In this hemisphere there is very little high-energy physics done outside the United States and Canada; Latin America is devoid of research in the field.

The proposal comes at a time when there is a certain pessimism among Canadian physicists about future support by their Government. Two large national projects, the Queen Elizabeth II Observatory and a facility called the Intense Neutron Generator, have been cancelled. Studies have suggested that Canada needs to push development of applied physics while saying little or nothing about basic physics, thus giving the impression that basic physics is doing all right as it is.

But the study group is optimistic. This project is "not huge," says Dr.




Like to be friends?

BEFRIENDING US MAY BE REWARDING for you if you feel that things are getting sort of drab. We modestly believe that we can add a dash of romance and a soupçon of difference to it all.

HERE'S OUR FRIENDLY OFFER. Clip this ad and mail to us with a \$1 bill (No checks, please! It drives our bankers mad.) We'll send you an elegant, practical **TAPE MEASURE / KEYRING** like the one Henry holds here. You'll also receive "The World's Most Exciting Catalog." But then our friendship isn't over. Every month or so, we'll send you an exclusive offer of a new and exciting product, not available from anyone but us. And last, (but far from least), we'll send you a **\$2 GIFT CERTIFICATE** that may be applied to your first purchase. An unusual proposal? Sure! But Haverhill's is unusual. Be friends and see. SN-0329

584 Washington, San Francisco 94111 **haverhills**


Save His Eyes!
Put Protection At Hands Reach—




BARIKOS® PNEUMATIC EYE-WASH BOTTLES

Keep BARIKOS bottles on the spot, ready to prevent loss of eyesight from chemical burns, metal filings, foreign particles and dust. More accessible than eye wash fountains yet much less expensive.

BOTTLE \$5.90 ea. STATION \$4.00 ea.



Squeezing of plastic bottle creates continuous flushing action and drainage.



Bright day-glo instruction panel with hook to hold bottle.

WRITE **ADVANCE GLOVE MANUFACTURING CO.**
996 W. Lafayette Blvd., Detroit, Mich. 48226
Plants in Detroit; Chicago, Toledo; Rome, Georgia

March 29, 1969/vol. 95/science news/305

THE FUTURIST

bimonthly publication of the World Future Society, reports scientists' forecasts for the coming decades. Interdisciplinary. Nonpolitical. Written for laymen as well as professionals involved in social and technological forecasting, long-range planning, and studies of the future.

Recent articles:

The Impact of Technological Change on World Politics

Inventing Education for Tomorrow Simulating the Future with an Econometric Model

Urban Transportation of the Future Lunograd: A Soviet Vision of a Moon City

The Biological Time Bomb Physicians in Tomorrow's Healthy World

World Future Society, Box 19285-S,
Twentieth Street Station,
Washington, D. C. 20036

Enclosed is \$7.50 for one year's subscription to **THE FUTURIST**.

Name

Address

City State

Zipcode Occupation

Are You A Bore?

A noted publisher in Chicago reports a simple technique of everyday conversation which can pay you real dividends in social and business advancement and works like magic to give you poise, self-confidence and greater popularity.

According to this publisher, many people do not realize how much they could influence others simply by what they say and how they say it. Whether in business, at social functions, or even in casual conversations with new acquaintances there are ways to make a good impression every time you talk.

To acquaint the readers of this publication with the easy-to-follow rules for developing skill in everyday conversation, the publishers have printed full details of their interesting self-training method in a new booklet, "Adventures in Conversation," which will be mailed free to anyone who requests it. No obligation. Send your name, address and zip code to: Conversation, 835 Diversey Parkway, Dept. 540-013, Chicago, Ill. 60614. A postcard will do.—(Adv.)

Prentice. He feels that there were valid scientific reasons for cancelling the neutron generator and the observatory, and the scale of proposed Canadian participation in NAL is about equal to other Canadian efforts. It matches, for instance, the cost of Tri-University Meson Facility, a meson-producing accelerator being built for nuclear physics by a group of universities in western Canada; the same scale could be applied to support for other branches of physics as well. "We would foresee a group of universities wanting to do something similar in solid-state physics," says Dr. Prentice.

