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? WHY THE WEATHER ?

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VARIABLE SUN HEAT

A few weeks ago the papers were full of statements about forecasting the weather from solar variations. The Smithsonian Institution and the Weather Bureau got together in a symposium to thrash out certain differences. Dr. C. G. Abbot and Mr. H. H. Clayton have for some time been much impressed by the variability of the measured heat from the sun and by an apparent relation between these solar values and current or immediately subsequent weather. Naturally, they tried to see to what extent the weather could be forecast from daily solar observations alone. Mr. Clayton appears to have demonstrated that some degree of success in forecasting is possible, but the Weather Bureau of the United States has not yet felt justified in adopting solar values as an element in forecasting. The Weather Bureau still has to be satisfied of the rationale of such forecasting, and also has to work out a practicable means of dovetailing solar indications into the present scheme.

It is quite evident that the daily values of the "solar constant" found by Dr. Abbot and his associates in Arizona and Chile contain observational errors perhaps as large as the usual solar variations themselves. And it seems that day to day changes in solar heat, with the passage of cooler sunspots and hotter faculae cannot exceed, except rarely, two tenths of one per cent. With the establishment of a third observing station, in Africa, it should be possible to get daily values of solar heat for the earth as a whole that more truly represent what is actually received from day to day, than has hitherto been possible. Forecasting from solar values, as a regular procedure in the United States at least, must still await more years of observation and study.

(Tomorrow: "All Signs Fail in Dry Weather".)

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