ASTRONOMY

New Sunspot Cycle

First group observed at Mt. Wilson and photographed at Naval Observatory. First time since 1889 that first spot is so far south of equator.

➤ THE SUN has just entered on a new 11½-year sunspot cycle, during which the freckles on his face will become more and more numerous for half that period, and then wane to a minimum in 1954 or 1955. The first group of spots identified as belonging to the new cycle was photographed at the Naval Observatory by Mrs. L. T. Day. It was observed and its magnetic polarity noted by Edison Hoge at Mt. Wilson Observatory, Calif.

First indication that the new spot group is the first of a new sunspot cycle was given by their position, well away from the sun's equator. The last spot group of the old cycle, close to the equator, was visible at the same time. Then an instrumental check-up showed that their magnetic polarity is opposite to that of spots in the cycle just closing. This reversal of polarity is a "sure sign" of the opening of a new cycle.

Sunspot abundance has been shown to have a direct relation to radio reception. When they are most numerous, the sun is giving off intenser streams of atomic particles, which affect the height of the world's "radio roof," the Kennelly-Heaviside layer, and hence the range of radio signals.

Possible effects upon terrestrial weather of solar radiation connected with sunspots is still a much-debated point.

Several notable particulars were pointed out in the wire from Mt. Wilson Observatory which notified Science Service of the first observations made there.

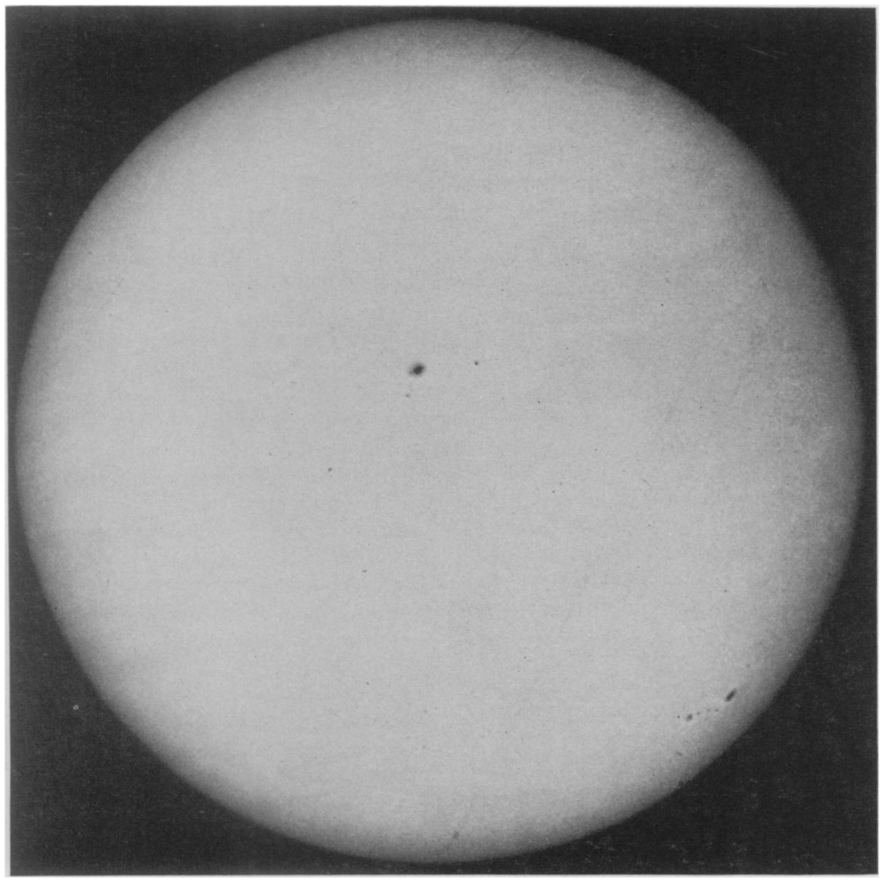
"The first sunspot group definitely belonging to the new cycle was observed by Edison Hoge on May 16 at 9 a.m., PWT, at the 150-foot tower telescope of Mt. Wilson Observatory.

"The spot group extended from heliographic latitude south 40 degrees to 44 degrees, and had magnetic polarities opposite to spots of the old cycle in the southern hemisphere. It thus satisfies the two fundamental characteristics of spots of the oncoming cycle: that it be in a latitude much greater than the average latitude for sunspots (15 degrees), and that it have a magnetic polarity opposite those of spots of the old cycle in the same hemisphere.

"This is the first time since 1889 that the first spot of the new cycle has been so far south of the equator. The first spot of the present old cycle was seen on Oct. 10, 1933, in latitude 26 degrees north.

"The spot appeared near the edge of the sun's disk that is being carried from view by the solar rotation. When last observed on May 17, it was increasing in area. The spot will vanish on May 19 and if it survives the journey on the side of the sun turned away from the earth should reappear on June 3."

Science News Letter, May 29, 1943



***NEW SUNSPOT GROUP**—This photograph taken on May 17 at 12:15.55 p.m., EST, at the U. S. Naval Observatory shows the new sunspot group in the lower right. It is unusual for the first spot of a group to appear so far south of the sun's equator. It broke out on the sun's face and did not first appear in view over the edge, as sometimes happens. The group in the center with the dark spot belongs to the old cycle.*

DENTISTRY—NUTRITION

Tooth Decay Can Be Prevented by Proper Diet

➤ TOOTHACHE, that bugaboo of youngsters, may become a rare occurrence when an ideal diet is eaten throughout childhood. This hope is raised by three years of experiments just reported to the American Dental Association by Dr. Julian D. Boyd of Iowa City, Iowa.

After observing children at the State University of Iowa for 17 years and making an intensive study of more than 200 children during the project just completed in collaboration with the late Dr. Charles L. Drain, Dr. Boyd declares:

"Surely, the dietary approach offers the most effective means of attack on the