A Science Service Feature

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February 7, 1935 ? WHY THE WEATHER ? Mailed Jan. 31, 1935

UPSIDE-DOWN TEMPERATURE

By Charles Fitzhugh Talman
Authority on Meteorology

The meteorologist calls it a "temperature inversion," meaning the state of affairs that prevails when the air gets warmer as you go upward, instead of getting colder, as is more usual. Inversions are especially common in the lower atmosphere on clear nights, but they also occur in the daytime when the ground is relatively cold and hence cools the air adjacent to it.

Temperature inversions are very pronounced in Alaska during the winter. R. L. Frost, of the U. S. Weather Bureau, tells us in a recent article that aviators in that territory often take off in temperatures as low as 50 degrees Fahrenheit below zero and on climbing to 4,500 feet find their thermometers reading only 10 or 15 below.

"At times," he says, "when surface temperatures were around 40 degrees below zero it was somewhat amusing to hear the pilot complain of the heat aloft. The heavy fur parka and mukluks worn on the ground were uncomfortably warm in the higher temperatures aloft. The shutters on the motor cowling were not adjustable from the cockpit and when the motor was cowled down for cold-weather flying it would at times become overheated in the warm air aloft and prevent the plane from attaining its maximum altitude."

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