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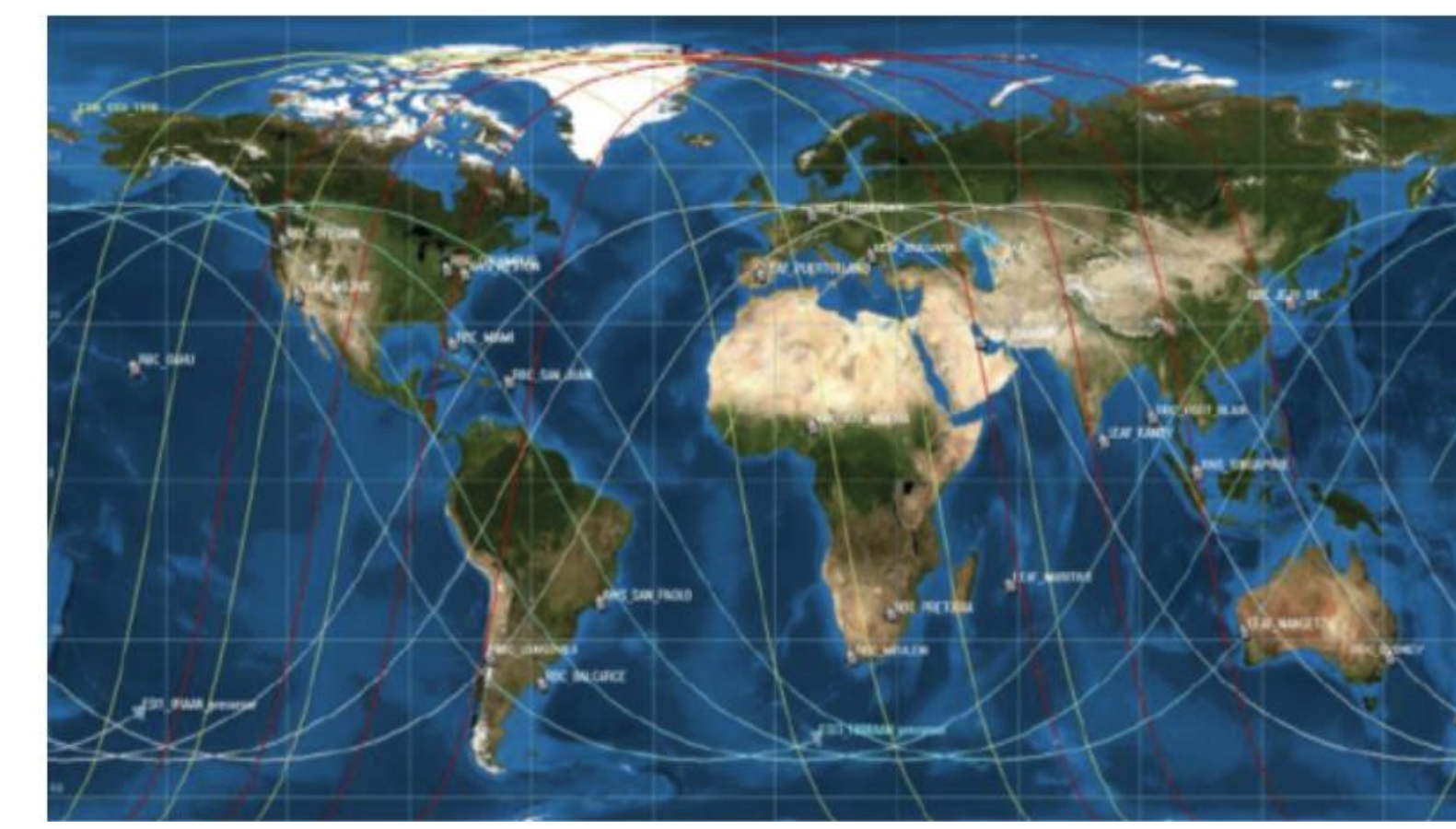
Coronal Mass Ejections, Solar Flares, and plasma from Solar Storms are violently ejected from the Sun every day. So what happens when these are pointed at the Earth?



Space weather is causing real harm today. Over \$250 Billion in critical infrastructure is at risk worldwide for many industries including Electric Power, Aviation, and Telecommunications.