FEDERAL SUPPORT

Implementing the NSB proposals

Following a pattern established during World War II, the bulk of Government money for science is allocated to individual researchers to carry out specific projects—a system that has meant that certain institutions are indirectly heavily endowed while others get very little.

This was the problem addressed by the National Science Board when, in a report last month (SN: 3/8, p. 231), it proposed reallocation of Federal research money to better support graduate degree-granting institutions themselves.

To minimize the limitations of the project grant system and to implement the NSB recommendations, Senator Fred Harris (D-Okla.) and others have introduced a bill to establish a National Institutional Grants Program to substantially increase, by \$400 million, support of scientific research and education from the community college to the university level.

The money, which each year after 1970 would equal 20 percent of total Federal funds for academic science, would go directly to the institutions, rather than to individuals within them, and could be used by the schools to support programs of their own choosing. The distribution would be administered by the National Science Foundation. The bill has been referred to the Senate's Committee on Labor and Public Welfare which is likely to schedule hearings within the next few months.

In the House, Representative George P. Miller (D-Calif.) has introduced legislation also aimed at marshalling support for university science (SN: 3/8, p. 231). His proposal is to distribute funds by a complicated formula incorporating proportions of graduate and undergraduate students, designed to feed less wealthy institutions, in more states.

The Harris proposal may sidestep objections to the Miller bill. ◇

END ALL BLIND SPOTS



See More! Drive Safely with amazing PANORAMIC REAR VIEW AUTO MIRROR

Gives actual wide angle vision, lets you see all cars behind you—left, right and rear. Also amazing aid in seeing cars coming up fast to pass from either side. Ends hazardous "blind spot" driving, makes you feel safer behind the wheel. Precision made in Europe of 1/8" mirror glass in sturdy casing. Snaps right on present rear-view mirror. For safer driving, greater vision; you need this panoramic mirror. Only \$5.95 plus 55c pp. & hdlg.

Send check or M.O. No C.O.D.'s. Satisfaction Guaranteed.

J. W. HOLST, Inc. Dept. SN329, 1005 E. Bay St., East Tawas, Mich. 48730

Math "Bug" You? —No Problem!

From Simple Numbers to Calculus

Now comes a new and completely different kind of self-teaching math "course"—one that yields truly amazing results!

"The author assumes no previous acquaintance with mathematics . . . He advances the reader to some mathematical notions of 'college' level . . . The near-miracle is accomplished by patient, carefully-phrased exposition and by building the discussion step-by-step . . . The book is intended for study without the aid of a teacher"—New Technical Books (of the New York Public Library).

If you have despaired of ever "licking" mathematics, if lack of mathematical knowhow is holding you back, if you have tried other methods and found they simply did nothing for you, then perhaps you would wish to try the remarkable Colerus method. It is guaranteed to satisfy your expectations, or full purchase price refunded. Not a tutored math course that stands you anywhere from \$150 to \$300, but a self-instruction manual that costs a mere \$4.95— if you decide to keep it. ORDER NOW!

MATHEMATICS FOR EVERYMAN by Egmont Colerus

\$4.95 Postfree 10-Day Money-Back Guarantee
EMERSON BOOKS, Inc., Dept. 115-S
251 West 19 Street, New York 10011



LIQUID PLASTIC

Polyurethane that applies like paint forms a skin so tough it won't crack, chip or peel. Cuts painting costs . . . covers and protects like a shield of unbreakable glass.

Waterproof in 30 Minutes

Adheres to practically anything, stops leaks. Ideal for concrete, aluminum, wood, masonry, canvas, any metal. Clear—any major color. Just specify. \$5.95 per qt., \$18.50 per gal. We pay all shipping costs. Order NAVAL 5.

MEREDITH SEPARATOR CO.

Dept. YSN-222
310 West 9th St., Kansas City, Mo. 64105