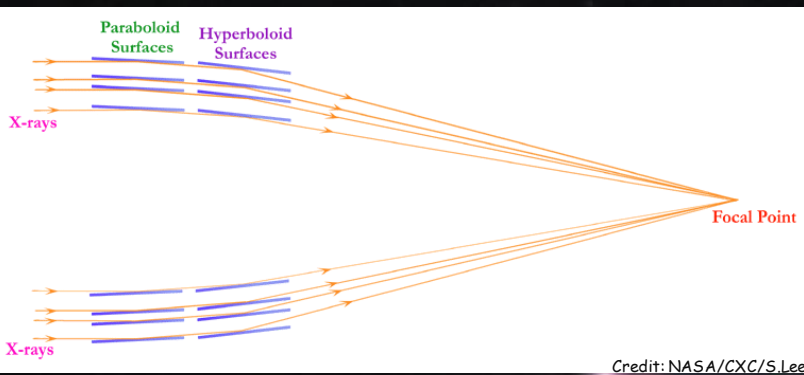
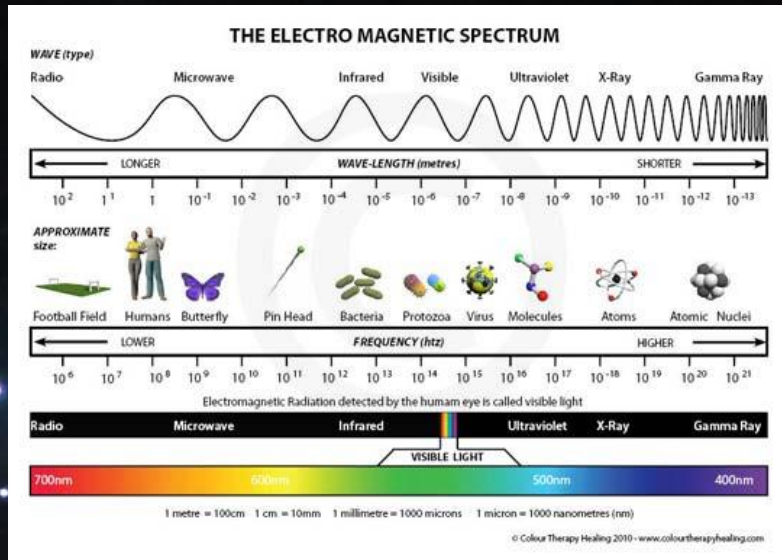


# How does a X-Ray Telescope work?

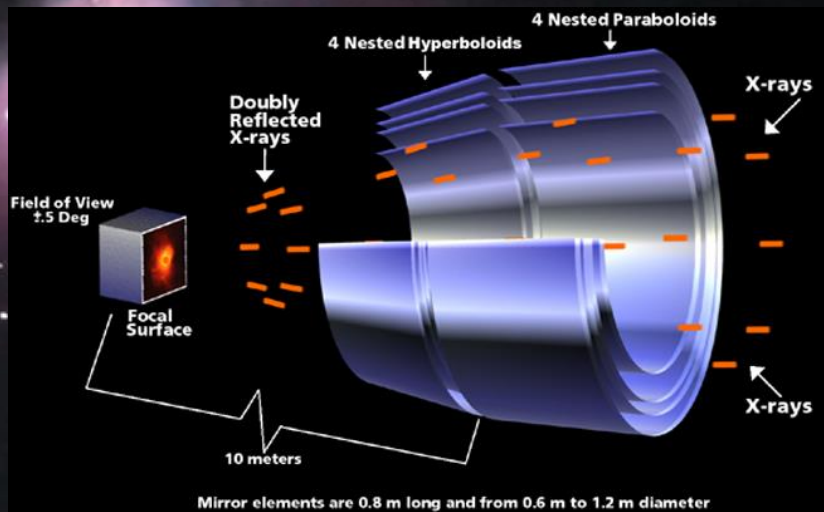
X-ray photons are highly energetic (small wavelength), which means they can pass through surfaces such as those used in conventional telescopes.



Credit: NASA/CXC/S.Lee

X-ray telescopes need to have mirrors that are made of material that will reflect an X-ray photon and need to be oriented such that the X-rays hit the mirror at that grazing incidence.

There is a large hole in the middle of the telescope where the mirror used to be, so the telescope misses a lot of X-rays. To solve this problem, X-ray telescopes use cylindrical mirrors and nest them, one inside the other. The final collecting surface depends on the number of nested layers.



Credit: NASA/CXC/D.Berry



Credit: ESA

XMM- Newton mirror module, an example of nested layers.