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A Science Service Feature

? WHY THE WEATHER ?

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THE BROCKEN SPECTRE

On mountains an observer standing with his back to the sun sometimes sees his shadow cast upon a nearby cloud or fogbank, with colored rings surrounding the shadow of his head. The whole phenomenon is known as the Brocken spectre, or spectre of the Brocken, because some of the early descriptions related to its appearance on the well-known mountain of that name in Germany. The colored rings are called a glory, or Brocken-bow. Similar shadows and rings are also seen from aircraft, and they have occasionally been observed at sea level; e.g., on a fogbank near a ship at sea.

An interesting feature of the Brocken spectre is that through the observer sometimes sees the shadows of his companions, they are without glories. The explanation is that the glory is no personal attribute of the observer; if he observed through a periscope he would see the glory around the shadow of the top of the instrument. A German investigator, Franz Mierdel, has used a periscope for viewing glories formed in an artificial cloud in his laboratory.

A white fog-bow -- known as Ulloa's circle -- is sometimes seen outside the glory.

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