

Feb. 4

? WHY THE WEATHER ?

By Dr. Charles F. Brooks  
of Clark UniversityDULL DAYS

Why are dull days so characteristic of winter? Are the clouds of winter more persistent, denser, and lower than those of summer? Yes. With the exception of Cape Hatteras, central Colorado, and the coast of northern California, where the percent of possible sunshine occurring is about the same winter and summer, the cloudiness throughout the United States and southern Canada is greater in winter than in summer. This winter cloudiness reduces the number of hours of sunshine in winter to but a half or a third of that in summer in the eastern United States generally. The dullness of many winter days compared with correspondingly cloudy days of summer is enhanced both by the greater density and the lower elevation of winter clouds. The difference in cloud density in winter vs. summer is not so great, however, as the relative darkness makes it appear. In winter the sun from a low angle must shine a much greater distance through any cloud before its rays or their remnants can emerge at the under surface. The same cloud might, therefore, appear twice as dense in midwinter as in midsummer. The lowness of typical winter cloud sheets shuts off much light that might come from more illuminated portions of the sky. Local heating by the sun tends to make summer clouds bunched and to keep them broken, thus allowing the passage of plentiful light here and there no matter how dense a particular cumulus cloud may be. The weakness of the sun's rays in winter, however, and the strength of the generally overlapping winds constantly favor the sheet-like formation so characteristic of winter clouds. Nevertheless, it is the hopelessly dull day of winter that makes the sparkingly clear day so cheery by contrast.

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(Tomorrow: Temperature and Pressure Experiment)

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