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## METEOROLOGY

# Winter's 'Second Half'

➤ THE "SECOND HALF" of winter came in with a vengeance.

The traditional January thaw, which now occurs earlier in the month than it did 60 years ago, had its inning, and bitter Arctic air blanketed virtually all of the country.

The January thaw breaks winter into halves. It has done so for at least two-thirds of the last 38 years, Dr. Robert T. Duquet of Pennsylvania State University, University Park, Pa., told SCIENCE SERVICE.

Weathermen consider winter to be the months of December, January and February. Dr. Duquet's thorough statistical study of weather records from 1926 through 1963 showed there is a January peak in mid-winter temperatures all across the country.

The high in the average weekly temperatures occurs first on the West Coast, then over the Midwest and lastly on the East Coast. It is not always on the same date every year.

However, on the average, the first two weeks of January have temperatures higher than either the preceding or following two weeks. This was true not only for 1964 but also for 1963, Dr. Duquet said.

Records for the last 90 years show that for the first few decades the warmer January temperature pattern occurred during the third week in January. The shift to an earlier time, Dr. Duquet believes, is tied in with a change in the general circulation of the atmosphere.

He said there are two reasons why the January thaw appears to be more pronounced in the Northeast, when actually it affects the entire country.

One is that the Northeast was more heavily populated at an earlier time than the rest of the country and temperature records have therefore been kept there longer.

The other is that the average temperature at this time of the year in the Northeast is very close to freezing so that a slight change of a few degrees is sufficient to make a very noticeable change in the snow cover.

Dr. Duquet said that the January thaw was due to a surge of warm air ahead of a long wave high in the atmosphere. As this

shifts slowly across the country, cold air pours down behind it, giving a very pronounced cycle of warm and cold temperatures during the two halves of January.

The January thaw in 1961, he said, was the biggest ever. However, 1963 was a close rival. These were part of a cycle that started in 1960, Dr. Duquet believes.

• Science News Letter, 85:62 Jan. 25, 1964

## PUBLIC HEALTH

### Cold Weather Increases Danger From Car Fumes

➤ THE ICY BLASTS of winter increase the danger from warming up cars and trucks inside garages, warns an engineer.

Deadly fumes of carbon monoxide can seep unnoticed from the running engine and overwhelm the driver.

This odorless, colorless and tasteless gas gives no warning, states Waldo E. Bell, agricultural engineering specialist of West Virginia University, Morgantown.

First indication of poisoning is drowsiness, followed by unconsciousness and often death.

Victims should be moved immediately to fresh air and given artificial respiration after a doctor has been called. If the victim has stopped or slowed his breathing, mouth-to-mouth resuscitation is needed.

Car and truck exhaust systems should be checked for defects, states Mr. Bell. Also, gas heaters in the home should be checked for proper ventilation. Unvented heaters should never be left burning overnight or during sleeping hours.

• Science News Letter, 85:62 Jan. 25, 1964

## ASTRONOMY

### Jupiter's Atmosphere of Hydrogen 160 Miles Deep

➤ JUPITER has an atmosphere of hydrogen 160 miles deep, 10 times deeper than previously thought, two scientists have found.

The new figure resulted from experiments using the world's largest absorption tube at Pennsylvania State University, University Park, Pa. Dr. David H. Rank and John V. Foltz reported in the Astrophysical Journal that they duplicated within the tube the hydrogen atmosphere actually observed on Jupiter.

• Science News Letter, 85:62 Jan. 25, 1964

## Do You Know?

Final tests are being made on an *insecticide* that reportedly kills gypsy moths, forest tent caterpillars and inch worms, but does not harm humans, birds, animals or fish.

The Weddell *seal* is the only one of five Antarctic species that can live underneath the ice shelf anchored to the shores of the continent.

• Science News Letter, 85:62 Jan. 25, 1964

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