A Science Service Feature

Released on receipt
but intended for use
July 14, 1927

? WHY THE WEATHER ?

Mailed July 7, 1927

By Charles Fitzhugh Talman
Authority on Meteorology

SUNSPOTS AND WEATHER

Sunspots were at low ebb in August, 1923, when for days none were visible in the telescope. Now they are approaching high tide. In other words, a maximum of the eleven-year sunspot cycle is likely to be reached in the course of the next few months. The exact date cannot be determined in advance. Though the length of the cycle averages a little more than eleven years, it is subject to large variations.

However, we have already reached the stage when, besides being numerous, sunspots often grow to an enormous size. Last year twelve groups of spots big enough to be seen without a telescope appeared on the solar disk. Thus a long-mooted question crops up again. Do sunspots affect terrestrial weather?

That they may do so was first suggested by the astronomer Riccioli in the middle of the seventeenth century. Sir William Herschel investigated the subject at the beginning of thenineteenth century. He believed there was a relationship between the abundance or scarcity of solar spots and the prices of wheat prevailing from year to year, indicating some connection between sunspots and terrestrial temperatures.

Since the existence of the eleven-year cycle of spots became generally recognized, toward 1850, hundreds of investigators have occupied themselves with this problem. Sunspot records have been compared with records of temperature, rainfall, cloudiness, thunderstorms, tropical cyclones, and so on. It seems to be quite easy to discover a sunspot period in almost any record of earthly weather, but not to convince the rest of the world of its existence! The main result of all this hunting has been -- controversy. Only one relationship has been quite generally accepted. Dr. W. Koeppen found that the earth's weather is, on an average, a little cooler when sunspots are numerous than when they are scarce. The temperature fluctuation involved is very small and is not generally well marked outside of the tropics.

(All rights reserved by Science Service, Inc.)

SCIENCE SERVICE,
21st and B Sts.,
Washington, D.C.