

# Sun Spot Caused Magnetic Storm

*Astronomy*

A severe magnetic storm that disrupted telegraph communication recently, and displays of the northern lights as far south as Texas, where they are rarely seen, were two of the consequences of the recent display of sun spots. The cover this week shows a photograph of the sun made with the 60-foot tower telescope at the Mt. Wilson Observatory in California on July 9. The notches at the top and bottom were photographed at the same time as the sun to determine directions. The top is the north, the east side of the sun is to the left and the west to the right. A pair of mirrors at the top of the high tower reflect the sun's light into a lens, so that an image of the sun is formed at the base, where it can be studied or photographed. Or, if desired, its

light may be sent down into a pit below containing a powerful spectroscope. Another such instrument at Mt. Wilson mounted in a 150-foot tower is used regularly to observe the sun.

A sun spot is supposed to be a vast whirl—something like a tornado—in the sun's outer surface. As it is relatively cooler than the surrounding part of the sun, it appears dark, but actually is intensely bright. Once in a period of about eleven years sun spots become particularly numerous, as now, for it is just about at the sun spot maximum. This cannot certainly be identified, however, until after the time has passed, and the numbers are definitely on the downward trend.

But much is yet to be known of their

nature. In a recent book ("Elements of Astronomy," McGraw-Hill), Prof. Edward A. Fath says:

"It is evident that a sun-spot is a complicated phenomenon and much remains to be done before all details are clear. Thus it is evident that the influence of the spot must extend below the levels shown. Nothing definite is known concerning the cause of spot, or why they vary in number, nor why spot zones appear in middle latitudes and gradually approach the equator. These problems as well as others are still unsolved."

Though the relation of sun-spots to terrestrial conditions is also uncertain, it is believed that they are connected with aurora borealis and magnetic storms.

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