



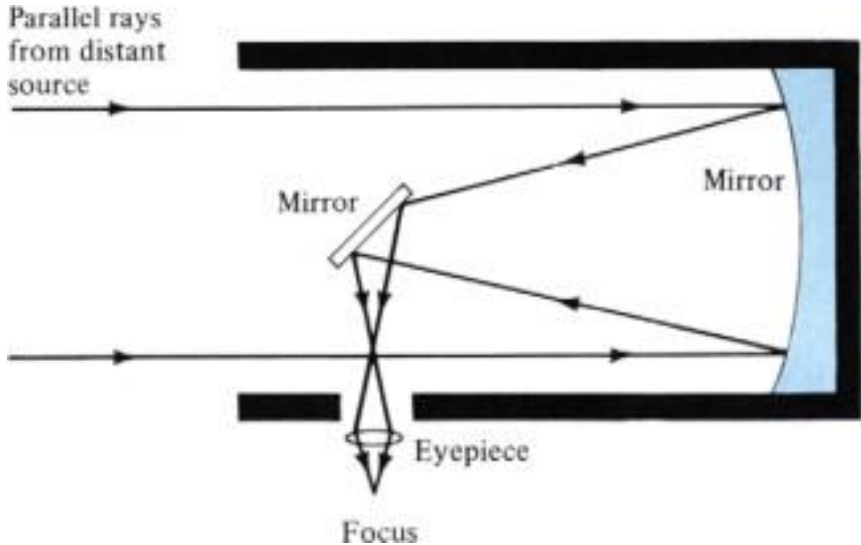
TELESCOPES



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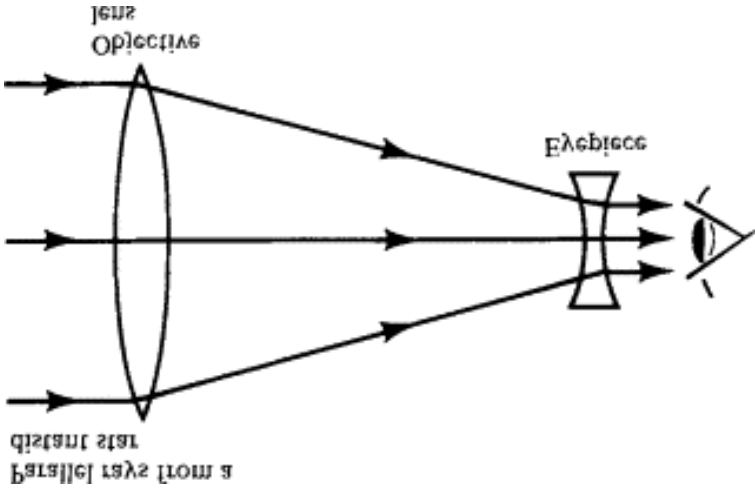
REFLECTOR TELESCOPES

- 1. A reflector telescope uses a curved mirror at the end of a tube to gather & focus light at the far end of the tube where the eyepiece is located.



REFRACTOR TELESCOPES

- 1. A refractor telescope uses curved glass, called the objective lens, at the front of a tube to collect light & bring it to a focus at the eyepiece at the other end of the tube.



TELESCOPE MOUNTS – ALT/AZ

- 1. An ALT-AZ mount moves up/down & left/right.
- 2. To follow a star, an ALT-AZ mount typically needs to move in both directions at once.



TELESCOPE MOUNTS - EQUATORIAL ^{M2M}

1. An EQUATORIAL mount is similar to an ALT-AZ mount except it's tilted to align the AZ axis towards the celestial pole.
2. An EQUATORIAL mount only moves in one direction to follow a star.



OBSERVING WITH YOUR TELESCOPE



Prepare Telescope

- Collimate (reflector, check optics alignment)
 - Align red dot finder (daytime, telephone pole, etc.)
 - Insert lowest power eyepiece (widest field of view, EP with largest number on it)
 - Adjust telescope height to accommodate standing or sitting
 - Setup telescope outside during daytime
 - Use a red light in the dark
 - When observing occasionally use peripheral vision thru the eyepiece
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- $\text{magnification} = \text{telescope focal length} / \text{eyepiece focal length}$
 - $\text{True field of view (deg)} = \text{EP apparent field of view (default 50)} / \text{magnification}$
 - The full moon is $\frac{1}{2}$ degree in diameter

Observing Targets

- Moon
- Planets
- Open Star Clusters
- Nebula
- Globular Star Clusters
- Galaxies
- Planetary Nebula



Observing Targets

- Open Star Clusters \
- Nebula \
- Globular Star Clusters -- 'M'essier Objects (110 objects)
- Galaxies /
- Planetary Nebula /

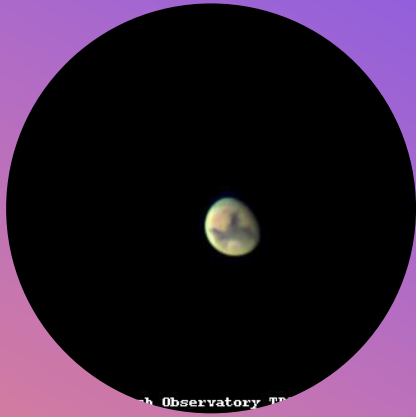


Planning Your Observing – Messier Objects ^{M2M}

- Stellarium App
- Weather Underground App
- Astronomical League .COM
- Observing Log
- JOIN & share observations to closed club Facebook group; 'Little Colorado River Valley Astronomy Club'

M2M

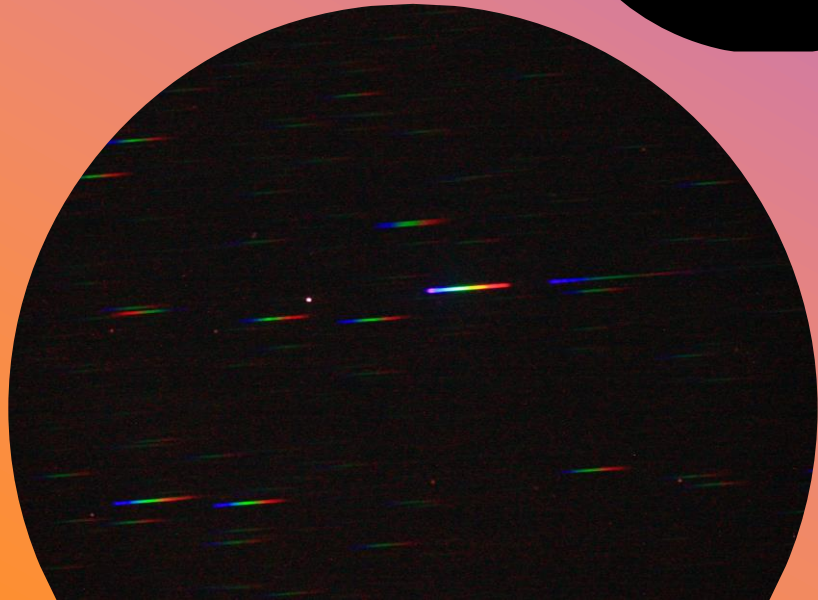
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THANK YOU

LET'S GO OBSERVE

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