

A Science Service Feature

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? WHY THE WEATHER ?

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LEADEN SKIES

The dull leaden skies which often make November and December days cheerless are due in part to the lowness of the sun. Because the sun is low, its rays strike the upper surface of a cloud sheet at a small angle. Much of the incident light is reflected, or absorbed in its long slanting passage through the cloud. When the rays are more nearly perpendicular, much more sunlight penetrates. But when the sun is near the horizon, so that it shines upon the under surface of the cloud cover the leaden sheet may become gorgeous.

With lower temperatures, dense snow clouds become more common, a type of cloud which is most effective in cutting off the light from above. It is a curious fact, however, that although the snow-covered ground may look white and the clouds gray, the clouds, by photometric measurements, are brighter than the snow surface.

Mr. Irwin G. Priest has shown that apparently it is not only actual brightness, but brightness compared with what we expect, which determines whiteness or grayness. So much less light comes from an overcast sky than from a clear sky or a sky with scattered white clouds, that we consider it dark or gray, even though at such times it is actually brighter than the snow, which is our brightest ground surface.

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