Solar Diameter in Central Eclipses through Projection

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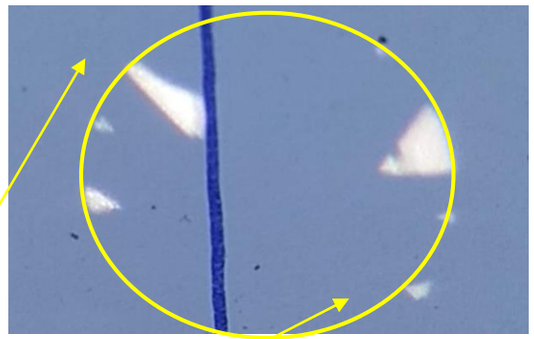

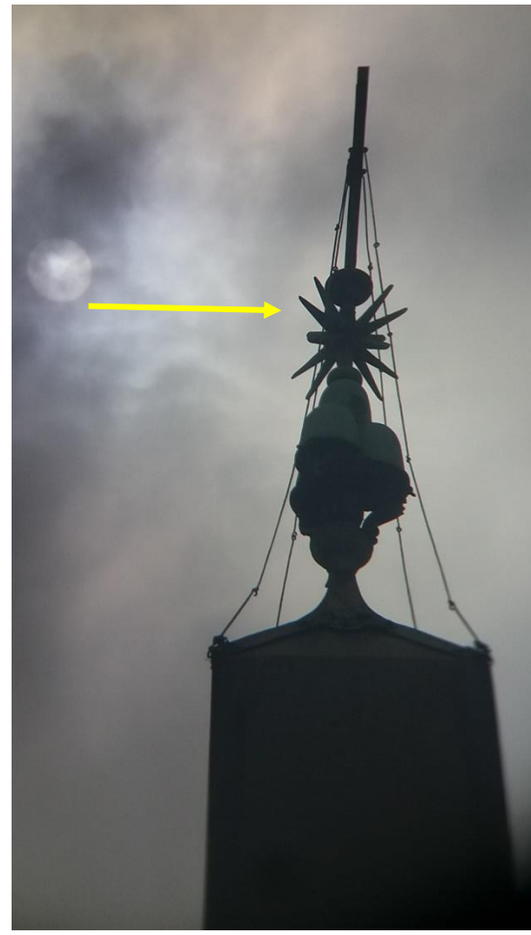

1. Traditional Eclipse projection: all relevant Baily's beads are visible, also in annular eclipses.
Mini-scopes 18 to 50 mm don't burn.
The solar projection video with the smartphone is good.

3. 10 arcsec/pixel
one-inch image
18 mm scope
diffraction limit = 6 arcsec
is a good combination.
This frame is extracted from a VGA 30 fps video.

5. The «beads» here are produced by the Sun through the star over the Vatican Obelisk, at the meridian transit.

2. A **continuos steady video, starts before t2 ends after t3**, **geo-localized**, allows Baily's beads timing. Each of them gives the position of the solar limb on the Lunar profile with a 0.01'' accuracy.

References: Guidelines for measuring solar radius with Baily beads analysis (2009)

4. Large solar spots are visible, but the beads as small as 0.001 arcsec shine in the darkness.

6. Baily's beads projection's simulations at the Vatican Obelisk: September 2023.
All videos are made in full daylight background, much worse than eclipse environment.
Reference: ATel #15991 (2023)