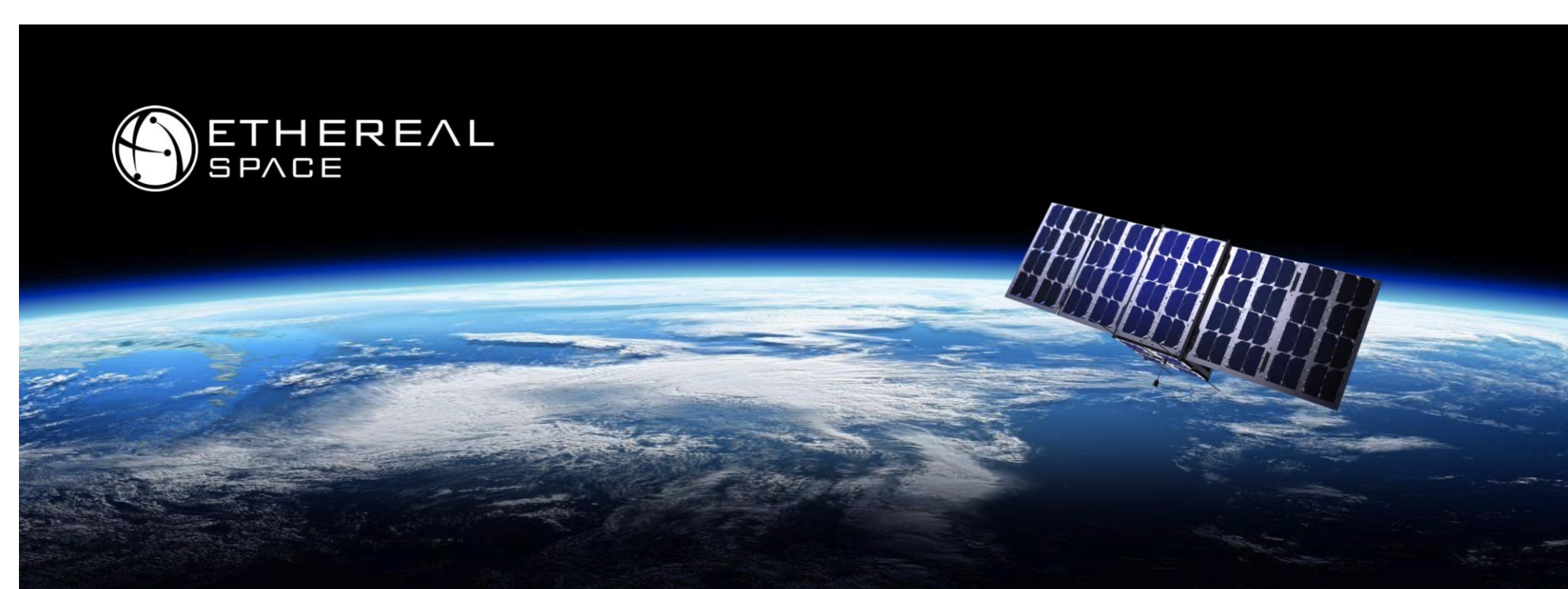
We intend to deliver focused, actionable intelligence to these customers. This is made possible by real-time measurements in orbit delivered from our satellites to improve decision support.



Our shared mission is to deploy a spacecraft constellation to monitor potentially hazardous solar activity and conditions on the Sun, in the solar wind, magnetosphere and ionosphere.



