

GENERAL SCIENCE

U. S. Science Not Lagging

A physicist recently returned from Russia believes reports of Soviet advances in basic research are exaggerated as are reports of their scientists' high social and economic status.

► THE RUSSIANS are not ahead of the United States in basic research.

A majority of Russian scientists are poorer paid than their American counterparts and tales of their pampered life have been exaggerated.

Actual discoveries by Russia's nuclear physicists in basic science are not impressive.

These are some of the conclusions drawn by Dr. Donald J. Hughes, a senior physicist at Brookhaven National Laboratory, Upton, N. Y., after a recent month's tour of Polish and Russian nuclear laboratories as a guest of the Soviet Academy of Sciences.

Dr. Hughes' findings may appear surprising to most who have been reading other reports on Russian science of late. His "minority" report is in direct contradiction to these. He is optimistic about the future and even points out that because of the different ideologies in the U. S. and the U.S.S.R. "there is little danger that the Soviets will pass us up in basic science."

In Poland, Dr. Hughes found the Polish nuclear scientists looking for the West's help in science; anxious to receive Western research equipment; and having a high opinion of Western science as the world leader in fundamental research. He also found anti-Russian feelings widespread from the "man-in-the-street to the intelligentsia."

In Russia, Dr. Hughes found the only Red scientists to be socially pampered were the relatively few Academicians. The greater majority of scientists, he says, receive about half the pay of American scientists in real purchasing power and do only half as well in their standard of living as our scientists.

Although the Russians excel largely in the field of large equipment, they are definitely lagging far behind the United States in many areas of basic research.

Speaking of the world's largest accelerator, which the Reds have at Dubna near Moscow, the Soviet atomic power plant and the sputnik, Dr. Hughes has this to say:

"In each of these cases the Soviet high command has picked the particular development and has pushed it ahead without regard for cost or manpower. These developments, however, are not basic science and are the type of things that can be pushed to rapid success if funds are not limited."

He cautions the U. S. from adopting the same practice. The Academy of Sciences, he says, rules all science, engineering and technology in the Soviet Union with an iron hand. Dr. Hughes explains, too, that Red scientists are friendlier to the West than the Academy.

Dr. Hughes says that under the present Russian set-up it is hard to see how basic science can advance. There is some evidence of change taking place, he notes, concluding, however, that:

"But my own opinion is that the difficulties go so deeply into the fundamental structure of the Soviet society that it would be impossible to gain the freedom of research so necessary to progress without a change in the Soviet Government more deep-seated than we can anticipate for decades."

Dr. Hughes' full report on his trip appears in *Physics Today* (Dec.).

Science News Letter, December 28, 1957

GEOPHYSICS

Antarctic Leader Receives Top Award

► THE MAN who has lived in Antarctica longer than any other person has received the Army's top civilian award.

Dr. Paul A. Siple of Arlington, Va., former scientific leader at the U. S. South Pole station in Antarctica, was given the Army's Exceptional Civilian Service Award by Secretary of the Army Wilber M. Brucker.

Dr. Siple received the high honor for his "exceptional performance of duty" as deputy officer-in-charge of the U. S. Antarctic program, under the late Rear Admiral Richard E. Byrd, USN, and for his extraordinary service as scientific leader at the South Pole station.

As a result of Operation Deep Freeze studies, Dr. Siple reported that the cause of the cold swift winds on the Adelie Coast is their passage down a great sloping trough of ice 200 to 300 miles wide lying between the mountain range that begins near Little America and extends toward the Coast, and one of the two huge mounds of ice that make up the bulk of the Antarctica area.

The man who has lived more than four years on the "white continent" has just returned from his sixth trip to Antarctica. His first was made as a representative of the Boy Scouts of America on Admiral Byrd's first expedition in 1928-1930.

The American Polar Society recently made Dr. Siple an honorary member.

Science News Letter, December 28, 1957

PLANT PHYSIOLOGY

Develop Tomato Plant For Hot Climates

► A TOMATO plant that thrives when the night temperatures are high has been developed at California Institute of Technology's Earhart Plant Laboratory, Pasadena.

