



SÉMINAIRE DE PHYSIQUE CORPUSCULAIRE

SUJET : A new technique in gamma astronomy : an innovative camera for high-energy gamma-ray telescope array

PAR: **Dr Vittorio Boccone**
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DATE: Mercredi 20 mars, 11h15

LIEU: Science III, Auditoire 1S081
30, quai Ernest-Ansermet, 1211 Genève 4

RÉSUMÉ:

Solid-state detectors, in particular Geiger-mode Avalanche Photo-Diodes (G-APDs) represent a valuable alternative to substitute the Photomultipliers in many applications.

The Cherenkov Telescope Array (CTA) is the first open-access high energy (HE) gamma ray observatory and consists of many tens of telescopes of three different sizes (Small, Medium and Large) covering a large area on the ground.

We proposed a novel design for the Small Size Telescopes of CTA based on a 4 m Davies Cotton reflector focusing the light on a large area G-APD (developed by us together with Hamamatsu) array coupled to non-imaging light concentrators.

I'll first introduce briefly the physics motivations of CTA with particular regards to the SST energy range and I'll then give an overview of the 4-m DC SST project. I will focus my talk on the R&D necessary for the design and construction of the G-APD camera that was proposed by the University of Geneva. I will describe the measurements necessary to characterize the G-APD and I will discuss and compare our first results to the design requirements.

INFORMATION : <http://dpnc.unige.ch/seminaire/annonce.html>

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