

A detection unit designed for the study of the UHECRs from space

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A new generation detection unit has been developed in the frame of the JEM-EUSO program to detect Ultra-High Energy Cosmic Rays (UHECR) from space. This 256 pixels compact (55 x 55 x 60 mm), low consumption (< 500mW) and fast detection unit (>150 Mhz) is based on four Hamamatsu multi-anodes photomultipliers (MAPMT), one Cockcroft-Walton high-voltage circuit and four SPACIROC 3 ASICs. This type of unit has been developed for different pathfinders, on ground (since 2013), onboard stratospheric balloons (EUSO-Balloon in 2014, EUSO-SPB in 2017, EUSO-SPB2 in 2021), onboard ISS (in 2020) and will operate in future space missions K-EUSO (ISS 2023) and POEMMA (2028).

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