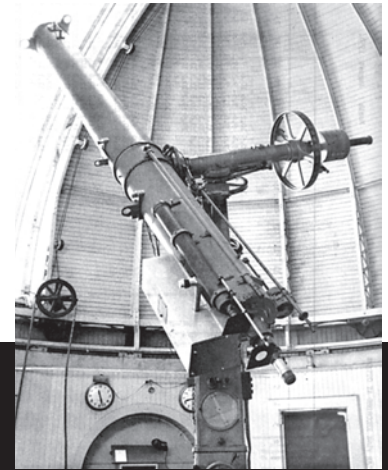


15" Refracting Telescope



Background Information

The first national observatories, such as the **Dominion Observatory** in Ottawa, were built for two practical reasons: to provide accurate timekeeping, and to assist surveyors with mapping.



As technology developed, telescopes became larger and provided more detailed images.

Astronomers became increasingly interested in understanding the stars and objects that were then being found with these larger telescopes.

When the Dominion Observatory was being built in 1905, astronomers asked the government for money to build the largest telescope in Canada — this 15" refractor.

Fun Fact

As the Earth revolves, the stars slowly move across the night sky. To make meaningful observations, telescopes have to move with the precision of a fine clock, following the stars' paths.

Artifact Details

The 15" refracting telescope was built by the Warner and Swasey company of Cleveland, Ohio. It allowed astronomers to study the faint light coming from faraway stars.

The telescope makers installed a clock mechanism in the telescope's base. This mechanism moved the telescope at exactly the same rate that stars cross the sky. This allowed astronomers to make observations or take continuous photos over periods of minutes or hours, observing the faintest features of far off stars and planets.

This telescope clearly measures more than 15" in length — its name refers to the diameter of its lens. The telescope's original lens consists of 2 pieces of glass crafted by the best lensmaker in the world at the time, John Brashear of Pittsburgh, Pennsylvania. Brashear's lens remained in the telescope for 50 years. It was then replaced with a new lens, better suited to telescope photography, made by American company Perkin-Elmer. Perkin-Elmer is best known for having made the mirror for the Hubble Space Telescope.

By 1970, this telescope was no longer useful for professional astronomers. As well, by that time, the Dominion Observatory was no longer used for official timekeeping in Canada — this job had been taken over by an atomic clock. After the Observatory's closure, the telescope was moved and installed at the Canada Science and Technology Museum. It continues to be used for public education — a function that it has now served for over 100 years!