A BRIEF HISTORY OF THE TELESCOPE

The first patent for a telescope was submitted in 1608 by Hans Lippershey, an eyeglass maker.

The first telescope was invented to be used in warfare. In battle, seeing your enemy first was a huge advantage.

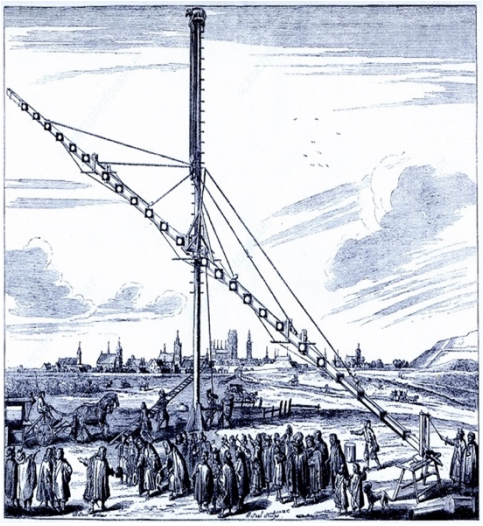
Galileo Galilei was born in Italy in 1564. In 1609 he was the first to turn the new invention to the night sky.

Galileo Galilei – 1609

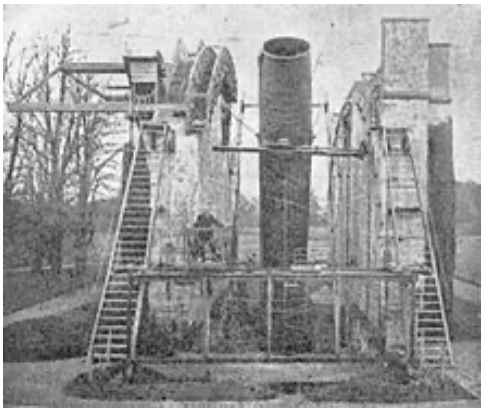
His new telescope was quite small, about two feet long with a diameter of about 2 inches. One of his first discoveries was that Jupiter was circled by four tiny moons. He also found that Venus goes through a complete series of phases. Along with these findings and his confirmation of some of Copernicus writings, the Catholic Church demanded that he publicly renounce his findings. Being a strong Catholic, he could not continue his studies in astronomy.

In 1611, Johannes Kepler developed the first telescopes that were designed for astronomy. They had two convex lenses. Earlier telescopes used flat lenses. Further improvements included reflecting telescopes using a curved surface to bring the image to a focus point.

In 1673 Johannes Hevelius built a strange looking telescope 148 ft long that used 24 different lenses. This scope was constructed with ropes that were pulled to find objects.



Johannes Hevelius – 1673



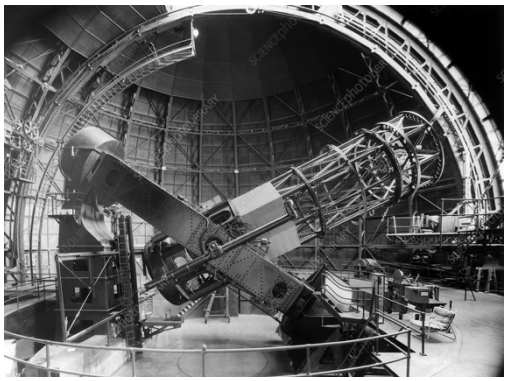
Lord Ross – 1845

Englishman Lord Ross built an enormous 72-inch telescope in 1845. The mirror was not made of glass but of speculum metal, which is easily polished. His discoveries included nebula and galaxies that other smaller instruments could not observe.

In 1886, James Lick Built the 36-inch refractor that at the time was the largest such telescope in the world. The Lick observatory is located in the mountains near San Fransisco, CA.

James Lick – 1886

For many years the Mt. Wilson observatory was home of the largest telescope in the world. The 100-inch reflector saw fist light in 1917. This scope, located in the mountains above Pasadena CA, does not have an eyepiece. It takes long exposure photographs, discovering galaxies millions of light years away. This telescope was the first to measure the diameter of the star Betelgeuse at 1.4 billion kms or 875,000,000 miles. Our Sun is 864,000 miles in diameter. Betelgeuse – a bright reddish star – is the left shoulder of the Winter constellation Orion.



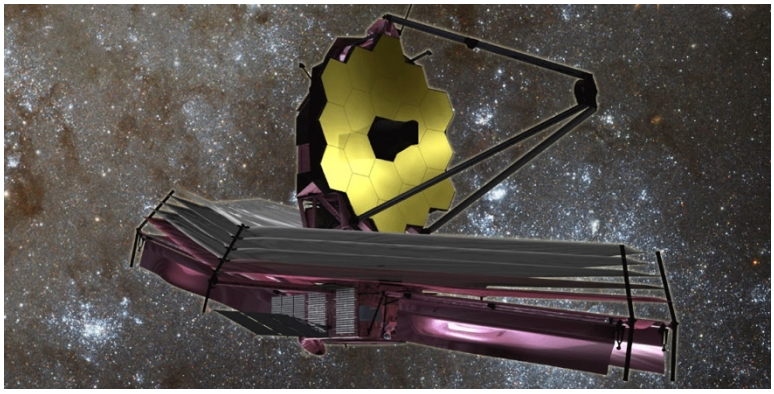
Hooker telescope at Mt. Wilson – 1917

Mt. Palomar – 1949

In 1949 The Palomar 200-inch telescope located in San Diego County, replaced Mt Wilson's telescope as the largest. Edwin Hubble was the director. This telescope discovered quasars – extremely distant celestial radio wave sources.

In 1990 the Hubble telescope, with a mirror of 94 inches in diameter was launched to be the first telescope that obits the Earth, eliminating atmospheric distortion. Among its possible discoveries will be to help determine the rate of expansion of the universe.

Hubble telescope – 1990



James Webb telescope – 2021

The James Webb telescope, 21 feet across with 18 mirrors, was launched on Christmas Day 2021 and is planned to operate for at least 10 years. It will capture – in the infrared part of the spectrum – images from over 13.5 billion years ago when the first galaxies and stars were being formed. It will be stationed a million miles from earth.

– Ray Yeager
18 January 2022

Sky's The Limit has a 14-inch Celestron telescope in the observatory dome.