Within a few years, says Dr. Frits Went, director of the Laboratory, tomatoes of excellent processing quality may be grown commercially as far south as Texas. Now the tomato seems to be partial to life in California and in a narrow area running

from the Midwest eastward to New Jersey. This is where night temperatures stay within the not-too-hot and not-too-cold range, about 64 degrees Fahrenheit, that has been critical to the tomato's flowering and fruit setting.

The strain is the result of selective breeding. A Philippine and an American variety were crossed and the resultant hybrid plants were inbred until scientists had a tomato plant that produced excellent fruit at night temperatures as high as 80 degrees Fahrenheit. The genes controlling temperature tolerance and fruit size are independently inherited, it was discovered.

Dr. Lester W. Schaible, a plant breeder for Campbell Soup Company which financed the program, directed the research.

Science News Letter, December 28, 1957

SCIENCE NEWS LETTER

VOL. 72 DECEMBER 28, 1957 NO. 26

The Weekly Summary of Current Science, published every Saturday by SCIENCE SERVICE, Inc., 1719 N St., N.W., Washington 6, D. C., NORTH 7-2255. Edited by WATSON DAVIS.

Subscription rates: 1 yr., \$5.50; 2 yrs., \$10.00; 3 yrs., \$14.50; single copy, 15 cents, more than six months old, 25 cents. No charge for foreign postage.

Change of address: Three weeks notice is required. When ordering a change please state exactly how magazine is now addressed. Your new address should include postal zone number if you have one.

Copyright © 1957 by Science Service, Inc. Reproduction of any portion of SCIENCE NEWS LETTER is strictly prohibited. Newspapers, magazines and other publications are invited to avail themselves of the numerous syndicated services issued by Science Service. Science Service also publishes CHEMISTRY (nine times a year) and THINGS of Science (monthly).

Printed in U.S.A. Entered as second class matter at the post office at Washington, D. C., under the act of March 3, 1897. Acceptance for mailing at the special rate of postage provided for by Sec. 34.40 P. L. and R., 1948 Edition, paragraph (d) (act of February 28, 1925; 39 U. S. Code 283) authorized February 28, 1950. Established in mimeograph form March 13, 1922. Title registered as trademark, U. S. and Canadian Patent Offices. Indexed in Reader's Guide to Periodical Literature, Abridged Guide, and the Engineering Index. Member Audit Bureau of Circulation.



SCIENCE SERVICE

The Institution for the Popularization of Science organized 1921 as a non-profit corporation.

Board of Trustees—Nominated by the American Association for the Advancement of Science: Karl Lark-Horowitz, Purdue University; William W. Rubey, U. S. Geological Survey; Wallace R. Brode, National Bureau of Standards. Nominated by the National Academy of Sciences: George W. Corner, Rockefeller Institute for Medical Research; Edward U. Condon, Washington University; Harlow Shapley, Harvard College Observatory. Nominated by the National Research Council: Jerome C. Hunsaker, Massachusetts Institute of Technology; I. I. Rabi, Columbia University; Leonard Carmichael, Smithsonian Institution. Nominated by the Journalistic Profession: Neil H. Swanson, Garrison, Md.; O. W. Riegel, Washington and Lee University; Michael A. Gorman, Flint Journal. Nominated by the Scripps Estate: Charles E. Scripps, Cincinnati, Ohio; Edward J. Meeman, Memphis Press-Scimitar; Frank Ford, Washington, D. C.

Officers — President: Leonard Carmichael; Vice President and Chairman of Executive Committee: Charles E. Scripps; Treasurer: Wallace R. Brode; Secretary: Watson Davis.

Staff — Director: Watson Davis. News Editor: Howard Simons. Writers: Marjorie Van de Water, Ann Ewing, John W. Robinson, Jane Marye, David Pursglove, Benita Tall. Science Youth Division: Harold A. Edgerton, Joseph H. Kraus, Margaret E. Patterson. Photography: Fremont Davis. Production: Priscilla Howe, Marcia Nelson. Syndicate Sales: Hallie Jenkins. Interlingua Division in New York: Alexander Gode, 80 E. 11th St., GRamercy 3-5410. Advertising Manager: Fred A. Moulton, METropolitan 8-2562.