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SiPM optical modules for the Schwarzschild- Couder Medium Size Telescopes proposed for the CTA observatory

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Silicon Photomultipliers (SiPMs) are excellent devices
to detect the faint and short Cherenkov light emitted in high energy atmospheric showers, and therefore suitable for use in Imaging Air Cherenkov Telescopes. The high density NUV SiPMs (NUV-HD3) produced by Fondazione Bruno Kessler (FBK) in collaboration with INFN were used to equip optical modules for a possible upgrade of the prototype Schwarzschild-Couder Telescope camera, in the framework of the Cherenkov Telescope Array project.
SiPMs are 6x6mm2 devices based on 40x40μm2 microcells optimized for photo-detection at the Near Ultra Violet wavelengths. More than 40 optical modules, each composed by a 4x4 array of SiPMs, were assembled. In this contribution we report on the development and on the assembly of the optical modules, their validation and integration in the the camera.

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