# Mirion Missions in the Milky Way

### ACE | 1997

**Rectangular segmented PIPS detector on the SEPICA** instrument. Mission to sample low-energy solar particles and high-energy galactic particles.

### **BEPICOLOMBO | 2018 Telescope of 5 circular PIPS** detectors of different sizes on the BERM probe. Europe's first mission to Mercury.

### **MESSENGER | 2015**

Square pixelated PIPS detector. Mission to understand Mercury, least-explored of the terrestrial planets.

### **EQUATOR-S | 1997**

Circular PIPS detectors. Mission designed to study Earth's magnetic environment above the equator.

### **DOUBLE STAR | 2004**

**Rectangular PIPS detectors.** Double satellite mission to study the effects of the Sun on Earth's environment.

# VENUS

### SOLAR ORBITER | 2020

EPT & HET – circular pixel PIPS detectors on the EPD probe. Segmented PIPS detector (annular segment) on the SWA instrument. Mission to explore the inner heliosphere and the effects of solar activity on it.

### **STEREO | 2008**

Trapezoidal segmented PIPS detector on plastic instrument. Mission to study the Sun and the nature of its coronal mass ejections (CMEs).

MERCURY

### **SOHO | 1995**

Several circular, square and rectangular PIPS detectors on the ERNE instrument. Space-based observatory for viewing and investigating the Sun from its core, through its atmosphere, out to a distance ten times beyond the Earth's orbit.

### **PAMELA | 2016**

Square segmented PIPS detector. First satellite-based experiment dedicated to the detection of cosmic rays.

### MMS SPACECRAFT | 2015 PROBA-V SATELLITE | 2013

**Rectangular pixel PIPS** detector. Investigates how the Sun's and Earth's magnetic fields connect and disconnect.

### **Rectangular pixel**

VAN ALLEN PROBES | 2012

📄 MOON

MARS

CHANG'E-4 | 2019

**Rectangular segmented PIPS** 

detectors. First lander on the

far side of the moon.

**ARTEMIS | 2022** 

ATOM<sup>®</sup> dosimetric phantoms

used on space flight beyond the

moon to assist in measuring

potential radiation exposure

to astronauts. Crew Active

Dosimeters (CAD) to study radiation exposure levels and keep crews safe.

**PIPS detector. Mission** to explore the Van Allen Radiation Belts.

EARTH

Segmented PIPS telescope detector on the EPT instrument. Mission to survey space radiation levels.

MARS ODYSSEY | 2001 On board spacecraft, Gamma-ray Spectrometer (1.2 kg) HPGe detector. Mission to study elemental composition and radiation on Mars.

### MARS EXPRESS | 2003

Several circular, square and rectangular PIPS detectors on the Aspera instrument. Mission to characterise, photograph, and map the surface of Mars.

### **JUICE | 2023**

Sixteen-sided PIPS detector used on mission to study Jupiter's icy moons.

### **JUNO | 2016**

**Rectangular pixel PIPS** detector. Mission to reveal the origin and evolution of Jupiter.

## PSYCHE

JUPITER

### **PSYCHE | 2023**

HPGe detector used on mission to metal asteroid to uncover the mysteries of planet formation.

### MARS CURIOSITY | 2012

Pixel PIPS detector coupled to scintillators on the RAD instrument. Mission to explore and quantitatively assess the surface of Mars.

# **CASSINI | 2017** Several circular, square and

rectangular PIPS detectors on the MIMI instrument. Mission to explore the wonders of Saturn and its family of icy moons.

SATURN

### **CUSTOMER TESTIMONY:**

**66** I was extremely happy working with this team. In our initial design we frequently met by phone and worked through different options. They provided excellent suggestions, and together we came up with the best solution. They were available to meet with very little notice, had excellent technical expertise, and kept the effort moving on or ahead of schedule.



# MIRION TECHNOLOGIES