

METEOROLOGY

Winter Getting Warmer

► WINTERS ARE NOT getting colder but warmer, despite some unusually cold weather experienced in many parts of the United States, the weatherman says.

Climatologist of the U.S. Weather Bureau, Lothar A. Joos, reported that the changes in winter temperatures are minor, but records of the last 50 to 75 years show that winter temperatures are now one to two degrees higher. This increase, he said, may be caused by the fact that cities have grown larger and now burn more fuel than earlier.

He said winter "storms" have not been unusual in severity this year. Daily weather maps for all years contain records of series of storms. One common path of winter storms has been from Colorado to Ohio. This generally means rainfall as the storms move, but if a north wind sets in, it snows instead.

The cold weather experienced in many parts of the U.S. is caused by storm tracks that this year have come from areas

farther south than usual. Texas, southern New Mexico, Oklahoma and Kansas have had wet, cold weather, three to four degrees below the normal average.

Very dry, cold weather of two to four degrees below normal has been common in Nevada, Utah, southern Idaho, western Arizona and southern California.

The Atlantic states from New York to northern Florida have seen more snow than usual and temperatures of six to eight degrees below normal in December and three to seven degrees colder than normal in January.

However, this has not been a hard winter for a large part of the central U.S. where less snow than normal has occurred. Temperatures in January have also been quite high in the Rockies, Montana, Wyoming, the Dakotas and surrounding area where temperatures have averaged 14 to 18 above normal.

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ASTRONAUTICS

NASA Chief Appointed

► PRESIDENT John F. Kennedy has appointed James Edwin Webb, former director of the Bureau of the Budget and Under Secretary of State under President Truman, to head the National Aeronautics and Space Administration.

Mr. Webb now directs the McDonnell Aircraft Corporation of St. Louis, Mo., that makes the space vehicle designed for manned space flight under NASA's Project Mercury. The Mercury capsule just carried the chimpanzee "Ham" 155 miles up into space and returned him safely to earth.

The new NASA Administrator will give up his business connections with the McDonnell Corporation as well as other business connections and stock holdings that might conflict with his Federal responsibilities. These yield annually several times the \$22,500 he will receive as NASA administrator.

Mr. Webb does not consider the reduc-

tion in his income imposed by service in Government "a personal sacrifice." It is a "privilege to serve the Government," he said.

Mr. Webb was chosen by both the President and Vice-President Lyndon B. Johnson, who will head the Administration's space council. He is a long-time friend of Dr. Jerome B. Wiesner, Science Adviser to President Kennedy, who advised him of the President's wish that he head the space agency. His distinguished record as a talented administrator both in Government service and in private business impressed the President.

Until the Senate confirms Mr. Webb's appointment, NASA will be headed by Dr. Hugh Dryden, appointed Acting Administrator by the President. When Mr. Webb is confirmed, Dr. Dryden will resume his former post of Deputy Administrator.

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PHYSICS

"Nuisance" Phenomenon

► PRACTICAL USES for a "nuisance" phenomenon that has complicated research into photoconductive materials was demonstrated by two New York University physicists.

The phenomenon, known to scientists as the "persistent internal polarization" or P.I.P., can now be used in high-speed memory computers, photography, and energy storage devices, according to Dr. Hartmut P. Kallmann, director of NYU's solid state laboratory, and Dr. J. Tennert, senior scientist.

P.I.P. occurs when luminescent materials, such as the phosphor plates in television tubes, are exposed to radiation. The carriers of electrical energy inside the solid separate and a polarized field is formed, thus storing the energy in the plate.

The effect remains even after the source of radiation is removed, but the stored energy can be released by exposure to light.

This phenomenon has been used at NYU to develop memory apparatus in which fast, intense light flashes are used to read back

information in less than one-millionth of a second.

With P.I.P., the NYU physicists said, greater amounts of information can be stored in less space than in present computers. Other advantages over present computers include operation under normal room conditions, and the possibility of even speedier operation with more intense and faster light flashes.

P.I.P. also can be used to widen the range of sensitivity in infrared photography, the researchers found. After intense radiation exposure, such as that from an atomic blast, a P.I.P. plate can be exposed without danger of fogging the film. The P.I.P. effect also can provide safer and simpler dry copying in photocopying machines.

P.I.P. also can be used to store electrical energy for hours, and even days, something that cannot be done with normal capacitors. The energy is stored in the phosphor plate and then recalled by exposure to radiation in the form of ultraviolet, infrared or gamma rays, or electrons.

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NATURAL RESOURCES

Fast Action Needed On Water Resources

► WATER, WATER EVERYWHERE, and not a drop fit to drink, is what this nation will face if it fails to take immediate action to prevent further pollution of our water resources, Sen. Robert S. Kerr (D.-Okla.) has warned.

"Unless we launch an immediate, all-out effort, our economy will be thwarted, our security undermined, and our national health plagued," the Oklahoma senator, chairman of the Select Committee on National Water Resources declared bluntly, in announcing the final report of the Committee after a two-year study.

The report recommends a 20-year water-saving plan to keep the nation abreast of its present usage of 300 billion gallons daily, expected to nearly double in 20 years.

The five-point program, prepared under his direction, calls for close Federal-State cooperation to prepare and keep up-to-date plans for comprehensive water resource development and management for all major river basins of the United States by 1970.

It also calls for a 10-year, \$50 million program for Federal grants to the states for water resource planning; coordination and expansion of Federal scientific research programs dealing with water as well as major improvements in construction of works for water storage and control; a biennial assessment of the water-supply demand outlook for each of the regions of the United States by the Federal Government, and emphasis on flood-plain zoning, the emerging water problems in the water-short areas, the needs for major multiple-purpose reservoirs, and the holding of public hearings on proposed Federal activities in the water resource field.

The Committee report is based on a series of more than 90 studies. It looks ahead to needs in the year 2000, when our water demands will have tripled.

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