

DOBSONIAN TELESCOPE

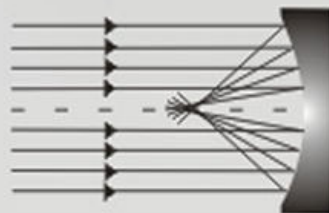


The Moon

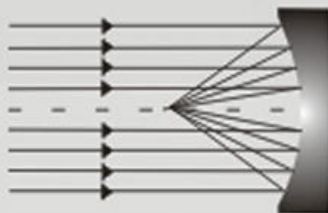
Photo taken through Sky-Watcher 203mm (8") Dobsonian,
Hewlett Packard HP618 digital camera held by hand up to the eyepiece
September 10, 2001 at 5:30am

A simple, elegant form of an alt-azimuth mount made to carry a Newtonian reflector was popularized by John Dobson in the late 1970's. In its simplest form, the Dobsonian mount consists of a box which allows the optical tube assembly to pivot in altitude, while the box itself is swivelled on a base in azimuth. Normally such mounts are moved by hand rather than motor driven. Their main advantages are low cost, fast easy setup and ability to make a mount big enough for larger tubes.

The Sky-Watcher Dobsonian Telescopes includes 153mm/1200mm (6"), 203mm/1200mm (8") and 254mm/1200mm (10") Newtonian-based models.



Spherical mirrors bring the light rays to different focal points, resulting in blurry images.



Paraboloidal mirrors bring all the light rays to the same focal point.

Reflecting telescopes with spherical mirrors often have a defect called "spherical aberration." Light rays from the perimeter of the spherical mirror do not focus to the same point as rays from the centre, resulting in images with less sharpness and detail. This problem is not critical for smaller Newtonians, and other reflecting telescopes with focal ratios of $f/9$ or higher, where the aberration is minimal. However, it becomes more noticeable in larger Newtonians and other reflectors having ratios of $f/8$ or lower.

Accurate parabolizing, although more difficult and time-consuming, is essential for large Newtonians. If you have opted for a telescope of lower f -ratio or with an aperture of 150mm or more, it is important to look for "parabolic mirror" or "paraboloidal mirror" in the specifications.

Sky-Watcher®