

Caratterizzazione dei fotomoltiplicatori al silicio di FBK SiPM per il prototipo SCT Medium Size Telescope per l'Osservatorio CTA

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The Cherenkov Telescope array (CTA) will represent the new generation of Imaging Atmospheric Cherenkov Telescopes (IACTs), aimed to detect very high energy gamma-rays produced in atmospheric showers. The prototype Schwarzschild-Couder Telescope (pSCT) has been inaugurated in January 2019 at the Fred Lawrence Whipple Observatory aiming to the extension of the CTA array baseline.

Silicon Photomultipliers are particularly suitable as optical units of IACTs to detect the low and fast-intensity Cherenkov signal. The Near UltraViolet High Density 6x6 mm² SiPMs (NUV-HD3), produced by Fondazione Bruno Kessler in collaboration with INFN, have been assembled in more than 100 arrays of 16 pixels. These optical modules have been characterized in the laboratories of INFN to be integrated on the camera of pSCT.

In this contribution we report the characterization results of the SiPM arrays and on the uniformity of their performances.

Primary author: LOPORCHIO, Serena (BA)

Presenter: LOPORCHIO, Serena (BA)

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