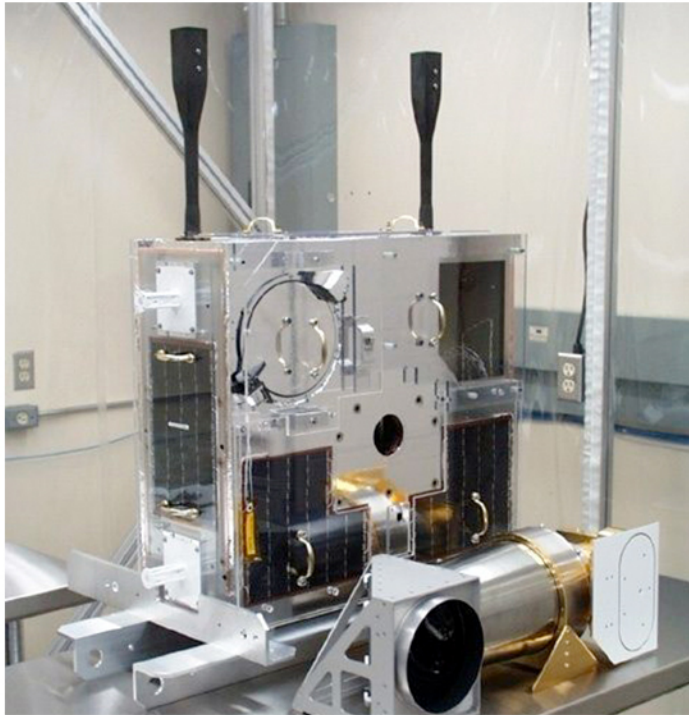


MOST (Microvariability and Oscillations of Stars) Space Telescope



The Microvariability and Oscillations of Stars telescope, better known simply as MOST, was Canada's first space telescope. Up until nearly 10 years after its launch, it is also the smallest space telescope in orbit (for which its creators nicknamed it the "Humble Space Telescope", in reference to one of the largest, the Hubble). MOST was the first spacecraft dedicated to the study of asteroseismology, subsequently followed by the now-completed CoRoT and Kepler missions.

Its primary mission was to monitor variations in star light, which it did by observing a single target for a long period of time (up to 60 days). Typically, larger space telescopes cannot afford to remain focused on a single target for so long due to the demand for their resources.

About the size and shape of a large suitcase (60 cm (24 in) wide and tall, and 24 cm (9 in) deep), the satellite weighs only 54 kilograms and is equipped with an ultra high precision telescope that measures only 15 centimetres in diameter. Despite its diminutive size, it is ten times more sensitive than the Hubble Space Telescope in detecting the minuscule variations in a star's luminosity caused by vibrations that shake its surface.

MOST original mission was supposed to last one year and to allow the study about 10 stars, but it is still in operation after more than 10 years in space and was involved in the observation of more than 5,000 stars.

The first major discovery made by the telescope occurred as soon as it became operational. The discovery was that Procyon, one of the most studied stars, shows no pulsations at all, which contradicts 20 years of ideas and observations, and forced astronomers to rethink their models for stars.

In 2005, MOST was responsible for another surprising discovery: it observed a giant planet that orbits so close to its host star that the star was forced to synchronize its rotation with that of the planet. Normally, it is the other way around: a planet synchronizes its orbit with that of its host star.

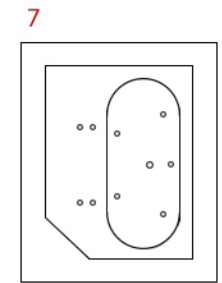
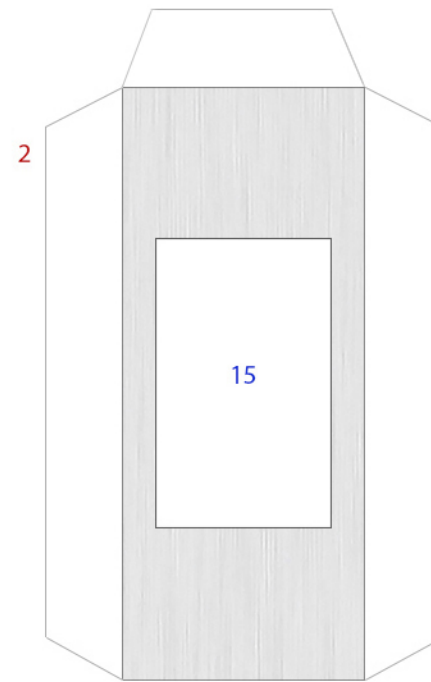
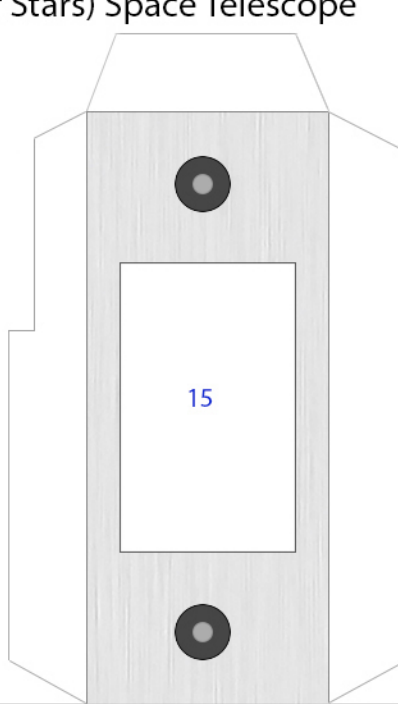
In 2011, MOST was used to confirm the existence of the 55 Cancri e exoplanet while studying its transit in front of its host star. These observations allowed better knowledge of this exoplanet composition.

MOST was launched into space on June 30, 2003. On 30 April 2014, the Canadian Space Agency announced that funding to continue operating MOST would be withdrawn as of 9 September 2014, apparently as a result of funding cuts to the Canadian Space Agency's budget by the Harper government, despite the fact that the satellite continues to be fully operational and capable of making on-going science observations.

In October 2014, the MOST Satellite was acquired by MSCI, which then commenced commercial operation of the satellite, offering a variety of potential uses including continuing the original MOST mission in partnership with Dr. Matthews, but also other planetary studies, attitude control system algorithm R&D, and Earth observation. MOST was finally decommissioned in March 2019, after an apparent failure of its power subsystem.



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