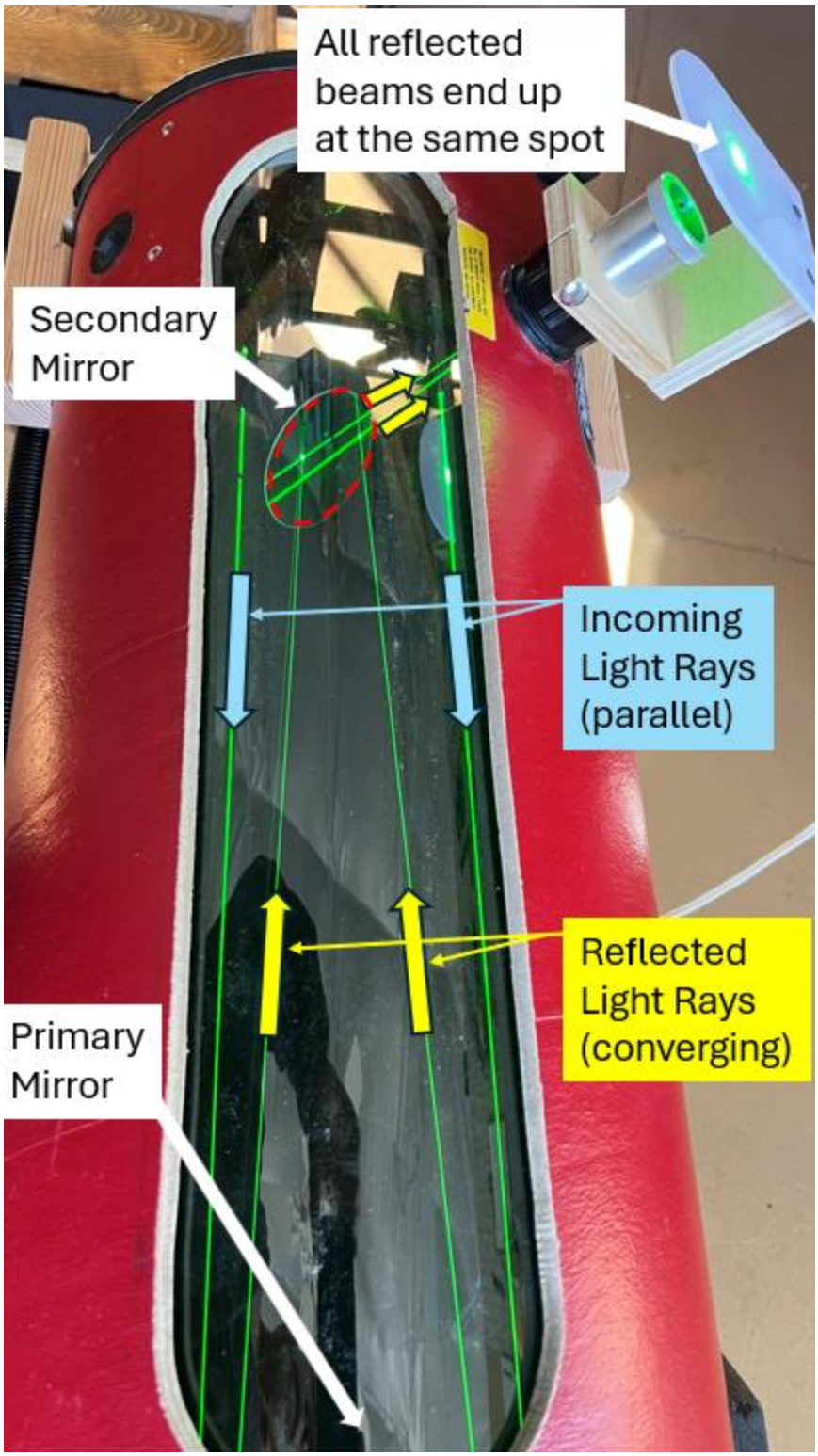
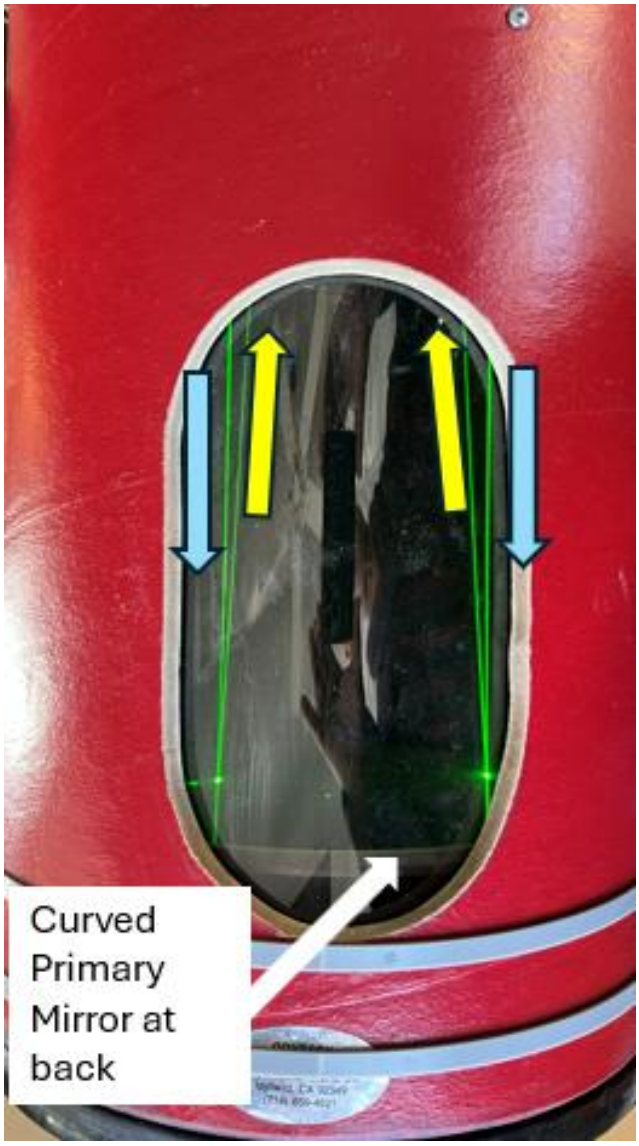
This is a demonstration of how a reflecting telescope works.

