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A Science Service Feature

? WHY THE WEATHER ? Mailed Nov. 10, 1934

"TWICE AS COLD"

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The U. S. Weather Bureau was recently asked whether a temperature of 50 degrees below zero is twice as cold as 25 degrees below zero. "This question," replied the Bureau, "from the physical standpoint, has no meaning. There is no zero, or starting point, of cold as there is for warmth, or degree of temperature. Cold has no physical reality while heat has. When one speaks of the air being twice as cold at one time as at some other, he presumably means that on the one occasion he felt more uncomfortably cold (twice as uncomfortably so, he vaguely estimates) than on the other when the air was not so cold."

If, however, one is thinking of the effects of cold on human beings, then perhaps it might be proper to say that a certain state of weather is twice as cold as another when the rate of heat-loss from the human body is twice as rapid in the one case as in the other. There are instruments, such as the katathermometer, designed to give at least approximate indications of the rate at which the body loses heat under different atmospheric conditions.

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