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Integration and testing of the Mini-EUSO UV telescope

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The Mini-EUSO telescope is designed to observe the UV emission of the Earth from the vantage point of the International Space Station in low Earth orbit.

Mini-EUSO will map the earth in the UV range (300 - 400 nm) offering the opportunity to study a variety of atmospheric events such as Transient Luminous Events (TLEs) and meteors, as well as searching for strange quark matter and bioluminescence.

The instrument comprises a compact telescope with a large field of view $(\pm 22^\circ)$, based on an optical system employing two Fresnel lenses for increased light collection. The light is focused onto an array of 36 multianode photomultiplier tubes and the resulting signal is converted into digital, processed and stored via the electronics subsystems on-board.

In addition to the main detector sensible in the UV range (300 - 400 nm), Mini-EUSO contains two ancillary cameras for complementary measurements in the near infrared (1500 - 1600 nm) and visible (400 - 780 nm) range.

The integration of the instrument, currently underway at the University of Rome Tor Vergata, is at an advanced stage in order to be compliant with a launch opportunity in the early 2019. The on ground test results will be presented.

Primary author: CAMBIÈ, Giorgio (University of Rome Tor Vergata)

Co-author: MARCELLI, Laura (ROMA2)

Presenter: CAMBIÈ, Giorgio (University of Rome Tor Vergata)

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