

No. 200

A Science Service Feature

Jan. 2

? WHY THE WEATHER ?

Dr. Charles F. Brooks,
of Clark University,
tells of:

DAY OF INTENSEST SUNLIGHT

Today, January 2, the earth receives most heat from the sun, for we are now nearest it, only 91,340,000 miles away. The sun occupies a bigger part of the sky as we see it, and sends us heat about 7 per cent more intense than if it were at its greatest distance, 94,450,000 miles.

We do not get the full benefit of this greater intensity, however, for the days of winter are short and the sun's rays strike slantingly. Furthermore, even such sunshine as we do get is largely lost when there is snow on the ground, for its heat is reflected off into space, as much as 70 per cent of it from new snow, and what is absorbed cannot raise the temperature of the snow surface above 32 degrees, owing to evaporation and melting. Therefore, the sum total is cold weather.

Notwithstanding, our winter climate in clear weather is made notably warmer, whatever the air temperature may be, because of this greater intensity of sunlight. Fortunate it is that the most peopled hemisphere has now, and will have for a few thousand years more, the nearest sun in the coldest season. In the southern hemisphere, though, the reverse is the case, and the climates there would be more severe than they are but for the vast expanse of the heat regulating oceans.

(Tomorrow: January Weather)

All rights reserved by Science Service

Science Service,
1115 Conn. Ave.,
Washington, D.C.