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## Development of a Charge Preamplifier to improve NUV- HD SiPM performance

The development of a new camera based on the use of Silicon Photomultipliers (SiPM) proposed for the Cherenkov Telescope Array (CTA), which represents a new generation of ground based very high energy gamma ray observatory, is one of the main items of the Italian Institute of Nuclear Physics (INFN). In the R&D framework a single channel electronic charge preamplifier has been developed to improve the performance of photon cameras equipped with High Density NUV –HD SiPM produced by Fondazione Bruno Kessler (FBK) with a micro cell of  $30\ \mu\text{m} \times 30\ \mu\text{m}$  and  $6\ \text{mm} \times 6\ \text{mm}$  total area. The single channel preamplifier will be used as basic component for a 16-channel electronic board prototype to test the  $8 \times 8$  NUV –HD SiPM modules proposed to equip a pSCT (Schwarzschild-Couder Telescope prototype) camera. In this work the results of tests on the single channel preamplifier prototype to optimize the SiPM performances will be presented.

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