The two green laser beams represent two of the millions of light rays arriving in parallel at the telescope from a distant celestial object.

Key points to get across to visitors:

- The two laser beams represent incoming light rays from a distant object.
- The laser beams are parallel to each other, the same way that light rays from distant objects would be parallel to each other
- The large "primary" mirror at the back of the telescope is polished into a curve (i.e. it is not flat). If anyone cares, the surface of the mirror is a parabola.
- Because the primary mirror is curved, the reflected beams begin to converge on their way back out of the telescope
- The two lasers are positioned so their beams strike the curved mirror at the back of the telescope at different places, demonstrating the following key point:
- **KEY POINT: Regardless of where the laser beams strike the primary mirror, their reflections (and the reflections of the light rays that they represent) all end up converging to the same point on the white target**
- Because the reflected beams are converging, the flat "secondary" (45 degree) mirror at the front of the telescope can be much smaller than the large primary mirror at the back, thus blocking only a small portion of the light entering the telescope. (Thanks to Isaac Newton for figuring this out)
- In this way, a telescope takes the large (but spread out) amount of light arriving from the celestial object and "squeezes it down" into a much smaller (but much brighter) image.
- This smaller, brighter image can then be magnified (by the eyepiece) to show faint details that would otherwise be too dim to see


All reflected beams end up at the same spot
Secondary Mirror
Incoming Light Rays (parallel)
Reflected Light Rays (converging)
Primary Mirror


Curved
Primary
Mirror at
back