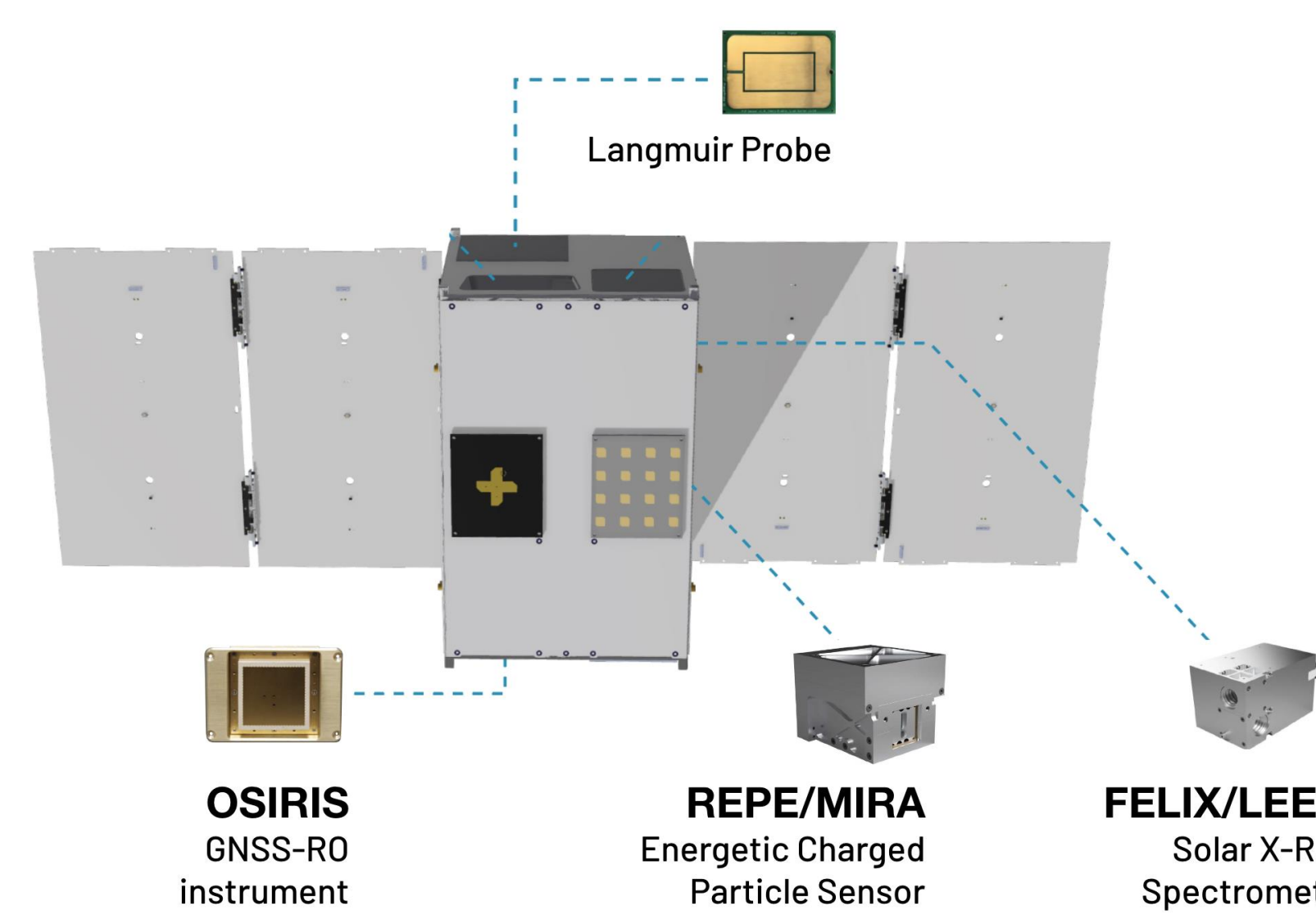
To build an abundant future, we must protect the infrastructure we depend on as a society. Our in-situ observations from LEO and the models they enable will prevent harm on Earth.



Ethereal Space, Inc. was founded in 2022 in Colorado, USA to build a commercial space platform for providing proprietary data services for government and commercial customers.

Ethereal Space team members designed, built, and operated mission critical space Programs of Record for the US Government, including most of the US Government's currently orbiting fleet of weather satellites.

We are building an in-space platform with a flight-proven foundation of standardized flight hardware and unique payload instruments which provide on-orbit data for government and commercial customers.



Ethereal Space, Inc. Baseline 12U Satellite configuration including ASRO instruments



Aboa Space Research Oy (ASRO) is a design agency founded in **1999 in Turku, Finland**.

The company has expertise in space instrumentation with rapid development capabilities and flight-proven instruments.

ASRO is currently focused on developing radiation monitors for space weather applications, microscopy, dosimeters for human space flight missions and industrial projects.

The company also provides space weather data modelling services and develops new instrument for scientific missions.

Radiation Monitoring at ASRO

ASRO has a long history of developing instrumentation for various space environment monitoring purposes.



| 1995 | 2001 | 2005 | 2010 | 2016 | 2019 | 2021 | 2022 | 2024 | 2025 |
|---|--|---|---|---|---|---|--|--|--|
| ERNE instrument was launched on-board SoHO. Foundation for ASRO's instrumentation know-how. | Phase A study for ESA's state-of-the-art particle instrument for space weather monitoring. | SIXS particle instrument development started for BepiColombo Mercury mission. | ASRO participated in ESA's SSA studies as an instrument provider. | ASRO was part of a consortium to deliver dosimeters for European astronauts at ISS. | ASRO started as an expert consultant for ESA Space Weather Service Network (R-ESC). | ASRO started as an expert consultant for ESA Space Weather Service Network (R-ESC). | Dosimeters developed by ASRO and DLR were launched to the Moon on-board Artemis 1. | Delivery of dosimeters for two instrument arrays at Lunar Gateway. | Delivery of X-ray instrument electronics for NOAA Space Weather Next L1 mission. |

ASRO's family of Radiation Monitors

ASRO introduces a family of radiation monitors tailored to the **New Space** era for space weather applications.

