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? WHY THE WEATHER ?

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BROWNING'S RAINBOW

By Charles Fitzhugh Talman,
Authority on Meteorology.

In the description of a double lunar rainbow found in Robert Browning's poem "Christmas Eve" the lower or primary bow is pictured as follows:

"It rose, distinctly at the base
With its seven proper colors chorded,
Which still, in rising, were compressed,
Until at last they coalesced,
And supreme the spectral creature lorded
In a triumph of whitest white."

This description means, if it means anything, that the lower portion of the bow showed spectral colors (the "seven" need not be taken literally), while the summit was colorless. It is doubtful whether the poet ever saw such a bow, but the thing is not impossible.

Most lunar rainbows are too faint to show much color and hence are likely to be described as white. Some, however, formed by a moon near the full are distinctly colored. The amount of coloration in any rainbow depends partly on the size of the droplets by which the light is refracted and reflected. Thus solar bows formed by large raindrops of fairly uniform size show brilliant colors, while those formed by the much smaller droplets of clouds and fogs are nearly or quite devoid of color.

A bow formed in its lower parts by falling raindrops and in its upper by cloud would, therefore, if the source of light were bright enough, be colored below and colorless above.

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