

SUN BLAMED FOR FADING

Vanishing Wave Mystery Is Believed Caused By 'Bombardment'

RECENT magnetic bombardments and freak "noise" outbursts blamed on sunspots have afforded the Bureau of Standards opportunity to collect more data relative to a mysterious blotting out of certain radio waves. The attack on radio is estimated to take place about 200 miles above the earth's surface.

As explained by S. S. Kirby, associate physicist at the Bureau of Standards, there are three ionized regions above the earth. The last, or highest, of these acts as a wall to reflect the high radio frequencies. When this ionized region, for reasons as yet undetermined, loses much of its ionization density it no longer stops the radio signals or reflects them back to the earth for reception at some distant point on the globe.

The Air Is "Charged"

The ionosphere, which is actually extremely rarefied atmosphere—too thin to sustain human life—might be called "charged air," Mr. Kirby said. When it no longer reflects radio signals it has lost part of this "charge," or ionization density.

Long-wave broadcasting or low or medium frequency radio transmission is not disturbed by the change in the ionosphere, since such signals seldom if ever shoot up so high when transmitted.

The latest disturbance began April 18 and reached its maximum intensity April 21-22.

While physicists at the bureau have no means of checking on conditions in the ionosphere over the globe, they are reasonably confident that the disturbance is world-wide, though not as serious near the Equator as near the North and South Poles. The condition is much worse in the daylight than at night.

The Bureau of Standards scientists hope to learn from their accumulated data not only what causes the density changes in the ionosphere but to determine the relations between magnetic disturbances, sunspot activity and poor short-wave radio transmission.