This consists of four instruments namely REPE, LEEVI, MIRA and FELIX, each having unique measurement capabilities.

Instrument family key benefits

- 1 Instruments use same back-end design based on flight proven heritage
- 2 Possible to merge two instruments into 1U instrument
- 3 Sensor heads can be tuned for different energy ranges and fluxes

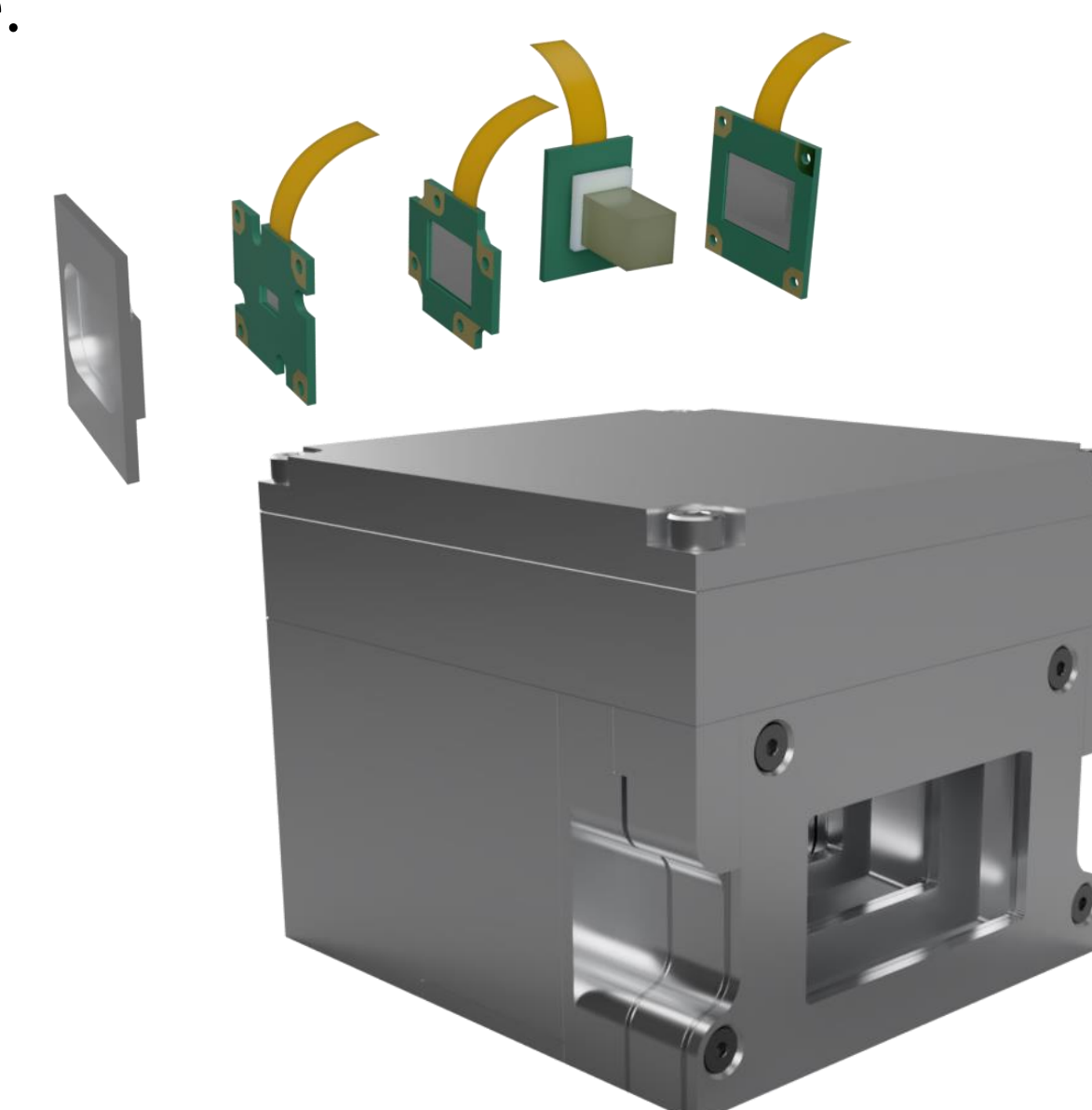
Particle detector - REPE Relativistic Electron and Proton Experiment

Compact energetic particle instrument that detects electrons and protons over broad energy range.

