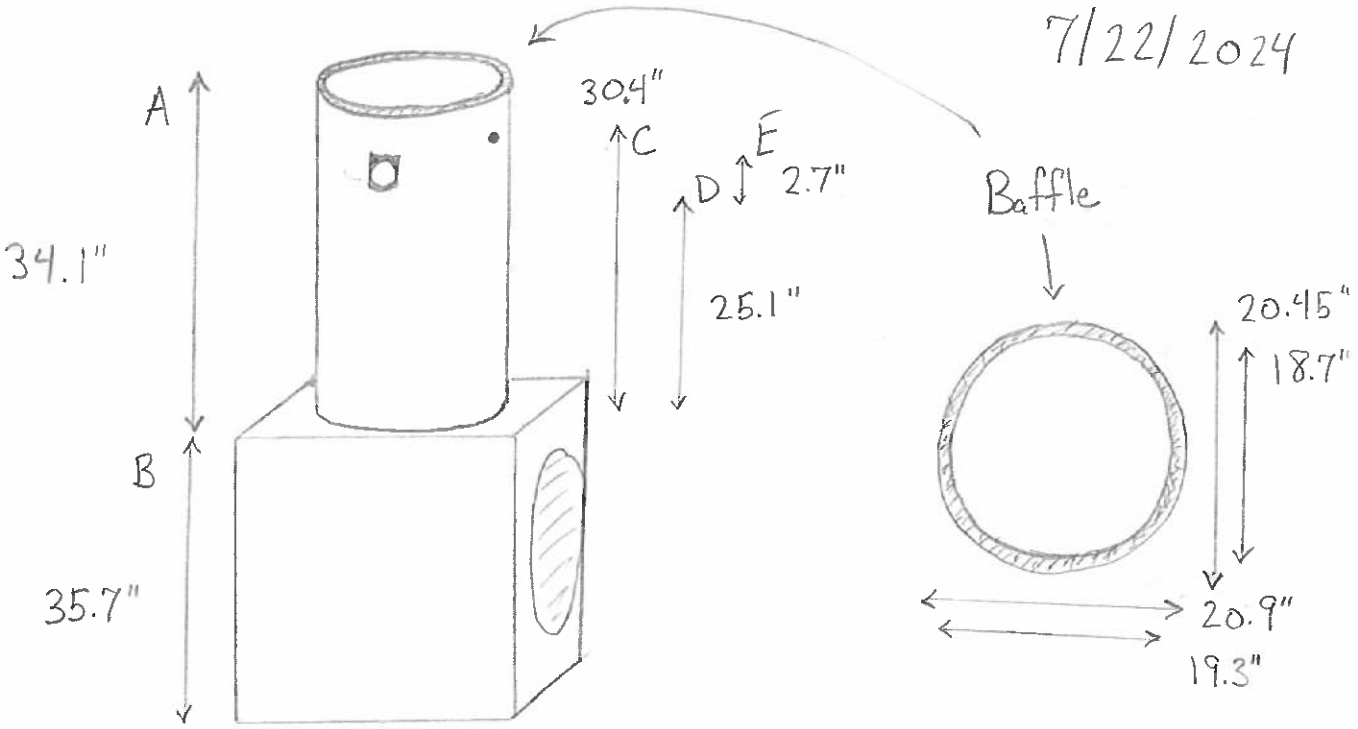
Temple Physics Dobsonian

7/22/2024



A. Cylindrical baffle, height above base
B. Core (w/ bearings + mirror mount) height.
C. Distance to bolt holes, above base
D. Distance to bottom of beam exit, above base
E. Height of beam exit.

Measurements:

