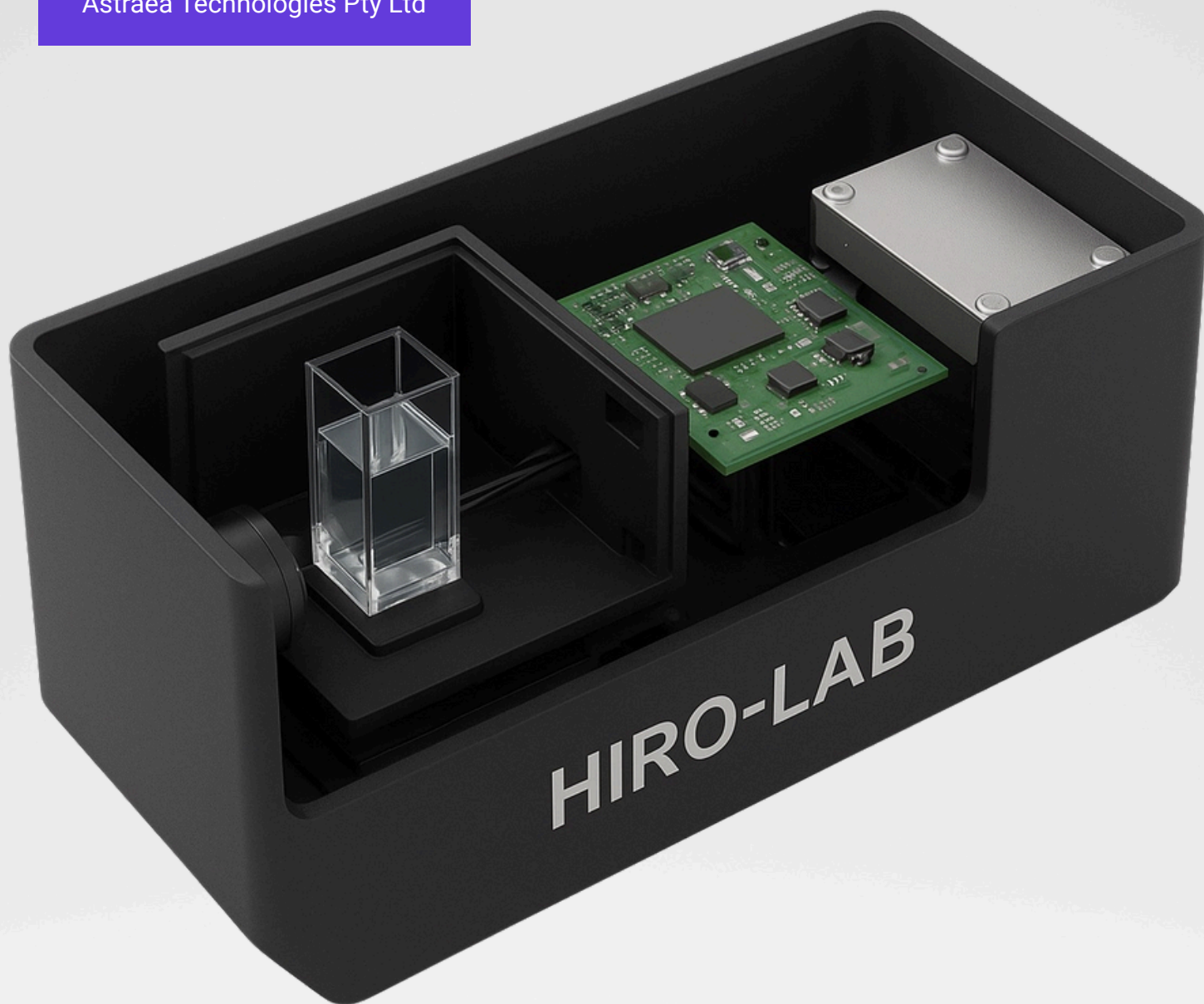




Astraea Technologies Pty Ltd

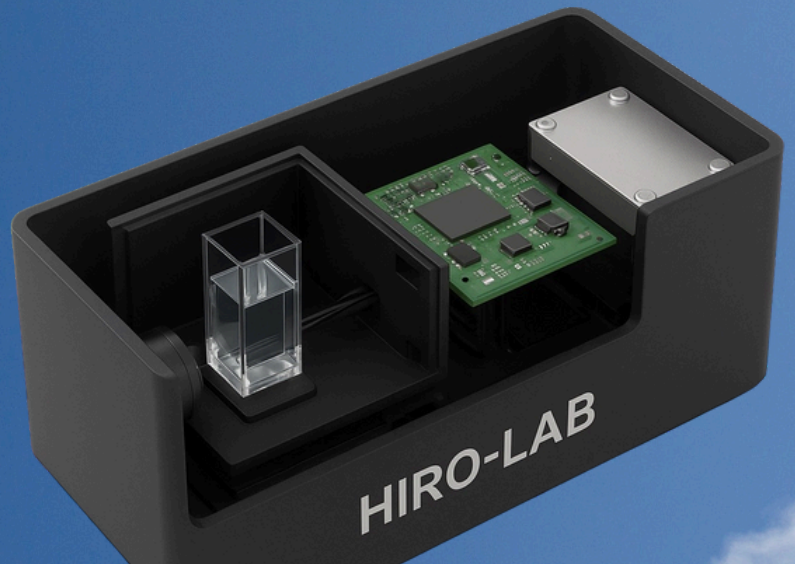


HIRO-LAB

Heavy Ionising Radiation Observation Laboratory
Radiation Detection & Analysis



ASTRAEA
TECHNOLOGIES



HIRO-LAB

Heavy Ionising Radiation Observation Laboratory
Radiation Detection & Analysis

Concept Illustration: HIRO-LAB

Cover: Heavy Ionising Radiation
Observation - Lunar Analysis

Concept

HIRO-LAB will be a compact, modular, purpose-built payload built for deployment beyond low-Earth orbit (BLEO), engineered to measure both the intensity of radiation and the structural integrity of biologicals and materials exposed to it.

Specifications

Dimensions: 10cm x 5cm x 5cm

Science: Polychromatic UV-Vis Spectrophotometer

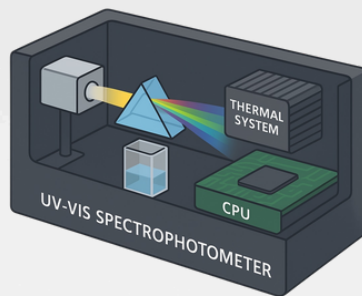
Hardware: Radiation Shielded Electronics, Unshielded Sample Compartment to maximise Radiation Detection

Comms: Sample analysed every 24 hours, relayed to Earth every week

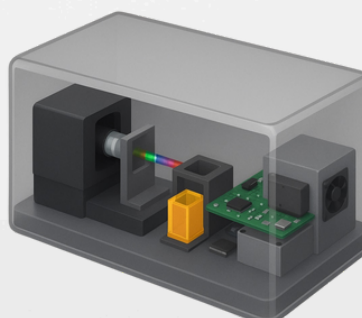
Lifespan: 2+ years

Looking ahead

With the debut of HIRO-LAB at the IAC 2025, our first objectives are to collect data on the degradation of pharmaceuticals in space. However, HIRO-LAB has many uses beyond space, suitable to any environment where radiation science is needed.



Detecting Pharmaceutical Degradation during long-duration missions



HIRO-LAB: on and off world applications

APPLICATIONS



Healthcare



Nuclear Industry



Defence



Medical



Pharmaceuticals



Materials

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Scan to visit
our website:
astraea.tech

Astraea Technologies

Founded by a passionate collective of space and radiation enthusiasts, we're on a mission to protect human health beyond Earth. Our flagship project, HIRO-LAB, is tackling one of space exploration's most overlooked challenges: how radiation affects essential medicines in deep space.