



Astro-H Metrology System

The Hard X-ray Telescopes on Astro-H have a 12 meter focal length. To achieve such a long focal length while launching compactly Astro-H will use an extendable optical platform. The Canadian Astro-H Metrology System (CAMS) is designed to measure the lateral (X/Y) and rotational (roll) displacement in the spacecraft's optical bench relative to the instruments.

Two metrology systems will be installed inside the spacecraft's main body. Each metrology system is capable of measuring absolute lateral displacements of the optical bench to an accuracy of at least 60 micro-meters. By comparing the measured lateral displacement on each detector the rotation about the telescope's main axis can be determined and image correction performed.

Performance Requirements

- **Position Accuracy:** 60 μm
- **Field of view:** $> \pm 13$ by ± 13 mm
- **Sampling rate:** 5 Hz
- **Mass:** 3.3 kg (CAMS-LD)
0.47 kg (CAMS-T)
- **Size:** 165 × 165 × 200 mm (CAMS-LD)
50 × 50 × 50 mm (CAMS-T)
- **Power:** < 5 W
- **Lifetime:** > 3 years



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CLASS 3B LASER PRODUCT
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