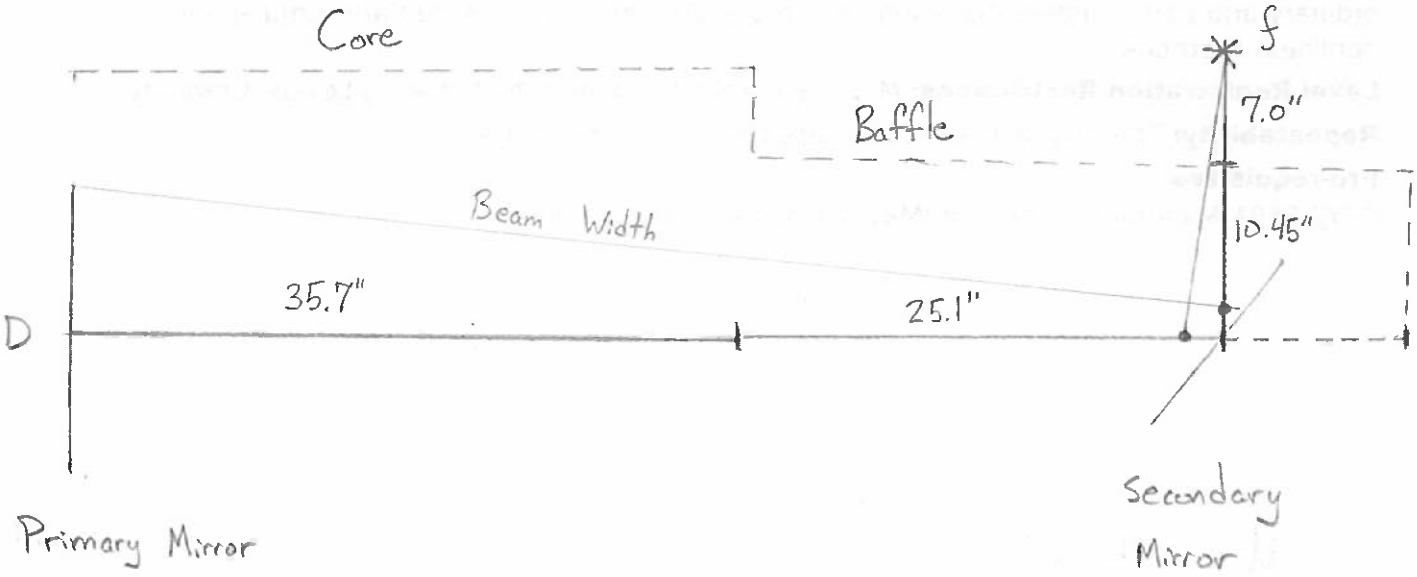
7/22/2024

object distance, $O = 113.5"$
image distance, $I = 251.9"$
$\Rightarrow f = 78.24"$

7/24/2024

$O = 108.87"$
$I = 273.37"$
$\Rightarrow f = 77.86"$

$f = 78.24"$



Diameter of light beam, d, with distance from primary mirror, x:

$$d(x) = D\left(1 - \frac{x}{f}\right)$$

$d(\text{secondary}) = 4.01"$

$d(\text{beam exit}) = 1.61"$

Anomalous images

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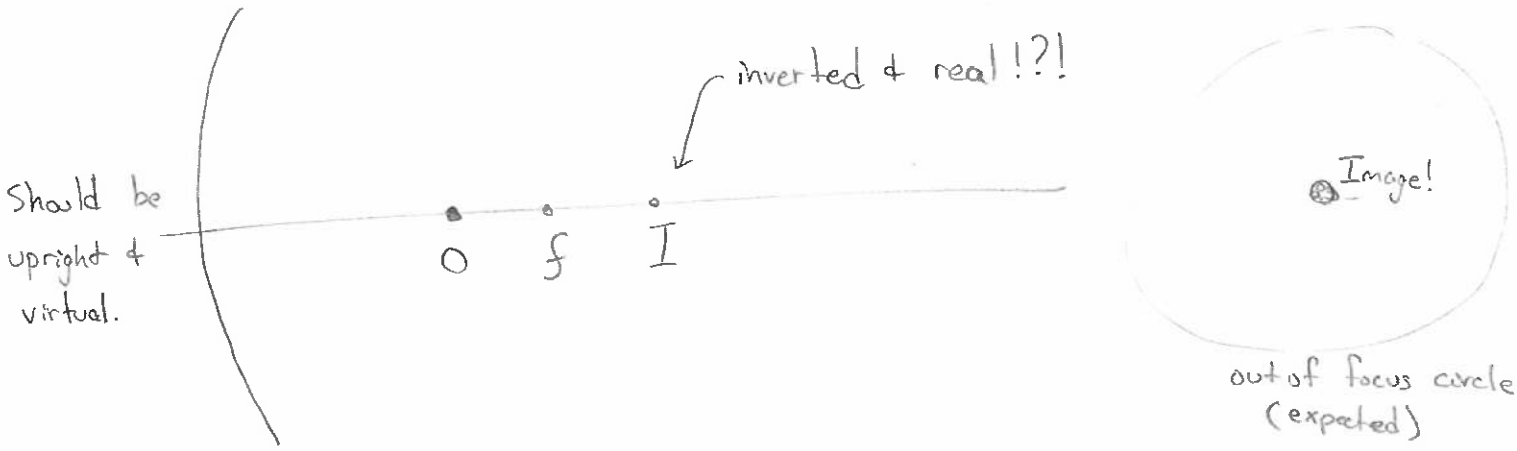
$O = 56.8''$
$I = 96.6''$
$\Rightarrow f = 35.77''$

7/24/2024

$O = 56.9''$
$I = 96.5''$
$f = 35.8''$



- Mirror has a second focus? (Distortion?) Unlikely.
- Flashlight LEDs acting as a lens? Extremely consistent if so.
- Secondary reflection off white board?