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May 25, 1926

A Science Service Feature

? WHY THE WEATHER ?

Mailed May 18, 1926

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CREPUSCULAR RAYS

When the sun shines through small apertures in a cloud sheet, illuminating dusty air beneath, broad bands of light and shadow appear and the sun is said to be "drawing water". Perspective makes these beams of light appear to converge rapidly towards the sun, though really they are practically parallel. In unusual instances where they extend across the sky they may be seen to converge toward a point opposite the sun. Then they are called "anti-solar" rays. In somewhat the same way, the parallel rails on a long straight stretch of track appear to converge towards either horizon.

These anti-solar rays are seen also when the sun is below the horizon, frequently after sunset and occasionally at dawn. Alternating luminous and dark bands may be caused either by distant clouds, particularly thunderheads, or an irregular horizon. When the sun is setting over the Bay of Biscay, some of the high peaks of the western Pyrenees cast shadows on the sky to the east, while the light still passes through the gaps between. Sometimes these rose-colored rays pass hundreds of miles through the thin upper atmosphere across Spain and converge again on the horizon east-southeast of Barcelona, making a faint mysterious glory over the Mediterranean.

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21st and B Sts.,
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