GEOPHYSICS

New Sunspot Cycle

➤ THE FIRST spot of a new solar cycle has been spotted high on the sun's face.

The McMath-Hulbert Observatory of the University of Michigan has informed radio experts at the National Bureau of Standards that a small, hard and dark disturbance appeared at latitude 52 degrees north and 12 degrees east on Aug. 13. Dr. Helen Dodson and Clifford Bennett discovered this addition to the sun's activity.

Most of the spots up to now have been near the sun's equator at about 5 to 10 degrees north latitude. Sunspot activity is now approaching a minimum and the least sun spottedness will be reached in less than a year. The whole cycle of the sun's activity takes about 10 to 11 years. At the same time of the appearance of this high latitude spot, four other sunspots, in low latitudes and belonging to the old cycle of solar activity, were also visible on the surface of the sun.

The last maximum was the middle of 1947 and the one before that was 1937-38. The best guess of the next maximum is the middle of 1958.

Sunspots affect the transmission of radio here on earth and the government scientists use them in making day-by-day predictions of use to communications and the armed forces.

Science News Letter, August 29, 1953

METEOROLOGY

Predict Severe Drought

➤ THE DROUGHT in the Southwest in 1976 will probably be worse and longer than the one this year, Dr. Charles G. Abbot, retired secretary of the Smithsonian Institution, predicts.

He bases this forecast on periodic variations in the heat of the sun that he has found by studying the relations between solar changes and the weather. These variations complete one cycle in 22 and three-fourth years, Dr. Abbot reports in "Solar Variation, A Leading Weather Element" (see p. 140).

Therefore, on the whole, this year's weather will repeat its same general trends in 1976. This means, for instance, a drier than normal spring and summer in the Southwest.

Besides the 22 and three-quarter year cycle, Dr. Abbot has been able to find 23 subcycles that can be used to forecast the weather. He says that his system, at the present time, is useful only for broad, general predictions, not for rain tomorrow afternoon.

Many meteorologists believe that changes in the amount of heat received by the earth from the sun affect the weather. Some of them, however, doubt that this variation can have as much effect on the weather as Dr. Abbot believes it has, since the changes found are only about three percent.

The base measure in Dr. Abbot's calculations is the solar constant, which Smithsonian scientists have been measuring nearly every day for 35 years. The solar constant is a measure of the amount of heat given off by the sun, and it averages 1.94 calories per square centimeter per minute. In analyzing changes in the solar constant, Dr. Abbot found that they were not haphazard, but followed many separate rhythm patterns, or cycles, at the same time.

There are many factors that prevent a direct correlation between changes in the solar heat and the probability of light showers on any particular afternoon. Some of these factors are the earth's motion, mountains and the smoke-belching cities of man.

Science News Letter, August 29, 1953

VETERINARY MEDICINE

Parrot Fever Discovered In Turkeys for First Time

➤ PSITTACOSIS, OR parrot fever, has been definitely found in turkeys for the first time. Drs. Karl F. Meyer and Bernice Eddie of the University of California have isolated the virus of psittacosis from turkeys in Texas.

The possibility that turkeys might carry the virus has been suspected since 1941 when the same scientists first isolated the disease agent from barnyard fowl, at that time in chickens.

A chance to prove turkeys could carry the virus came with an outbreak in Texas last year of psittacosis among employees of poultry-dressing plants, in which there were 63 cases with four deaths. By backtracking, the scientists found the source of the epidemic to be turkeys from farms supplying the plants. The turkey virus was found to have great virulence and infectivity.

Psittacosis attacks the lungs, and often causes severe pneumonia and sometimes death. In less severe cases, it may act like a bad bout of influenza or a cold. It often goes undiagnosed.

Nowadays, aureomycin controls psittacosis effectively if a proper diagnosis is made in time. But diagnosis remains difficult, recovery is often slow, and so the disease remains dangerous.

The scientists have found psittacosis in pigeons, ducks and other fowl, in addition to the better known reservoir of parakeets.

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