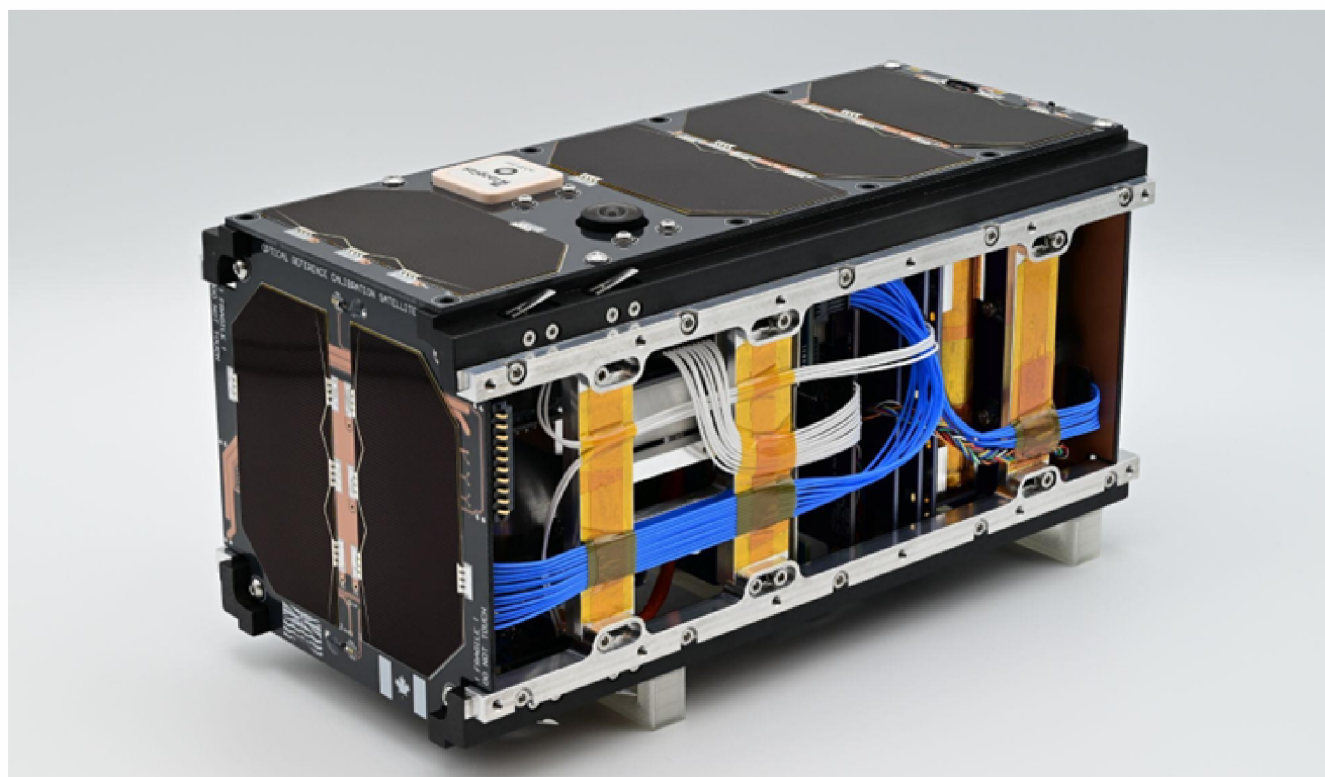


# HOW IT WORKS

ORCASat wants to demonstrate that an orbiting spacecraft can calibrate photometric references and telescopes. Once in space, astronomers will be able to observe the satellite as a star emitting light, and the satellite will also be measuring how much light it is emitting via calibrated photodetectors onboard the spacecraft.

After observation, the measurements taken by ORCASat will be downlinked to the ground station at UVic, where astronomers can now compare how bright ORCASat appeared to be vs how bright it actually was. The observations and data from this project will be used to calibrate photometric references and telescopes to account for the light lost in the atmosphere and telescope optics more accurately.

This light source will also help demonstrate that photometric reference calibration can be performed with better precision than previous methods. In addition to the payload ORCASat is carrying, it will demonstrate the complete end-to-end operations for missions of this nature, including precise scheduling of the light source illumination, collecting of measurements, data downlink, and data distribution.



Final assembly of the spacecraft with a solar panel removed.