

Observing Space - Telescopes

Chapter 18: Observing Space - Telescopes · Topic 1

Key Concept

Refracting telescopes use lenses to bend and focus light, while reflecting telescopes use mirrors to collect and focus light.

A telescope's ability to gather light depends on its aperture (opening size) - larger apertures collect more light for clearer images.

Space telescopes, like the Hubble Space Telescope, avoid atmospheric distortion, providing clearer images of distant celestial objects.

Telescopes have expanded our understanding of the universe, helping discover planets, galaxies, and phenomena beyond our solar system.

Quick Revision Notes

- Refracting telescopes: use lenses.
- Reflecting telescopes: use mirrors.
- Both collect, focus light.
- Aperture (opening size) matters for light gathering.
- Larger aperture = more light, clearer images.
- Space telescopes avoid atmospheric distortion.
- Example: Hubble Space Telescope.
- Telescopes expanded universe understanding.

Practice Questions

- 1 Research the difference between refracting and reflecting telescopes.
- 2 Discuss why aperture size matters.
- 3 Research the Hubble Space Telescope's discoveries.
- 4 Discuss why atmospheric distortion affects ground telescopes.
- 5 Research a discovery made using a telescope.
- 6 Explain how telescopes work in your own words.