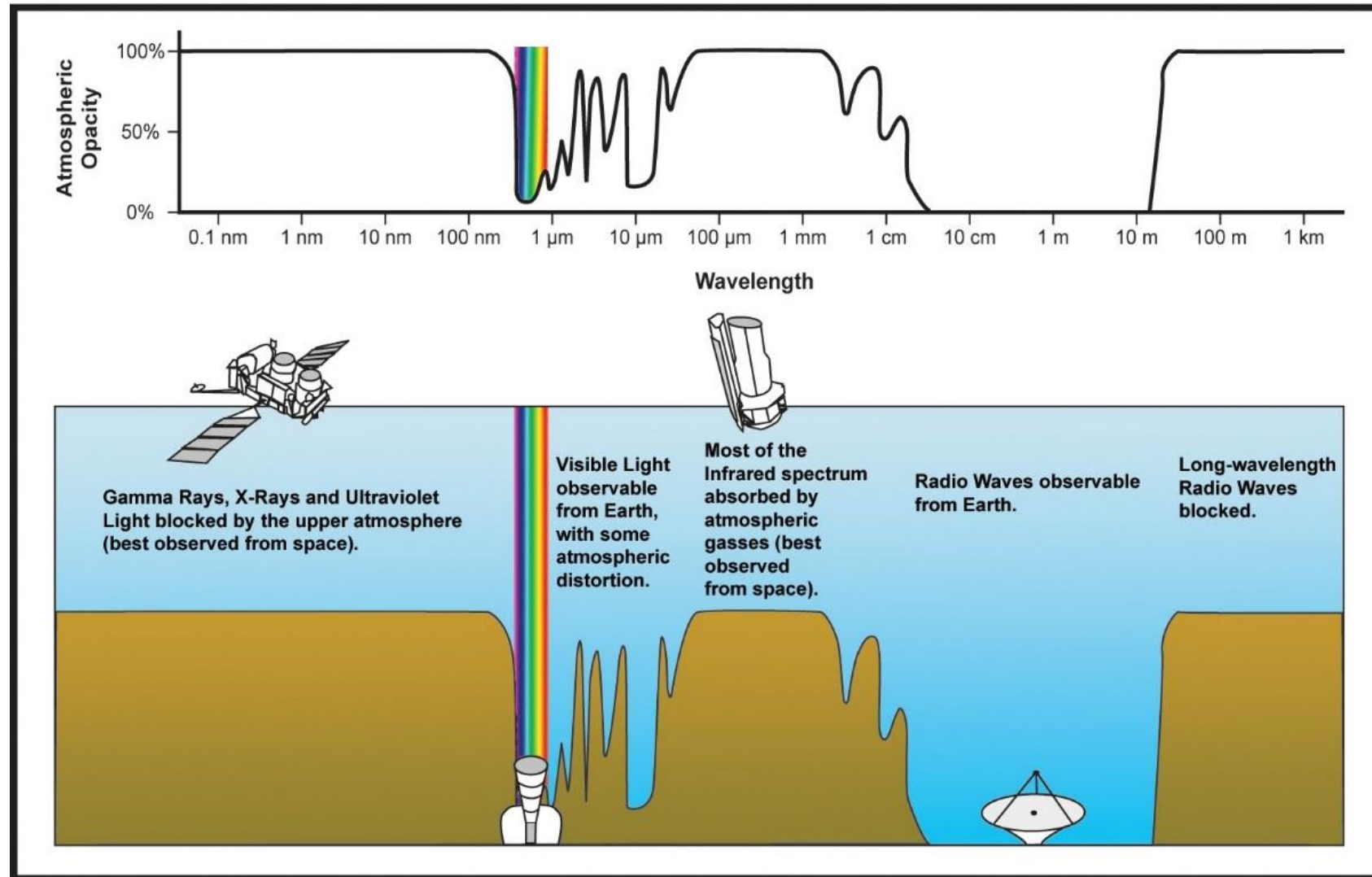


# Observing space from Earth

# Earth's atmosphere only lets some waves through



# The different layers of the atmosphere

- Add in the 'magnetosphere'

# Types of telescope:

- Refracting telescope uses lenses only.
- Reflecting telescope uses a mirror and a lens for the eyepiece.

# Van Allen Belts

- Inner belts – mostly protons
- Outer belt – mostly high energy electrons
- Both are held in place by the Earth's magnetic field

## Van Allen belts and space travel

- Van Allen radiation damages solar panels and electronic components
- They are highly radioactive and can cause problems for people
- The Apollo missions were the first to leave the safety of low orbit and go through the Van Allen belts. The route was planned to limit exposure.

# The moon

- Diameter of Earth – 12,742 km
- Diameter of the moon - 3,474 km
  
- Moon is 27% the size of the Earth
- Moon has 7% of the surface area of the Earth (less than Asia)
- Moon has 3% of the volume of the Earth
- Moon has 1.3% of the mass of the Earth
  
- The moon is 384,400 km away from Earth