

Speed calculation and reproduction experiments of Shadow Bands

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We analyzed a video of shadow bands from the total solar eclipse that occurred in Amerika in August 21, 2017. We determined that shadow bands move at a velocity of 1.91m/sec. We also theorized the reason why the shadow bands can be seen. This is the following theory. When a total eclipse occurs, the sun's surface light source turns into a linear light source or a point light source. This causes temperature difference on the surface of the moon's atmosphere which then creates a reflective surface area in it. The light shines through the area and forms the shadow bands. To confirm this theory, we conducted a reproductive experiment.

Keywords: shadow bands, total solar eclipse