

Eclipse Shadow Bands



Courtesy of Prof. Stephen E. Schneider
Head, UMass Dept. of Astronomy,
Tahiti 2010

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What are They? When are They?

- They occur just before the last sliver of the Sun is covered by the Moon and just as that sliver reappears after totality ends.
- It is thought that this sliver acts like a bright slit of light that refracts in the atmosphere's thermal eddies.
- Their long lines are oriented with the long dimension of the sliver of sunlight and may move in the direction of the Moon and with the atmospheric winds that create them.
- Not a done deal though. Measurements would be useful.

Questions That Can be Investigated

- Do the shadow bands move in the same direction across your viewing area?
- Do they move parallel or perpendicular to the direction towards the sun?
- Do they follow the geographic direction of local or prevailing winds?
- Do they maintain the same speed?
- What is the distance between the bands as they move?
- How does the intensity of the bands change during the eclipse?
- Do they travel in groups and if so what is the diameter of the group size?

Questions can be answered by measurement and by observations recorded into a notebook.

How Do You See Them?



Shadow Box

Courtesy of Dr. Gordon Telepun



On the Side of a Van

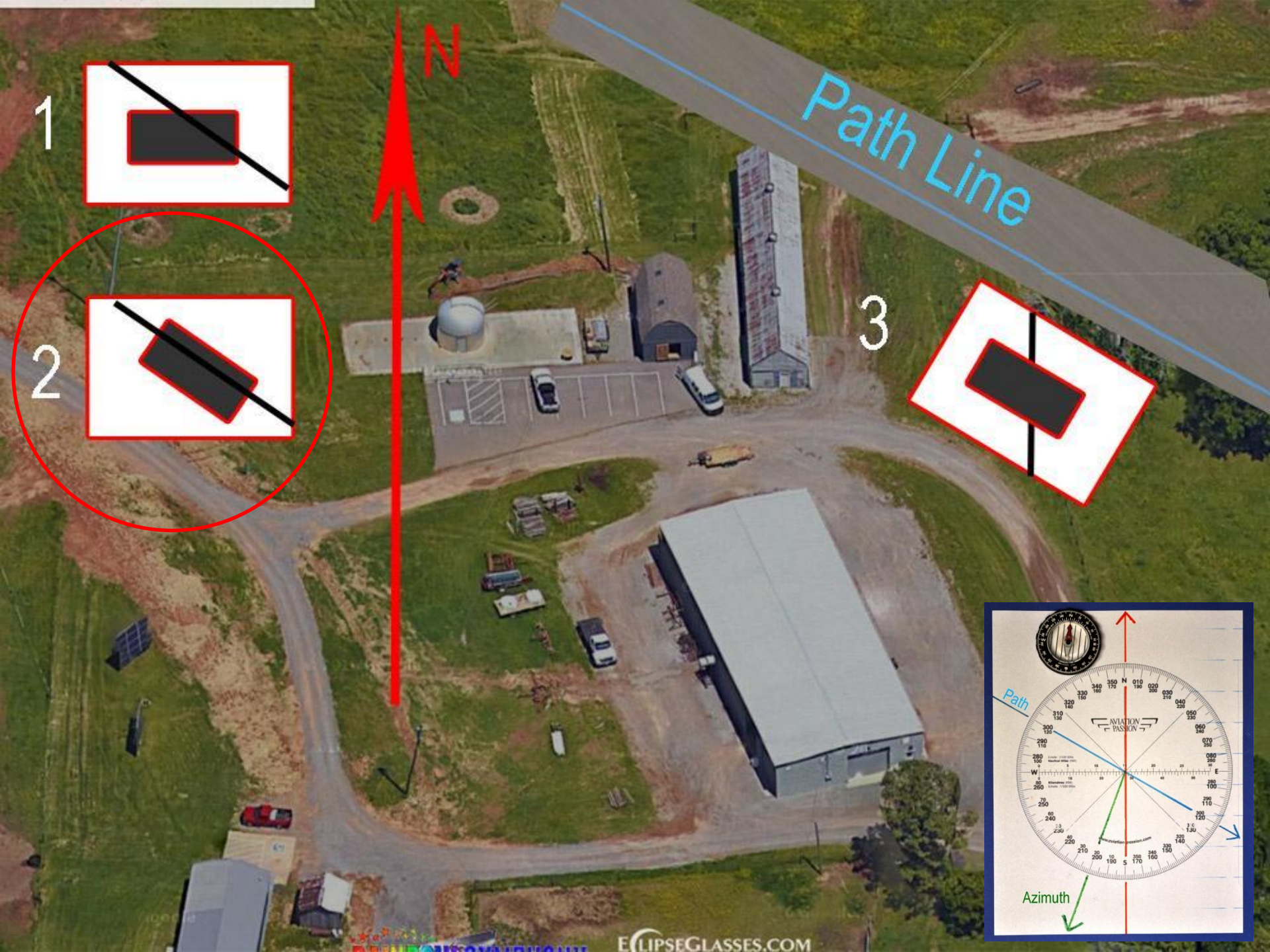


Courtesy of Prof. Stephen E. Schneider
Head, UMass Dept. of Astronomy, Mongolia, 2008

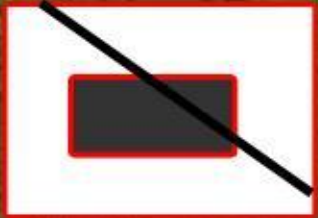
With a White Sheet



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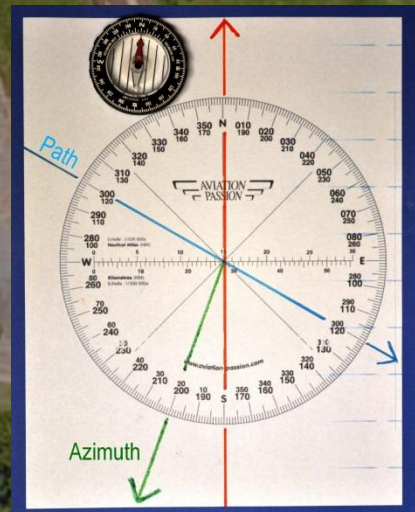
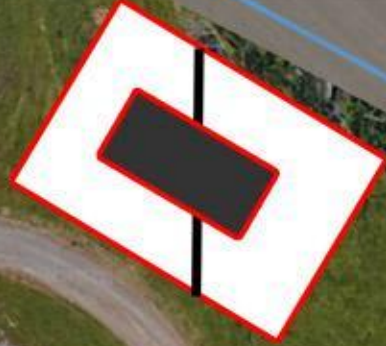
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2



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A Test

Video of me testing a shadow box