1.2 kg

0.75 U
95 x 90 x 76 mm³

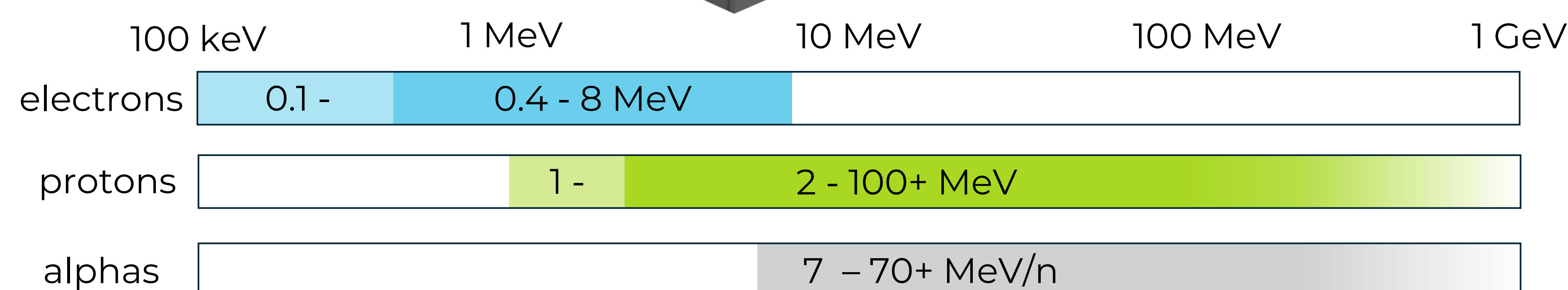
8 V (6 - 12..28 V)
2.4 W



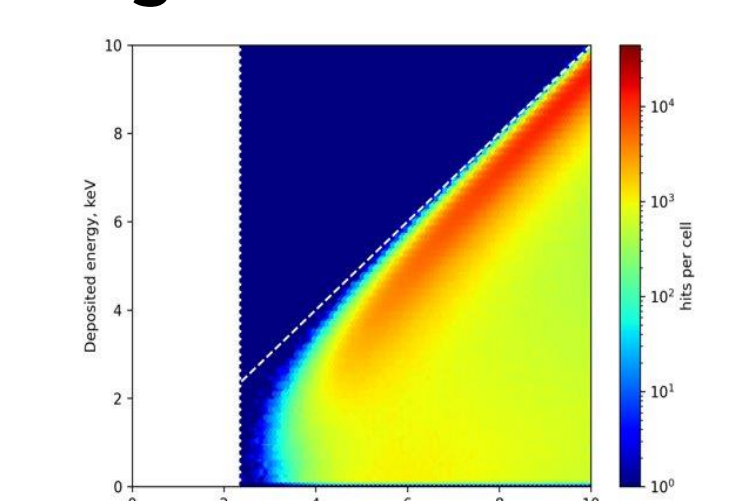
RS422/485, LVDS
> 2 MB/day

1st FM delivery Q1/2025
(commercial SWE fleet)

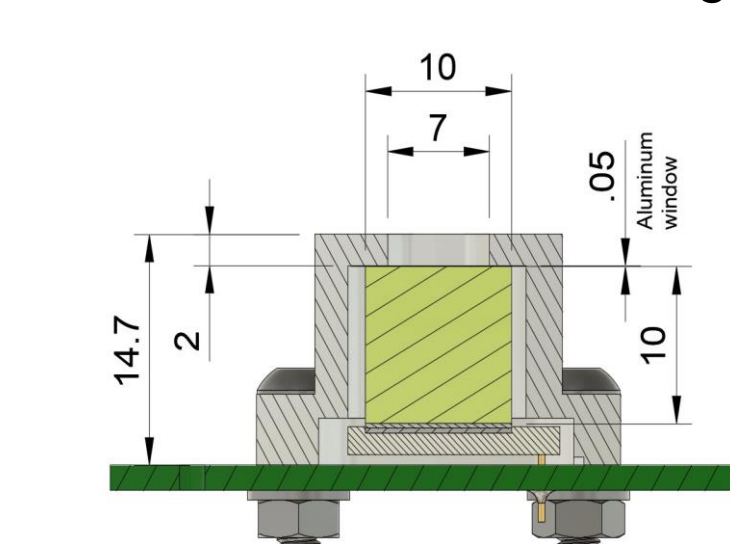
LEO fleets
Science and GTO missions



Low energy electrons - LEEVI Low Energy Electron Vigilance Instrument



Radiation monitor - MIRA Miniaturized Instrument for Radiation Analysis



X-ray spectrometer - FELIX Flare Examination and Lookout in X-ray



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